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ON THE HUMANITIES

THESE are days when everyone who works in the area of higher education feels obliged to offer some justification for what he is teaching or transmitting. It is evident that at least some of the scientists are on the defensive. While the specter of nuclear war has been somewhat overshadowed by the environmental depredations of scientific technology, the "moral neutrality" of science has been so widely condemned that a great many men active in the sciences are eager to manifest a humanistic sense of responsibility, especially in relation to ecological problems. The Humanities have long been under fire, not only for their compromises with scientific method in the matter of "research," but also on the issue of their relevance. Today, with the world in so much trouble, the idea that knowledge of literature and history affords cultivation and appreciation of æsthetic values can hardly be mentioned. While the object of "gracious living" might have meant something to a relaxed and complacent generation, today it seems artificial.

Scientists should have little difficulty in making a case for themselves, given some time and the internal reforms proposed by Michael Polanyi and others, but the teachers of the Humanities may find it more difficult. What, after all, can they say? One thinks of the letter sent by Aurangzeb, the last of the great Mogul emperors and conquerors, to his old tutor. Under Aurangzeb the Mogul empire attained its greatest extent, although it should be added that he was a bigoted Moslem who reversed Akbar's policy of conciliating the Hindu population. Revolts in many parts of India were in process when he died, leaving his successors a "legacy of anarchy." To the man who had tried to instruct him in his youth, he wrote:

> You told my father Shah Jehan that you would teach me philosophy. 'Tis true, I remember very well, that you have entertained me for many years with airy questions of things that afford no satisfaction at all to the mind and are of no use in humane society, empty notions and mere fancies that have only this in them, that they are very hard to understand and very easy to forget. . . . Have you ever taken any care to make me learn what 'tis to besiege a town, or to set an army in array? For these things I am obliged to others, not at all to you.

Aurangzeb was no doubt given the education his father planned for him, but obviously the "Humanities" part of it didn't take. Yet it is history—a branch of the Humanities—which enables us to compare the regimes of Akbar and Aurangzeb, and to decide that Akbar was a far better man and, as king, a far better administrator in terms of practical results.

This leads, indirectly, to a question. Should the Humanities be wedged into the curricular "package" which students have to "take" in order to get their degree? A lot of confusion and misrepresentation seems to result from including them. Technical subjects which have a content of unambiguous facts are learned by drill and the doing of problems of various sorts. Students can and should be examined in them to find out whether they are qualified to perform professional services affecting the public welfare. A navigator entrusted with the lives of passengers and crew ought to know navigation thoroughly, and it is possible to find out if he does before giving him a ship.

But what is the gain from "mastery" of the Humanities—of literature, history, and the arts? How do you measure it? Who is competent to judge the performance of students in this area? If you think of this activity as a "profession" with graded emoluments based on degrees, involving status and authority, the whole thing seems a kind of fraud. Not because there is no wisdom in

scholarship or learning, but because there is no *necessary* connection between them.

Again, what does one, might one, learn from the Humanities? Well, a man *might* learn to guard his mind and feelings against self-deception. After all, Aurangzeb was self-deceived. So we can say that the Humanities have to do with an art of self-knowledge. The technical subjects deal with things, concerning which there are no subtleties of motivation and personal morality. At least, they are not directly involved. Technical knowledge can be made objective, but what a man does about the forms of self-deception he is vulnerable to seems an essentially private thing. That is, nobody else can or ought to try to take charge of it. It is nobody else's business, except in a very general way, and hardly anyone is wise enough to interfere with how the individual decides to deal with his own character and its formation.

So we might argue, right at the start, that the Humanities ought not to be a part of compulsory education, nor should they be put into any package which includes the bait of a job with a good income for those who complete the requirements. This, one would think, is degrading to the Humanities. It makes them part of a gigantic cultural self-deception, since the people who take these courses may not care a thing about them. This adds systematic pretense to the curriculum.

The first step, then, in the justification of the Humanities would be to make their study completely voluntary. No one, that is, should go in this direction without a real hunger for what may lie at the end of the journey, or rather along the way, since the end is never reached. But who would "teach" the Humanities, then, and how would a student find someone who knows about them?

This is like asking what Utopia would be like. In Utopia, of course, *everybody* would be a practitioner of the Humanities, although the word would probably go out of use. It is after all only a medieval habit to classify learning and knowledge into a lot of "subjects," and to have a big faculty with a lot of "authorities" on it. Maybe wandering bards would be the teachers of some things, with men like Socrates among them. Socrates, after all, comes the closest of anyone in history to being an expert in the exposure of self-deception, so he might be taken by us as a model for the teaching of the Humanities. First, then, there is the question of how he came to have this role. If you read Plato it soon becomes evident that Socrates elected himself. No one chose or sponsored him. He worked as a mason to support his family, and the rest of the time he talked to anyone he met on the street—any one, that is, who wanted to talk about the things that interested Socrates.

In the *Theatetus*, Plato gives some idea of how Socrates conversed with those he met, who were mostly young men. In this dialogue, after Socrates has explained to Theatetus that the uncertainty he feels because of Socrates' questions is a form of "labor pains," he tells Theatetus that he, Socrates, is a kind of midwife, well equipped to help him through his anxiety. Then, after some account of the duties of midwives, he says:

> Such are the midwives, whose task is a very important one, but not so important as mine; for women do not bring into the world at one time real children, and at another time counterfeits which are with difficulty distinguished from them; if they did, then the discernment of the true and false birth would be the crowning achievement of the art of midwifery—you would think so?
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> *Theatetas:* Indeed I should.
>
> *Socrates:* Well, my art of midwifery is in most respects like theirs; but differs in that I attend men and not women, and I look after their souls when they are in labor, and not after their bodies; and the triumph of my art is in thoroughly examining whether the thought which the mind of the young man is bringing to birth, is a false idol or a noble and true spirit.
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> And like the midwives, I am barren, and the reproach which is often made against me, that I risk questions of others and have not the wit to answer them myself, is very just; the reason is, that the god compels me to be a midwife, but forbids me to bring forth.

And therefore I am not myself at all wise, nor have I anything to show which is the invention or birth of my own soul, but those who converse with me profit. Some of them appear dull enough at first, but afterwards, as our acquaintance ripens, if the god is gracious to them, they all make astonishing progress; and this in the opinion of others as well as their own.

It is quite clear that they never learned anything from me; the many fine discoveries to which they cling are of their own making. But to me and the god they owe their delivery. And the proof of my words is, that many of them in their ignorance, either in their self-conceit despising me, or falling under the influence of others, have gone away too soon; and have not only lost the children of whom I had previously delivered them by an ill bringing up, but have stifled whatever else they had in them by evil communications, being fonder of lies and shams than of the truth, and they have at last ended by seeing themselves, as others see them, to be great fools. Dire are the pangs which my art is able to arouse and to allay in those who consort with me, just like the pangs of women in childbirth; night and day they are full of perplexity and travail which is even worse than that of the women.

So much for them. And there are others, Theatetus, who come to me apparently having nothing in them; and as I know that they have no need of my art, I coax them into marrying someone else, and by the grace of God I can generally tell who is likely to do them good. Many of them I have given away to Prodicus, and to many other inspired sages.

I tell you this long story, friend Theatetus, because I suspect, as indeed you seem to think yourself, that you are in labor—great with some conception. Come then to me, who am a midwife's son and am myself a midwife, and try to answer the questions which I will ask you. And if I abstract and expose your first-born, because I discover upon inspection that the conception which you have formed is a vain shadow, do not quarrel with me on that account, as the manner of women is when their first children are taken from them. For I have actually known some who were ready to bite me when I deprived them of a darling folly, they did not perceive that I acted from good will, not knowing that no good is the enemy of man—that was not within the range of their ideas; neither am I their enemy in all this, but it would be wrong in me to admit falsehood, or to stifle the truth.

Once more, then, Theatetus, I repeat my old question, "What is knowledge?" and do not say that you cannot tell but quit yourself like a man, and by the help of God you will be able to tell.

So there is ample precedent for proposing that authentic teachers of the Humanities will not usually be found in institutions, and especially not in those which have full conventional approval or the sanction of prosperous parents who want their children to have the best that money can provide. Teachers of that sort, in Socrates' time, were the Sophists, who were well paid for their services, and might be compared to the exclusive schools and colleges of the present. But Socrates was not paid. The only payment he got, at last, was a death sentence from the stalwarts of the Athenian community, who found his questions menacing to their peace of mind and therefore corrupting to the young.

It would almost seem to follow necessarily that the only teachers of the Humanities who are really qualified for this calling must be looked for on the streets, where Socrates went to pursue the work he cared about above all. This might become the basis for another rule. If the Humanities ought never to be a part of compulsory education, then the teachers should be those who, like Socrates, care for nothing else and will accept no money for what they do. But where will we find teachers like this, to say nothing of students who will seek them out? Well, that, at least, seems a way to begin the right formulation of the problem of the Humanities and their survival.

This may sound like a very extreme view, but the situation calls for at least the intellectual clarification that is sometimes obtained by stating an extreme view. The fact is that the "value" of the Humanities, when finally elicited, is seen to be of the same essential nature as the value of philosophical religion, yet is reached only by individual distillation of materials found in the arts and literature, from biography and history. From the Humanities a man can get help in learning how to decide what it is good to want, and why. He can learn something about ends and means. He

can learn all these things, but there is no certainty that he will. Of course, the Humanities are really a tool which helps human beings to learn from life.

There is much less likelihood that he will use this tool for the purpose intended, if those who teach the Humanities are not intensely concerned with learning the same lessons themselves. So there is a sense in which full responsibility to the young means telling them that the Humanities are not "learned" at any particular place, in any particular institution, but only from those few, scattered individuals who, wherever they are, are recreating them anew. And it is necessary to tell the young that it is simply impossible to *hire* such men; although they often give themselves away. Probably one or two of them can be located, if a young man or woman really has a hunger to find them, and keeps on looking around.

Meanwhile, there are books. Great ideas come from great men; they are in great books, and hungry minds are nourished by them. It seems almost certain that the revival of the Humanities and the restoration of high culture in the modern world will not be possible until it is recognized that *men*, not institutions, are the sources of great ideas, good teaching, and the kind of thinking that leads to a practical understanding of how the Humanities provide the raw material for shaping a useful and ennobling life for human beings.

This sort of service cannot be planned and done *for* anyone. It is not a curricular problem at all. It has nothing to do with "schooling," as Ivan Illich has so effectively pointed out. The decline of the Humanities is not due to the irrelevance of the material which it offers, but to the framework of assumptions surrounding the approach to it. The sparks which fly into a man's mind after he broods on a great work of literature are not something that can be "served up" to order. Even creating a dialogic environment favorable to "sparks," as Socrates was able to do, requires exceptional wisdom and endless patience, and often brings the sort of reward that Socrates received from the Athenians.

So, the best service that ordinary persons can perform in behalf of the Humanities is to refuse to participate in any pretense as to how their value is to be obtained.

This is doubtless enough of the extreme statement of the case for the Humanities. The extreme case is the utopian case, and it should always be stated, at the outset, in any serious inquiry. Yet in a society like our own, which is far from being utopian, one often finds good men and good teachers struggling to do good work in places where the grain of common practice is very much against them. Yet these men make their mark. This is a way of saying that while institutional analysis is useful, its logic often hides the wonderful contradictions which persist in all culturally mixed-up situations. So, after the extreme case is put, there is another case to be made in defense of those few who continue to teach and teach well, even against great odds. This latter case was stated by William Arrowsmith several years ago, in an address on "The Future of Teaching." After disposing of what he called the "menial functions" of transmitting and popularizing, which many teachers perform, he pointed out that real teaching involves far more than this:

> Only when large demands are made of the teacher, when we ask him to assume a primary role as educator in his own right, will it be possible to restore dignity to teaching. Teaching, I repeat, is not honored among us either because its function is grossly misconceived or its cultural value is not understood. The reason is the overwhelming positivism of our technocratic society and the arrogance of scholarship. Behind the disregard of the teacher lies the transparent sickness of the humanities in the university and in American life generally. Indeed, nothing more vividly illustrates the myopia of academic humanism than its failure to realize that the fate of any true culture is revealed in the value it sets upon the teacher and the way it defines him. . . .
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> It is my hope that education . . . will not be driven from the university by the knowledge-technicians. . . . Socrates took to the streets, but so does every demagogue or fraud. By virtue of its traditions and pretensions the university is, I believe,

> a not inappropriate place for education to occur. But we will not transform the university milieu nor create teachers by the meretricious device of offering prizes or bribes or "teaching sabbaticals" or building a favorable "image." At present the universities are as uncongenial to teaching as the Mohave desert to a clutch of Druid priests. If you want to restore a Druid priesthood, you cannot do it by offering prizes for Druid-of-the-year. If you want Druids, you must grow forests. There is no other way of setting about it.

And if we want to restore the Humanities, whether in the universities or in American life, it will be necessary to generate a culture where they are loved and lived by. This means, first, removing the pretense about how they are "communicated"—they aren't; they are *forged* by individuals in their own lives—and it also means making pursuit of their meaning and value an entirely voluntary affair: something done for its own sake, and for no other reason. The Humanities are not instrumental to any other purpose than their own.

REVIEW
MAN AND NATURE

THERE are two kinds of specialists—the ones whose focus grows wider and wider, the more they learn, and the ones whose outlook is increasingly narrowed by specializing activity. The best example of the wide-focus specialists, today, is the ecologists, who illustrate not only the sudden development of a branch of science in response to human need, but also the vital potential of humanistic arousal in professional men of this sort.

We have for review a book that has doubtless become primary source material for popular writers on ecology—*Global Effects of Environmental Pollution* (New York: Springer-Verlag, 1970), edited by S. Fred Singer, who is Deputy Assistant Secretary of the U.S. Department of the Interior, and a physicist presently concerned with a wide range of water problems. He was formerly Dean of the Environmental Sciences at the University of Miami. In December, 1968, Mr. Singer organized a symposium on global environmental pollution in behalf of the American Association for the Advancement of Science, with the purpose of uncovering, if possible, hitherto unsuspected effects which might have serious consequences. The nineteen papers presented in this book were a fruit of this meeting. Discussions are under four headings: (1) Chemical Balance of Gases in the Earth's Atmosphere; (2) Nitrogen Compounds in Soil, Water, Atmosphere and Precipitation; (3) Effects of Atmospheric Pollution on Climate; and (4) Worldwide Ocean Pollution by Toxic Wastes.

A careful reading of this book would amount to the beginnings of a scientific education. For this reason, we cannot pretend to "review" it here. The basic problem in pollution is the difficulty of controlling its almost countless sources, some of them not yet determined. Basic human attitudes toward life and nature are involved, and the changes that seem required will involve reversal of centuries-old habits. Quite possibly, the rapid loss of our "economy of abundance" and its replacement by conditions of extreme scarcity will prove in the end the most effective means of getting the change under way. Meanwhile, helping to spread basic education on the extent and meaning of pollution has obvious importance.

The paper by Barry Commoner, director of the Center for the Biology of Natural Systems, Washington University, is about the threat of chemical fertilizer to the health of the soil and the waterways. The central point is that the balance of the natural nitrogen cycle is being upset by the introduction into the soil of inorganic nitrogen in the form of fertilizer. In nature, nitrogen seldom occurs in oxidized forms, but the nitrogen which enters the environment by human intrusion is almost entirely in oxide compounds. Dr. Commoner says:

> The maintenance of the naturally low concentrations of oxidized forms of nitrogen is essential to the integrity of the earth's life system. Important hazards to this system are generated when the concentrations of these nitrogen compounds are artificially increased. One hazard is pollution of surface waters by excessive amounts of nitrate. When the normally low level of nitrate in natural waters is increased, the growth of algae may be sharply enhanced. The resulting "algal blooms," which soon die, overburden the water with organic matter, which on being oxidized by micro-organisms depletes the oxygen content of the water, causing the natural cycles of self-purification to collapse. The Spilhaus report estimates that by 1980 the burden of organic matter imposed on surface waters will be sufficient to consume the total oxygen content of the summertime flow of every river system in the U.S. Excessive amounts of nitrate may contribute to this potential collapse of the self-purifying processes of the nation's water systems.

Another side of the analysis concerns the direct effect on the soil. While nitrate fertilizer, Dr. Commoner says, sustains crop growth, "it fails to rebuild the humus nitrogen lost from the virgin soil." Soil porosity declines, so that less oxygen is available to the roots, which in turn cannot take up all the nitrate supplied by the chemical

fertilizer. Much of this excess nitrate reaches the water courses of the region, while the soil itself degrades and becomes water-logged.

The effect of inorganic nitrate fertilizer on food is also examined by Dr. Commoner, showing that excessive nitrate content in baby foods, sufficient to be toxic, has been traced directly to fertilizer practice.

In his conclusion, Dr. Commoner points out that while sewage deposits and discharges of industrial wastes into lakes and rivers can be controlled, agricultural industry has grown largely dependent on the intensive use of chemical fertilizers, and that, oddly enough, fertilizer is about the only major item used by the farmer the cost of which has dropped in recent years. "If," he says, "as I believe, it becomes necessary to limit the use of inorganic nitrogen fertilizer, the present system of farming is faced with a massive dislocation." He warns that the fertilizer industry is already endeavoring to get its product used to fertilize timber crops on a large scale, remarking: "If this is done our present environmental problems will become worse." He says at the end:

> Science can reveal the depth of this crisis, but only social action can resolve it. Science can now serve society by exposing the crisis of modern technology to the judgment of all mankind. Only this judgment can determine whether the knowledge that science has given us shall destroy humanity or advance the welfare of man.

We shall let this notice of Dr. Commoner's paper serve as a sampling of the contributions to this volume, which all seem important and valuable. Unfortunately, such books are expensive and are probably available only in the larger libraries. Yet it should be widely read. The editor adds an epilogue on the difficulty of dramatizing the seriousness of the sorts of pollution with which these scientists deal. The oil accident off the coast of Santa Barbara, for example, easily gained attention by reason of the extreme visibility of the pollution. Yet oil breaks down in a fairly short time and such pollution has primarily local effects. Mr. Singer says:

> Consider, in contrast, the chlorinated hydrocarbons released into the environment; the insecticides DDT, dieldrin, and related chemicals, or any of the polychlorinated biphenyls used in the manufacture of plastics, paints and rubber. These substances are not specific; they are toxic to many organisms. They are extremely persistent. They dissolve in lipids and therefore concentrate in the fatty tissues of organisms. As a result, the upper members of the food chain now carry large concentrations of DDT or its breakdown products which presumably affect their hormone metabolism. DDT, for example, stimulates the production of hepatic enzymes in mammals, which interferes with the action of certain drugs and also of steroid hormones such as the estrogen or testerone produced by the animal. In rats, increased enzyme activity occurred at a concentration of 10 ppm in fatty tissue. The average human in the U.S.A. now stores about 12 ppm of DDT and DDE in his fat—making him unfit for human consumption!

Well, there are—or seem to be—spots still immune from all this horror. At any rate, we turn willingly to a delightful book on Nova Scotia, *Oxbells and Fireflies* (Knopf, 1968), by Ernest Buckler. This big peninsula of eastern Canada must be a wonderful place to live, and an even better place to grow up. Mr. Buckler writes about a Nova Scotian village, about the people who were his neighbors, how they worked, about their generosity, their simplicity, and on occasion their wonderful oddities. Here is a little on a boy with his mother working in the garden:

> My last row is finished and I watch her sow the small seeds. The ground is warm enough for her to kneel.
>
> I watch and I marvel. Potato seeds are no mystery: they just grow more potatoes like themselves. But how are the plumpness and the redness of the grown beet contained in that tiny brown burr? The greenness and the warts of the cucumber in that tiny white eye lens? The cone and tartness of the parsnip in that little oatmeal wafer? The cheek-flesh of the turnip and the leaf-pack of the cabbage in those miniature purple spheres so alike that you couldn't tell which was turnip seed and which cabbage unless they were marked?
>
> She covers the seeds with just a skiver of sifted earth and pats it down.

I look at her hands . . . and I look at my father's hands as they guide the handles of the plow so skillfully that the wave of earth the plow tumbles onto the potatoes covers each of them to exactly the same depth . . . and from every detail of everything I look at comes the sudden exclamation of its falling exultantly into place with me. . . .

The season has been late. This is the first morning of the year when the rooster's crow is liquid, not piercing, in the air. The light on the woodpile has turned from winter glass to a holograph of armistice on the scrolled birch bark. Overnight the whole camp of winter has been struck and everything has come over to our side. The repentant sun touches everything as if with the hand of reconciliation. The doorstep. The sides of the milk pail frothing to the brim with the milk of the cow just freshened. The rocks, which this day are somehow delivered of their self-stunning weight.

Things stretch deliciously in the warm-springing air.

This is a book about a country where the people use oxen to work the land.

COMMENTARY
TWO TEACHERS

MUSING about teachers of the Humanities whom we would like to have known more intimately than books allow, we thought of two: Ortega y Gasset and Harold Goddard. Yet both got the flavor of their teaching into their books. How did they do it? The simplest answer would be to say that they knew how to excite the imagination of their readers. Many of Ortega's books testify to this capacity. In Goddard's case, we have in addition the memories of numerous students who took his courses during the thirty-seven years he taught at Swarthmore College, which were collected in a volume honoring him and published by the College in 1946.

One of these students wrote:

> My (he might say *impudent*) proclivity to place this English professor from a small American college on a par with the immortal Greats of world literature is rooted in the fact that it was really *he*, not they, who most concretely and inspiredly gave meaning to the beautiful ideas, the great and subtle truths they endeavored to transmit. He translated them to me; and in the process he so brilliantly exemplified the best that was in them that, ever since, he has been one with that best. He was obviously afire with faith in what he was doing. Great books *live* in Dr. Goddard as surely as they lived in their authors. This faith and life is contagious, his students come away afire themselves. Small wonder then, that I, for one, have devised as a means of expressing this contagion an almost unconscious habit of using his name as a sort of shorthand for whatever goodness, truth or beauty I may come across in my reading. Dr. Goddard is my symbol of the symbols.

Dr. Goddard died in 1951, five years after his retirement, and a little before publication of his last work, in two volumes, *The Meaning of Shakespeare*. He also wrote a Pendle Hill pamphlet, *Blake's Fourfold Vision,* which is unfortunately out of print. There is probably no better brief introduction to Blake. (If by some miracle MANAS is ever prosperous enough to undertake a small publishing program, we'll think about putting material of this sort back into print.)

Meanwhile, probably available still is a 1960 edition of his doctoral thesis (Hilary House), *Studies in New England Transcendentalism,* first published by Columbia University Press in 1908.

The Shakespeare book has chapters covering all the plays and can be obtained in Phoenix paperback editions. No reader of Dr. Goddard can escape being drawn back to Shakespeare with deepened understanding and gratitude. What is the secret of Goddard's magic? It is his personal faith in the potentialities of the imagination, and a wonderful exercise of this power in declaring his faith. He has the same credo as Prospero—

> We are such stuff
> As dreams are made on . . .

and with Blake he was absolutely convinced that truth is not so much learned or discovered as *envisioned:*

> The science of our age seeks to explain the construction of matter. But perhaps the final secret and definition of matter will turn out to be not some mathematical formula but simply this: Matter is that stuff on which dreams may be imprinted, that substance, in other words, on which creative energy can be projected. How else could things as frail as dreams have survived the tempest and chaos of material evolution?
>
> > How with this rage shall beauty hold a plea,
> > Whose action is no stronger than a flower?
>
> A question that contains its own answer.

Incidentally, the full address of the Center for Intercultural Documentation is Rancho Tetela, Apdo. 479, Cuernavaca, Mexico. Requests for the catalog are welcomed.

CHILDREN
. . . and Ourselves
ALTERNATIVE EDUCATION IN CUERNAVACA

IN an article in the *American Scholar* (Winter 1970-71), Herbert J. Muller, speaking as a university professor, considers the question: "Are we the Establishment or the Underground?" So far as he can see, the teacher in the university must regard himself as both. There are conservative disciplines and traditions which contribute a great deal to the continuity of education, but there are also radical ideas which arise in this setting, and the innovator, ideally, is afforded a certain protection by the institution.

It is important, now and then, to separate words like "establishment" and "conservative" and "radical" from their polemical context and to see what are their best and most useful meanings. An establishment is, from this point of view, a place that you can set out from. Writing of the time he spent at the Transcendentalist colony at Brook Farm, Nathaniel Hawthorne said: "I was beginning to lose the sense of what kind of a world it was, among innumerable schemes of what it might be, or ought to be." And he added:

> No sagacious man will long retain his sagacity if he lives exclusively among reformers and progressive people without periodically returning into the settled system of things to correct himself by a new observation from that old standpoint.

An establishment, then, is a place which has consolidated and confirmed earlier gains. The word becomes an epithet only when its certainties, which are the fabric of past achievement, are turned into bastions against change. So, what Herbert Muller says seems just right. Teachers ought to represent both the consolidated past and a vision of the future. Is this possible for institutions? It seems a most unlikely attainment except for a new and free-wheeling sort of institution. Do any such exist? Probably a few, but they are hard to find and not easy to identify.

One that qualifies very well is the Center for Intercultural Documentation in Cuernavaca, Mexico, founded in 1963 by Valentina Borremans and Ivan Illich. We now have information on the work of this center, in a catalog of its several educational activities and a list of its publications. The Center, whose name is abbreviated as CIDOC, is a Mexican membership corporation supported entirely by tuition and subscription fees, and by the contributed services of some of the staff. It has accumulated a fine library of specialized research materials in particular areas. Following is a general statement from the catalog:

> CIDOC is not a university, but a meeting place for humanists whose common concern is the effect of social and ideological change on the minds and hearts of men. It is a setting for understanding the implications of social revolution, not an instrument for promoting particular theories of social action. It is an environment for learning, not a headquarters for activist planning. The main context of CIDOC is contemporary Latin America.
>
> To provide a focus for all encounters, CIDOC each year proposes the central themes of the succeeding series of courses, seminars, library acquisitions and publications. . . .
>
> CIDOC Library and archives comprise a documentation center for a unique set of materials on Latin America, including manuscripts and documents not readily available in North America. Through the Institute for Contemporary Latin American Studies, CIDOC offers its associates a framework for independent creative learning and the opportunity for leisurely research and non-structured colloquy.
>
> CIDOC operates a department for the intensive teaching of spoken Spanish.
>
> CIDOC enables individuals to organize their own classes or research seminars at Cuernavaca and permits foreign institutions of learning to organize their programs in Mexico.
>
> Many graduate and undergraduate students from the United States and other foreign universities conduct one or several terms of independent study at CIDOC.

During 1970, the "central themes" which gave characteristic coloring to the basic education program were:

> Dissidence and creative imagination under conditions of social change.
>
> Underdevelopment understood as a special form of the social construction of reality.

> The search for fundamental alternatives to current education systems.

It hardly needs pointing out that Ivan Illich's contributions to the development of this third theme, along with the work of his colleagues and various others, have been responsible for the worldwide attention attracted to the Center at Cuernavaca during the past two or three years.

The full import of the name of the Center is obtained by study of the 1970 catalog of CIDOC publications, which is a substantial paperback volume. Following is an account of the publication program:

> CIDOC has since 1967 alone published a total of 150 book-length volumes in its own photo offset plant. In this way, CIDOC performs essential documentation and manuscript circulation services for the principal benefit of specialists, libraries, and documentation centers. CIDOC publications reflect the themes of colloquies held at CIDOC and of the continuing research conducted in the archives. . . . CIDOC does not attempt to duplicate the functions of a commercial press but encourages its authors to seek further diffusion of their work.

Publications fall into six categories of approach to Latin American studies.

The fees for the classes and courses are set at a reasonable level. CIDOC provides no certification attesting a student's participation in work at CIDOC, but most colleges accept previously authorized work done there. The student's affidavit is given concerning completion of the work.

There are three main educational activities: the intensive language classes in Spanish, the Contemporary Latin American Studies courses and seminars, and special lectures which may be attended by all, every day at 11 A.M., on the central themes. Illich's lectures on alternatives in education were given as part of this special program, which is called E1 Ciclo.

Among the nearly eighty members of the teaching staff are the following, whose names will be familiar to many MANAS readers: George Brown, until recently a Congressman from California; George Dennison, author of *The Lives of Children;* Edgar Z. Friedenberg, author of *The Vanishing Adolescent;* Paul Goodman, who needs no identification; John Holt, ditto; Herbert Kohl, author of 36 *Children*, and Wallace Roberts, associate education editor of the *Saturday Review.* Some of the teachers come to Cuernavaca to give courses which have a brief term, while others belong to the permanent staff.

Scores of courses are offered, and one course description by no means characterizes the program. Yet what Wallace Roberts says about his July program, called "Schooling and the Dilemma of Legitimacy," has too much flavor to omit:

> This series of discussions takes as its assumptions the propositions that the schools of the United States are the sole, legitimate means to education and, hence, to culturally acceptable integration into adult society, that the schools have always failed the poor because they were designed to act as screening devices, and that the schools are beginning to fail middle class students because the culture is breaking into fragments whose values are antagonistic to those of the schools. Because the schools have a monopoly on legitimacy, the flunk-outs and drop-outs have no other valid means of becoming integrated with society. The schools are failing all of their clients for the same basic reason: there is no culturally certified alternative to formal schooling. Reforms within the schools are meaningless because they can never be directed at the issue of the school's monopoly of legitimacy. Alternatives to public and traditionally private schools cannot succeed as long as the schools themselves exist, because the schools will jealously guard their power and never give it up.

Since the entire income of CIDOC is derived from registration fees, tuition, and the contributions of permanent staff members in time and work, scholarship possibilities are severely restricted. Tuition scholarships are given only to Latin American students who reside in Latin America.

CIDOC is on a hilltop overlooking Cuernavaca, in Rancho Tetela. There are bus connections with Mexico City. CIDOC has dining areas but no housing for students, faculty, or guests. A booklet with counsel on accommodations is available. Living there costs from $80 a month up.

FRONTIERS

Moholy-Nagy

WHEN Sibyl Moholy-Nagy first met the man she later would marry, she told him she had known his name for ten years. In 1922 Moholy-Nagy had had an exhibit of his work in a Dresden gallery, and Sibyl, against the orders of her father to stay away, had gone to see it. Her father, a distinguished architect and a trustee of the Dresden Art Academy, especially disliked Moholy's collages, but Sibyl enjoyed them, seeing in the paintings "a symphony of floating, merging, speaking elements of form." She told Moholy about this experience and described her father's attitude:

> The tone in which I told my reminiscences must have been full of the superiority which my generation felt toward the academic backwardness of their elders. To us they were worth only a contemptuous laugh, which I expected to share with this man whose work had been so ignorantly attacked. But Moholy-Nagy reacted differently.
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> "I could make your father understand a collage," he said. "I'm sure I could. If I had a chance to explain the basic idea to him—the overlying planes, and the relationship of color and texture—
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> He crossed his fingers in the form of a grill, a gesture which I later came to accept as the most characteristic expression of his drive toward integration. I was touched by his demonstrative zeal, which, at that moment, was focused on my absent and old-fashioned father—as if it mattered whether or not he understood a collage. As I looked into Moholy's eyes, dark blue and startlingly direct, I realized half-consciously that for him everyone mattered. . . . Until now, I had never met a total teacher.

This is the quality which comes through, again and again, in *Moholy-Nagy*, a large documentary monograph on the Hungarian-born artist, designer, and teacher, edited by Richard Kostelanetz (Praeger, 1970), illustrated with more than eighty photographs, with nine in color. Most of the contributions are by Moholy-Nagy, ranging from writings in the early 1920's to work done just before he died in 1946. He emerges as one of the clearest and strongest writers on modern art. There are also some useful discussions of his work, written by others.

The book gives substantial coverage to Moholy's major interests, with sections on painting, photography, design, sculpture and architecture, film, light machines, education, and his social philosophy. Lazlo Moholy-Nagy was born in Hungary in 1895. After some years in the Austro-Hungarian army he completed his law degree at Budapest, but continued his drawing and painting, in which he had become interested during the war, while recovering from a wound. He joined an avant-garde group in Vienna and contributed to its magazine, then moved to Berlin where he shared a studio with Kurt Schwitters. His work became known and in 1923 Walter Gropius invited him to join the Weimar Bauhaus as a teacher. There he became teacher of the preliminary or foundation course, experimented in photography, and worked in a number of fields, including typographic design. He designed all the Bauhaus books in collaboration with Gropius. After the political pressures in Germany became too offensive to both Gropius and Moholy-Nagy, obliging them to resign, the latter found his way to London (with the help of Herbert Read) where he worked as a designer. Then, in 1937, he came to the United States at the invitation of the Chicago Association of Arts and Industries to organize and direct the New Bauhaus, which unfortunately was closed after a year as a result of mismanagement by the sponsoring organization. Moholy worked in industry as a designer, getting together enough money to start his own school, with much of the New Banhaus staff. This school was an unqualified success, so far as effective teaching was concerned, and at the time of Moholy's death in 1946 had 680 students.

To get a feeling for the contributions of this man to art education, to the profession of industrial design, and to the refinement of sensibility in his time, one should read, along with this book by Richard Kostelanetz, Sibyl Moholy-Nagy's *Experiment in Totality* (MIT Press, 1969),

and Moholy-Nagy's last published work, *Vision in Motion* (Chicago: Theobald, 1947), which is a richly illustrated exposition of the educational principles of the School of Design and includes excellent statements of the writer's ideas about human possibility and social responsibility. Books on the Bauhaus will of course also be useful.

It was a driving intention of Moholy's life to return the machine to the service of human beings. Some quotation will illustrate his feelings and thinking on this theme:

> Specialization was forced upon us through hundreds of ungoverned happenings, and their mostly unforeseen effects through hastened decisions in accepting and developing the machine as the only means of production, through a first unexpected but later forced gigantic growth of population profit motives, etc., all claimed today as providential or "economic" necessities. For the time being, very few people know that the present form of specialization is a terrible weapon against us, against human nature.
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> I am not speaking against the machine or the machine age. The machine is a splendid invention and will form the new basis for a more developed human society. But after the glorious technomania of the twenties, we know today that man cannot master the machine until he has learned to master himself. But how can he achieve this when he even does not know what he possesses, what his abilities and capacities are? He has delivered himself to thoughtless specialization which results in the development of certain of his facilities and—as a consequence of this—in a rather unnatural passivity of his specialized work.

Elsewhere he wrote:

> . . . technical progress is a factor of life which develops organically. . . . The true source of conflict between life and technical progress lies at this point. Not only the present economic system, but the process of production as well, calls for improvement from the ground up. Invention and systematization, planning, and social responsibility must be applied in increased measure to this end.
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> The common error today is that usually questions of efficiency are viewed from the technical and profit standpoint, without regard to organic considerations. The Taylor system, the conveyor belt and the like, remain mistakes as long as they turn man into a machine, without taking into account his biological requirements for work, recreation, and leisure.
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> Here the word "biological" stands generally for laws of life which guarantee an organic development. If the meaning of "biological" would be a conscious possession, it would prevent many people from activities of damaging influence. Children usually act in accordance with the biological laws. They refuse food when ill, they fall asleep when tired, they don't show courtesy when they are uninterested, etc. If today's civilization would allow more time to follow the biological rhythms, lives would be less hysterical and less often stranded.

The same conception appears in relation to the role of the designer. Discussing the rule that form follows function, Moholy-Nagy said:

> In designing for human consumption we find that function is not only the work to be accomplished for a limited mechanical task, but must also fulfill biological, psychophysical and sociological requirements as well. . . . To be a designer means not only to be a sensible manipulator of techniques, an analyst of the present production processes, but also to accept the social obligations connected with it. Thus design is dependent not alone on function, science and technological process, but upon social implications as well.

He insisted on the same conception of human good in all his teaching. His objective was to help every pupil to gain the capacity to live "a life evolved from within."