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THE LOST AUTHENTICITIES

A QUESTION often asked, these days, has to do with what the young need to be taught in order to get them ready for life in a world like ours. People seem to be increasingly uncertain on this subject. "No real core of knowledge exists that is essential for everyone," declares a recent book advocating open classroom education. And after a meeting with some educational testers, the staff of an excellent elementary school reached this conclusion:

> Perhaps the most unanswerable question asked was what does a child need to know in the future? This was so unfathomable that answers came in the form of further questions. What does a child as he now is need to know now? How can we understand and help a child to learn what he needs to know now? We are beset by conflicts among the child's, the teacher's, and the parents' beliefs about what he needs to know. Can we decide what is really relevant? The question is unanswerable in any absolute terms because each person must find his own answer which will change and grow as he and others share their convictions, concerns, and experiences. We need to keep in close touch as parents and educators as we seek to provide environments in which children can live and learn. Perhaps the best we can do is to provide places—schools, homes, adventures, fantasies, ideas—where children learn how to learn.

This seems basic common sense, since more important than any "subject" that can be taught would be the communication, somehow, of the *hunger* to know, which must be at least ninety per cent of learning how to learn. It is only later on, when learning gets divided up into various "disciplines," that some confidence begins to displace these honest doubts. The idea that "each person must find his own answer which will change and grow" is foreign to university departments which think in terms of separate, professionalized disciplines instead of avenues to individual development. While the specialist knows that his own field is continually "evolving," he becomes its jealous protagonist and guardian: not what happens to students and their growth, but what happens to *it* is his primary concern. So, inevitably, the biology major doing graduate work at the University of California in Berkeley found himself frustrated in his attempts to broaden his study and graduate program to include the areas relevant to his ecological interests. Finally, he quit school, declaring: "The trouble with the academic approach is that it is rarely directed toward *solving* the problems."

This is not a local ill, but appears wherever the concept of "disciplines" takes precedence over human development. There was this report in *World* for Feb. 27:

> Recently a young Frenchwoman studying architecture at a university became interested in environmental problems. She went to the library of the faculty of medicine for literature she needed for her research. The library, however, would not admit her; she was of another faculty.
>
> In French education there is almost no integration of the various disciplines, and no facilities for cross-disciplinary activity. If one climbs up the hierarchy of education to a particular kind of degree and then wants to jump over into another field and take a parallel degree, or a higher one, he "can't get there from here." He must first climb back down his particular educational pyramid and then back up another, satisfying all the prerequisites along the way. And in practice this usually proves quite impossible.

While the new French Environment Ministry is said to be attempting to overcome this rigidity in higher education, there is still the question of "interest." Only a handful of French scientists and educated persons seem qualified to deal with "the broad sweep of ecological questions—and many of those who might be so equipped appear to be uninterested." This sounds as though confinement within their separate disciplines is to their liking. The report in *World* adds that government planners hesitate to introduce university programs

in environmental studies, explaining, "we don't know what kinds of environmental careers will be open to young people in the future." This sounds as though job placement is held to be more important than finding out how to meet the crises in ecological relations.

It is pertinent, here, to listen to a man who was unwilling to wait for "the government" to decide it was time for education in terms of common human need—Buckminster Fuller. In *The Design lnitiative,* published by the World Resources Inventory, Southern Illinois University, Carbondale, Ill., he tells what he learned when, after serving in the Navy in World War I, he became a construction engineer. This experience, from 1922 to 1927, was instructive:

> After having been in the very advanced technology of the Navy and its new air arm, its new submarines, new electronics, etc., I became aware of the fact that the home arts—our so-called peaceful arts—the livingry arts—were millenniums behind the weaponry arts and were only being advanced as a by-product of the high priority weapons race which latter weaponry entirely preoccupied our highest scientific and industrial potential by the supreme authority of our world commerce masters—the only superficial progeny of the earlier master world pirates, and their land brigand henchmen. At the opening of the twentieth century the masters of world commerce were the inheritors of the world-command weaponry and the latter's evolution supporting tools, ergo the masters of world industry.
>
> In 1927, I decided to take the initiative, and without benefit of a patron, to investigate what would happen; what could happen, if world society or its industrial sectors were to apply the highest technology directly to making man a success on earth—not waiting for the new technology to first serve the weaponry and a generation later to piece-meal upgrade the domestic arts.
>
> There were no private, corporate or governmental patrons with inherent need and mandate to underwrite my investigation. No government existed anywhere that said, "I will employ you and continually foster your attempt to make all world men successful exclusively through design science competence." No sovereign governments existed which represented more than a small percentage of "all" people. Governments will only patronize defense of the enterprise of their own respective nations promulgations. No corporations were interested in *all men.* There were—and are as yet—no capitalized patrons, even amongst the great foundations, chartered to underwrite such a comprehensive undertaking. I was convinced, however, that the proposition was worth investigating, so, forsaking the a priori concept of "Earning a Living," I began the investigation in 1927 on my approximately zero capital.
>
> I soon found something that I will now announce to you as holding true, right up to this moment in history—that is: *That no scientist has ever been retained, or hired professionally, to consider the scientific design of the home of man;—to consider objectively the ecological pattern of man,—to design ways of employing the highest scientific potential; towards helping man to be a success on earth;—to implement total man to enjoy total earth;—to enjoy the great antiquities,—each to enjoy the total earth without cost of disadvantage to any other men.* No scientist has even been retained to do such a task. Paradoxically, we speak of our times as the *age of science.*

Quoting from Buckminster Fuller has the effect of throwing our consideration of an ideal or a necessary "core" curriculum into another gear, since it must naturally raise two questions in the mind of the reader. First, it seems evident that whatever "education" brought Mr. Fuller to the views which moved him to action in 1927, it could not have been anything he learned in a public school. The idea of working for all mankind had another source. Then, second, Mr. Fuller was certainly not a "typical" student. While he doubtless learned some of the elements of the physical sciences necessary to engineering by going to school, he was actually an academic "dropout," as he never completed a university education, although he has since acquired a score or more honorary degrees. How, then, would you plan a curriculum for children or young people likely to grow up into Buckminster Fullers? Would it even be the "right" thing to do, from a public-interest point of view, considering how disturbing Fuller often is to conventionally educated people?

The original question, of course, has locked us into position for looking primarily at the issue of curriculum, but quite possibly we ought to look first at the human being. For this purpose it is useful to go back to the Middle Ages. In a paper which explores the original idea of a "liberal education," Robert McClintock proposes that it once meant, given the assumption of the autonomy of the student, all that the teacher can do for him is to provide him with the tools of learning:

> Thus the medieval scholastic, John of Salisbury, asked why some arts are called liberal, gave this unequivocal answer: "Those to whom the system of the Trivium has disclosed the significance of all words, or the rules of the Quadrivium have unveiled the secrets of nature, do not need the help of a teacher in order to understand the meaning of books and to find the solutions of questions."

Obviously, the system and rules change from one epoch to another, but it is still pertinent to ask, as Mr. McClintock asks:

> As education has become a definitive function of the community, have educators maintained the liberal assumption as the foundation of their activities? Do teachers assume that the students to whom they offer instruction are free, autonomous beings?

The key issue seems to be: *Who* is doing the really important educating? Is it the pupil or the teacher? Liberal education is supposed to maintain that the pupil does it, but as Mr. Mcaintock shows, present-day education is not liberal. He writes:

> Exactly when educators rejected this liberal premise is moot. But since mass education developed, the dominant problem for educational theorists has been to assure that students will learn what teachers try to teach. Thus early in the nineteenth century the influential German pedagogue, J. F. Herbart, denied that education as he defined it was compatible with the doctrine of transcendental freedom, the axiom of the student's autonomy. Herbart believed, as do countless others, that it was impossible to educate if the student was already fully free, for in education the student was molded by the teacher, who should sagely shape the inchoate child into an autonomous adult.
>
> Educating a free being seems impossible, however, only to those who have conceptually separated an education from the person who acquires it, and have made the education into something that is done to the student, not something that he does to himself. Be that as it may, with the denial of the student's autonomy, paternalism flourished. Having defined education as the molding of a plastic pupil, Herbart logically made "the science of education"—the science by which the teacher could ensure that the child would learn what the teacher sought to teach—into the major problem of pedagogy.

Obviously, the French university library encountered by the architectural student and the indifference of the University of California to the urgent interest in ecology of the American graduate student are clear evidence that higher education in these countries has "conceptually separated an education from the person who acquires it." This situation, in turn, places burdensome obligations on elementary and high school education which undertakes to prepare students for university work.

But these are not merely problems of liberal education, since parental attitudes are shaped by the practices and the goals set by educational institutions. Illich's condemnation of the entire professionalized system of prerequisites and requirements as a "radical monopoly" seems very much to the point, by reason of the sanctity which education has acquired as the sole avenue leading to human excellence and achievement.

Let us return to another question which was mentioned earlier. Buckminster Fuller, whatever his achievements, is certainly a maverick, a man who breaks molds. Such people, as students, are threats and subversive elements to institutions which separate education from the person who acquires it. For Fuller was probably the sort of student who, in Ortega's view, ought not to be called a student at all, since he tries to shake people's confidence in established beliefs and ways of doing things. (Einstein, it will be recalled, was disliked by his routine-minded German elementary school teachers because he asked so many questions.) But the point is that such persons

grow up into actual *knowers*—their learning has been an intense, fought-for process of personal discovery—while the others, learning only what is passed on to them in school, are little more than believers in acceptable hearsay: they don't really *know,* although familiarity with the hearsay enables them to get along in the world. And the fact is that education, for the majority of people, means mainly learning how to get along in the world.

So, if usage is to govern definitions, we must say that education from the curriculum means having your mind filled with the information that is serviceable for getting along in the world; although, if education is something you do to yourself, then it means determining what you want to know at first hand and refusing to let anything or anyone stand between you and the knowing of it.

Discussing this question in the first chapter of *Some Lessons in Metaphysics,* Ortega identifies this sort of student as one who has an inner compulsion or need to know, while the others have the need imposed upon them by others—by parents, teachers, custom, or by the obligation to find a place in society, that is, a job. Ortega's preference is to limit the term "student" to those who have the need to study imposed upon them—who would not feel this need at all except for some kind of external pressure. The one who is destined to *know,* by sheer personal determination—the Buckminster Fullers, for example—are not, he says, really "students," as we use the word and as the problem of education confronts us. Ortega examines this distinction for some fifteen pages. Unless we differentiate between the man who *has* to know and the ordinary person, a deception is practiced in the name of education. As he says:

> To put a man in the position of a student is to oblige him to undertake something false, to pretend that he feels a need which he does not feel.
>
> But there are objections that will be made to this. It will, for example, be said that there are students who deeply feel the need to solve certain problems that are involved in this science or that. Certainly there are people like that, but it is hardly sound to call them students. It is not only unsound, it is unjust. Because these are the exceptional cases of creatures who, even if there were neither studies nor science, would, by themselves, invent them for better or for worse, and would by the force of an inexorable vocation, dedicate their strength to investigating them. But . . . the others? The immense and normal majority? It is they, and not those other more venturesome ones, who bring into being the true meaning—not the utopian meaning—of the words "student" and "to study." It is unjust not to recognize them as the real students, and unjust not to question with respect to them the problem of what studying as a form and type of human occupation, is.
>
> It is an imperative of our time—I will later explain the serious reasons for this—that we think things through to their naked, factual, and dramatic selves. This is the only way of coming face to face with them. It would be delightful if being a student were to mean feeling a most lively desire for this, that, or the other kind of knowledge. But the truth is exactly the opposite; to be a student is to see oneself as the person obliged to interest himself in the very thing that does not interest him or, at best, interests him only vaguely, indirectly, or in general terms.

Ortega is careful to distinguish this sustained hunger to know from the wonderful curiosity of the child—there are, after all, several levels to learning and knowing—and goes on to show the extreme difference between the man animated by a passion to know, who is a type of those who *create* the sciences and what we regard as the body of our knowledge, and the man who is "the typical student"—"one who does not feel any direct need of a science, nor any real concern with it, and who yet sees himself forced to busy himself with it." Ortega continues:

> This indicates the general deception which surrounds studying. But then comes the stiffening of that deception, almost perverse in its effect, for it does not lead the student to study in general, but to study broken into sectors leading to careers, with each career made up of individual disciplines, of this science and that. And who is going to pretend that a lad, at a certain year of his life, is going to feel the effective need of a science which his predecessors were moved to invent out of their own necessities?

> Thus, out of so genuine and lively a need that men—the creators of science—dedicated their entire lives to it, is made a dead need and a false activity. Let us not spin illusions, in that state of mind, human attempts at learning cannot reach the stage of human knowing. To study, then, is something fundamentally false and contradictory. The student is a falsification of the man. Because man *is* properly no more than he genuinely is, out of his own intimate and inexorable necessity. To be a man is to do only what he irremediably is. And there are an infinite number of ways of being a man, and all of them are equally genuine. One can be a man of science, or a business man, or a political man, or a religious man, because all these, as we will see, are constitutional and immediate needs of the human condition. But man by himself would never be a student, just as man by himself would never be a taxpayer. He *must* pay taxes, he *has* to study, but he is by nature neither a taxpayer nor a student. To be a student or a taxpayer is an artificial state in which man finds himself by obligation.

There is much more, here, on the build-up of "knowledge," which has the unfortunate effect of placing layer upon layer of artificial information between the human individual and the goals of education, until the totality of these layers is really unassimilable, and its volume ridiculous. What, then, shall we do? asks Ortega. It is foolish to say "Stop teaching." We must teach. Then he says:

> The solution to so crude a two-horned problem may be inferred from what I have said; it does not consist of decreeing that one not study, but of deep reform of that human activity called studying and, hence, of the student's being. In order to achieve this, one must turn teaching completely around and say that primarily and fundamentally teaching is only the teaching of a need for the science and not the teaching of the science itself whose need the student does not feel.

Since the question about a minimum necessary curriculum has no answer, save for the familiar dictum of giving the student the "tools," we have not attempted to review various proposals. Far more important it seems to us, are the realities represented by the great autodidacts, and the issues raised by Ortega, to which curriculum is entirely secondary, since these prior realities do not change very much, from century to century, while the curriculum must change all the time. The teacher is apparently both everything and practically nothing. As a trainer in the skills with tools, he amounts to little, but as an inspirer of the importance of feeling or recognizing needs, he is the most precious member of society. In any event, it is clear that as mere "students," in Ortega's sense, we shall never be able to recover our lost authenticities.

REVIEW
THE BONDS OF FRIENDSHIP

IN *Harper's* for March, Herbert Gold writes about the vicissitudes of friendship, revealing a marked talent for psychological observation. Friendship, he thinks, is a distinctively human bond, since it is different from species and family loyalties: it is "an act of pure intention," the seeking of the company of another "unobliged by blood." Yet friends may let one another down. Mr. Gold goes into some detail describing petty faithless acts by which one may "use" a friend, often to his disadvantage. Gold suffered in this way; he tells about a younger, weaker man who had opportunity to do himself good by allowing harm to be done to Gold. Gold, although knowing his friend's weakness, was embittered.

> Was he ever my friend? I thought so, and therefore it was so. We traveled together, and poured out the overflowing hearts of youth, and laughed and dreamed together. His face made me feel fond. My little pal. Our secrets. I thought I was immune to his weakness, though of course his sort of weakness spares no one, parents, wives, children, friends. My fatherliness expired in a petty harm done—a convenience to him. I wrote to him at the time: You would chop my fingers off if you were in the lifeboat and I in the sea. You are always afraid of foundering. You can be no one's friend.

Gold is not especially tolerant of himself. He knows he is the demanding sort—a bookkeeper of faithlessness. Speaking of these "friends," he says:

> They are loyal and true when the friend grows sick or needful, but vindictive and creepy with night hatreds if the friend lets them down. They love. They hate. They treasure injustice with the sweaty focus of adolescent concupiscence. An evil word behind the back, a lazy dismissal of obligation—the sort of thing human beings do all the time, because they are human, evil, and lazy—calls down the maledictions of the injustice collector. He sleeps in a bed of worms. There are many such. Alas, I find myself among their number. The element of disease in this pursuit of perfect loyalty and the continual discovery of failure is not a treat. A doomed ideal is no joy, even to fanatic idealists. Anything that gives so much pain must be given a more pejorative psychological name than quixotic: love of disappointment. Masochism. Mea culpa.

Mr. Gold is a skillful writer, and powerful, too; he is powerful because he is so observant of human nature, of how the psyche performs under stress. He sees that so many people have a low crumpling point, at which they act against their friends. So he made a mournful article out of his unpleasant tabulations, and it makes you think—it makes you think, even though you feel that there ought to be something better to recite about friendship than an inventory of the shabby things people do to their friends. Why not a little of the Damon-and-Pythias or David-and-Jonathan spirit? Has it been lost entirely? Is it that, as an honest man, Mr. Gold *can't* write about such qualities, today? . . . All right, but *why?*

Well, we live in a different age. Apparently, it is a time when only the faint reflection of heroic emotions can get into literature, as in Mr. Gold's final paragraph: "And still friendship matters; it seems to matter more than most things, and to have moral connections to the will more deeply human than mere connection by blood."

So far as we can see, the friendships Mr. Gold describes were shaky for the reason that they were based on only the residues of noble emotions. This seems a way of suggesting that while we are very acute in self-observation, and sensitively aware of human foible and weakness, one reason why we notice these things so clearly is that the general level of motivation has fallen very low. We don't give each other much else to look at. Motivation is low because people are not taken up with noble or heroic projects, these days. They may sometimes feel drawn to them, but this tendency seems to exhaust itself mostly in fantasy. Literateurs and scholars and psychoanalysts talk about the heroic element in epics and myths, and there are doubtless extraordinary men and women "lost in the crowd," but what they do rarely gets into the literature of the times in any positive or vital sense. If you read the best magazines, you are likely to be either bored or depressed by the

high proportion of trivia—in the form of exquisitely written commentary on political figures, middle-class mediocrity, and fashionable preoccupations—which appear month after month. It is all so "well done," but so much of it not worth doing.

It may be for reasons of this sort that an entire generation—or many of its most promising members—are turning away from the accustomed ways of the affluent society and attempting fragile simplicities. The old tribal societies of this and other lands hold great attraction for the young, and there is an attempt at direct dissociation from the habits, tastes, and objectives of the industrialized West.

But it is not only the young who are responding to this impulse. Writers of sensibility have for almost a generation been seeking the essences of tribal life, trying to understand the extraordinary vitality which pervades the more highly developed cultures among the Indians. The work of John Collier is a notable example of the attempt to understand and appreciate the sustaining qualities of American Indian tradition, and more recently Frank Waters has gained a large audience for his novels and studies concerned with the pueblo Indians. In Canada, Farley Mowat has written with deep insight about the Eskimos, and Yves Theriault has in two recent books, *Ashini* and *N'Tsuk*, both Harvest House (Montreal) paperbacks, endeavored to convey to readers the feelings and attitudes of the Montagnais Indian people of northern Canada.

Ashini is the fictional "autobiography" of a sixty-yearold Montagnais hunter whose children are either dead or gone, whose wife died, and who now is alone in the majestic Canadian forest. Theriault has lived with these people and knows something of their feelings. In one place, he tells of a meeting between Ashini and another Montagnais, and the account is suggestive of how "friendship" is understood by these Indians. Ashini had made a fire to prepare his evening meal when the other man appeared:

> "I am Kakatso," he said.
>
> Kakatso, the Raven. A name which expressed well the fine, haughty countenance of the man, who was taller than I, and who resembled indeed a raven, perched, as he watched me. I had heard of him. He was a solitary trapper as I was.
>
> "And I am Ashini," I said.
>
> "The Rock," he murmured. "They have named you well." . . .
>
> I raised my hand, the palm open, and he did the same. . . .
>
> "At the forks of the Mecatina, they were speaking of you."
>
> "I thought of going that way. Later I didn't care to." They must have been talking about the death of my son.
>
> "I have been looking for you," said Kakatso. This was more than he was going to admit.
>
> "I am alone now," I said. "My sons are dead. My wife is dead."
>
> He remained impenetrable, because among our people it is not the custom to show astonishment. The good manners of our race impose this immobility, this impassivity.
>
> (This I tell you so that you may know everything about us. Now that I am far away, and inaccessible, where can you learn what is and what should be, what is not and should not be? Unless in this book of blood. You are probably a white man, who believes he knows it all, and has never learned the only science that matters, that of living.)
>
> "What will you do now?" asked Kakatso.
>
> (And I understood that he had searched for me with the sole aim of helping me if I needed it. Is it not in this way that we form our strongest ties with one another, the men of our great race? By not leaving our brother to despair in vain. Kakatso had not even known that my wife was dead. Only that my last living son had perished by drowning.)
>
> "I have the whole country to travel," I said. "I shall go on." . . . "I shall do as I have always done." . . .
>
> "You will go on," said Kakatso. "That is good."

Here, friendship becomes the golden feeling of meeting the edge of necessity together; there is a strong sense of community in it, of tribal obligation which is also given freely. It must be

done, yet it is willingly done. The meeting of the two Indians is enwrapped in dignity.

Thériault makes articulate the element of brotherly love between these men. Austere and restrained, yet it is there. Ashini becomes a proud exemplar of his ancestral faith. As a man, he deals in dignities as he understands them. He is a Quixote of the northern forests, believing like the Spanish knight that men must respond to the same resonances of the human spirit that he responds to. And he dies in that belief, unnoticed, thought to be momentarily mad.

We learn something of the Indians from this book, but perhaps more of the painful side of the white man's conscience. For it is this which gives voice to the silent Indians. The book is the best of the stone age speaking to the worst of the iron age, but lacking the lift of imagination that may one day lead to reconciliation. It is the literature of reproach—uncompromising, strongly anguished, yet forlorn. Like *N'Tsuk,* the Montagnais woman who speaks also to the whites, Ashini is an old forest god who knows nothing of white men and cannot see beyond the evil they have done. The moral impasse is absolute.

No doubt the whites deserve reproach. Everything that the Indians can say, and more, is deserved. Yet there are also other things to say. Reproaches alone are impoverished since they have no vision. They speak only in an accusing language. And there is more for the white man to say in reply than *Mea culpa.*

The problem, for the white man, is to learn to define his moral necessities for himself by an inner constraint. The great heresy of the Progressive doctrine is that science is eliminating all his necessities one by one. To wait for nature to declare what they really are and not merely to declare them but to *impose* them, would be equivalent to the final failure of the cycle of Western civilization. For to be free is to retain opportunity to set one's own limits, to establish from insight the boundaries and laws of life and to live by them. Not to be free is to have to live under external constraint.

In any event, there will be constraints, and their discovery and definition is a large part of what men call the search for truth. Noble lives and refining examples make the social pattern chosen by people who raise the level of common motivation simultaneously as they free themselves from external control. This, surely, is what is wrong with the "friendships" Mr. Gold examined in *Harper's.* They were forms without enough internally supplied substance, so they collapsed under even a little pressure.

COMMENTARY
THE GUIDES OF CURRENT SCIENCE

READERS who found value in Mumford's *Pentagon of Power* and Roszak's *Where the Wasteland Ends* might gain similar benefit from Joseph Haberer's article, "Politicalization in Science," a socio-historical study which appeared in *Science* for Nov. 17, 1972. Mr. Haberer, a professor of political science (Purdue University), draws attention to the fact that it is no longer sensible to believe "that the solution to our social, political, and human problems lies in applying to them the instruments of modern science and technology." He shows how, step by step, science lost its international character and became a servant of the political objectives of the power states of the twentieth century. Early in this paper he traces the modern conception of the meaning and purpose of science to Bacon and Descartes:

> Modern science has been singularly devoid of any serious concern with fundamental questions—for example, those involving the relations between ends and means. Its overriding instrumentalism has been expressed in its desire to control and dominate nature, almost as an end unto itself. Not an intrinsic love of knowledge, but a Faustian hubris characterized modern scientific temperament. . . . Bacon's concrete proposals reflect an externalization of values: the prolongation of life, the restoration of youth in some degree, the retardation of age, and the curing of diseases regarded as incurable head the list of 33 projects that his research institutes would work on. There is no need to quarrel with these goals as such, but they are surely not ends in themselves. It is precisely here that a hiatus is most noticeable. Neither Bacon nor Descartes was thinking about the possible long-range consequences for society in any but instrumental terms. Borkenau has pointed out that Bacon's *Essays* were "the only psychological writing of his time which did not once raise fundamental questions about the purpose and value of human existence nor the inseparably connected questions of the essential nature of man." The same holds for Descartes, who developed no political theory who put the area of ethics in abeyance, and whose outlook is also permeated by instrumentalism. Obsessed by death, Descartes seeks to conquer death, on the one hand, and on the other to become, through the method of his deductive science, a surrogate god.
>
> These attitudes suggest that the power drive defines modern science and its practitioners far more accurately than does the belief that basic science is a disinterested search for knowledge and for the betterment of man's estate. It seems to me to be of the utmost significance that Bacon and Descartes, the institutional founders of modern science, placed the entire question of social responsibility into a limbo where it remained for the next 300 years.

Mr. Haberer ends his discussion by proposing a return in scientific thought to theoretical and normative questions.

CHILDREN
. . . and Ourselves
THE FIRST NURSERY SCHOOL

IT is impossible not to place a very high value on the reflective reports of highly self-conscious and observant teachers, even though, at the same time, you wonder whether all this "objectivity" is really necessary. It probably is, for some people. That is to say, once upon a time parents probably did a great many good things in relation to the young without thinking about it at all. Back in the days of a more natural environment, and under the strong customs of traditional societies, there must have been an enormous amount of "random" learning on the part of the young, so that there wasn't much point in having schools. The children didn't need to be taught a great deal because they were learning all the time as apprentices to life.

What does this mean? Well, what we are trying to say is illustrated by the part in *Letter to a Teacher* where the Italian boys who wrote it are reproaching their teacher for the silly sort of examinations they have to take in order to qualify for further education. This was the experience of the boys in "physical education," as they described it:

> At the gymnastics exam the teacher threw us a ball and said, "Play basketball." We didn't know how. The teacher looked us over with contempt "My poor children."
>
> He too is one of you. The ability to handle a conventional ritual seemed so vital to him. He told the principal that we had not been given any "physical education" and we should repeat the exams in the fall.
>
> Any one of us could climb an oak tree. Once up there we could let go with our hands and chop off a two-hundred pound branch with a hatchet. Then we could drag it through the snow to our mother's doorstep.
>
> I heard of a gentleman in Florence who rides upstairs in his house in an elevator. But then he has bought himself an expensive gadget and pretends to row in it. You would give him an A in Physical Education.

The point is that sometimes it seems that an awful lot of modern "learning theory" is devoted to understanding the subtle processes that once worked quite well without even being noticed, because life brought them into play naturally—"organically," as we say. This is what our heightened self-consciousness and the power of rationalization has done to us. So now we must do with deliberation what once came naturally.

But up to a certain level it is very difficult to equal, to say nothing of improving upon, spontaneous or even traditional forms of behavior—or some of them. This is a problem of modern man, the man who lives more by the rule of abstraction and intellectual formula than by tradition, and who prides himself on being free of every sort of habitual constraint. What he once learned from necessity and the immediacies of experience he now tries to learn from a planned curriculum, since the environment is to such a large extent man-made. In addition there are modern artificialities to cope with—conventions and rituals which may be just as inhibiting to natural growth as the rigid taboos and confinements of a traditional society were to what we think of as "progressive" tendencies.

This is not to suggest that our heightened self-consciousness is something to get rid of—which is impossible—or that it was a terrible mistake in human development, but only that it makes us vulnerable in ways that are difficult to guard against. We need to convert the communal wisdom of the past into the individual insight of today and tomorrow, and the constraints of custom into meanings chosen because we understand their value. These are great responsibilities, and only those who now have begun to point out the destructiveness of much of our behavior are able to see and say how important they are.

All this certainly applies to the care and "education" of small children. We have a book for review, *Children in "The Nursery School,"* by Harriet M. Johnson (Agathon, distributed by

Schocken, 1972, $7.50), first published in 1998, which illustrates many of these ideas. "The Nursery School" was begun in 1919 as a project of the Bureau of Educational Experiments, an organization brought into being in New York in 1917 by Harriet Johnson, Caroline Pratt, and Lucy Sprague Mitchell, three pioneers of progressive education. It was "the first genuine nursery school in the United States, and Harriet Johnson served as its director until her death in 1934." Hardly anything is "dated" in this volume, as the introductory essay by Barbara Biber makes clear. The children in the school ranged from fourteen months to three years in age. The book has three main sections—what the school set out to do and why, the environment created for the children and how it worked and was used by the children, and, finally, the sort of records that were kept of each child's development, since the school was a research project.

This is a book that parents of very small children or people intending to have children really ought to read, since so much of the common sense in it—and it all seems common sense—is directed at correcting misconceptions about children, what is good for them, and what they ought to do. Miss Johnson knew, first of all, what everyone who works with small children discovers—that the life of the child is a life of endless experiment, of adventuring and discovery. From first-hand experience of the environment, the child gains knowledge and skills. Miss Johnson had a Piaget-like understanding of the growth this represents, and of its crucial importance:

> Miss Johnson regarded self-initiated, experimental play use of materials as a prime medium for learning. It is taking many years to undo the perception of professional educators and scholars, as well as of laymen, that the play of children is an indulgence to be granted but always to be distinguished from the serious business of learning. . .
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> It seems obvious that what she wanted and prized in children and in people could easily be paraphrased as the components of positive mental health as these have been formulated in the many succeeding efforts to create a working allegiance between education and mental health: spontaneity, autonomy, involvement. Society was not waiting open-armed to embrace either these values as a framework for educational goals or the developmental principles presumed to be their catalysts. She was working and writing in a period when rebellion against the stultifying effects of middle-class convention was just in its youth, more particularly, when education was conceived as training, the earlier the better. She considered her school as part of a larger social struggle against the pressures from adults, parents among them, to "train" the child to conforming ways as soon after the first months of babyhood as possible, to have the early years prepare him for the later years—particularly to foster the adjustments that "school" proper would require placing greatest value on a rapid rate of achievement of skills; all in all, conceivably, to have little concern for the values of creativity and autonomy.

The business of the child is his own experimental sort of learning and growth. The process can be assisted, but not hurried beyond its natural pace, since internal rhythms are involved. All this comes out from Miss Johnson's records. Miss Biber also says:

> The most natural form of children's activities is play. Play is a form of experimentation. Work is a form of turning out a product. But play as experimentation is also productive, not of course of representative forms of production, but of the power to produce situations that are vital to an enlarging experience. No one can foretell the course of a child's experience in the years that follow his stay in the nursery school, but the school has done its legitimate task if it has for the time enabled the child to advance in the direction of independence of attitude and self-initiation of activity. . . . The nursery school, therefore, appears as a counter influence against the almost hidden processes by which society through the parents undertakes the premature exploitation of children's interests in behalf of its own conventionalized and not very natural program of life.

Imagine, we have a society in which a new profession—the nursery school teachers—plots against the conspiracy of the parents to mutilate the lives of their children, in order to protect the young from the spurs of conventional motivation for as long as they can! Of course, there are two sides to this matter. In some cases, it seems far

better to keep the children at home, if only to protect them from the well-established *mores* of the four- and five-year-old set and its incredible collection of slang and clichés, but there is plenty of evidence for what the teachers find out about the parents' habits of mind, too. There is a great deal of practical wisdom in what Harriet Johnson says:

> We must also remember that whatever our theoretical ambitions for our children, whatever opinions we may hold about the relative values of occupations and interests, the children will get what we express overtly by our attitudes and our emphasis. If we give much of our attention to correcting their speech or giving them some special techniques, they will tend to the feeling that these things are weighty. If we give a child blocks and then put our emphasis on his making no noise when he builds, upon his putting them away in an orderly fashion in his chest, or upon his sharing with his younger sister and permitting her to demolish his buildings, he may have little interest in real construction. Parents often say that they do not want their children to be vain or self-conscious but if they spend a good deal of thought over their small daughter's clothing and adornment, if they call upon their son and heir to show how nicely he can say a nursery rime or how he can do his daily dozen, self-consciousness and a desire to appear before the public eye will be fostered.
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> The examples are extreme and are given only in the effort to emphasize again this point: education demands an intentional and consistent policy. We must know what traits, what habits or tendencies, what powers and what interests we honestly wish to foster, and our attitude and our behavior in regard to those traits, habits, powers, and interests must be,—will be if we are sincere,—consistently maintained; we must also provide an environment suitable for the kind of growth which we wish to serve. Our role cannot remain a passive one. Our honest inner convictions will take possession of the field.

There is this sort of discussion throughout the book, in relation to particular relationships with small children. And in an urban, affluent society we need this help. Having taken over from nature the formation of the character of the young, we must learn to practice a similar consistency. Either that or go back to the farm!

FRONTIERS

Focus on California

FOR the ordinary person, reading through a couple of issues of *Not Man Apart* is like wandering for the first time into the middle of a three-ring circus, with something exciting or dramatic going on in them all. The paper is a news-print magazine issued monthly by Friends of the Earth, the organization started by David Brower after leaving the Sierra Club. It is skillfully, ardently, and often humorously written by Brower and his cohorts, who are intelligent, sophisticated, and militant people devoted to basic economic and political reform in behalf of the ecological health of the planet. The only thing wrong with the paper seemed to be the assumption that everyone who picks it up is sure to be a well-informed convert to the conservation movement, who is completely "with it" and will know just what all the writers are talking about. That's not really an objection, since hot gospellers are bound to sound like hot gospellers. And this twenty-page tabloid contains large amounts of valuable information.

The February issue, for example, contains long extracts from the Rand Corporation's recent report, *California's Electricity Quandary: Slowing the Growth Rate.* In the opening editorial article, Hugh Nash, one of the editors of *Not Man Apart* (the name of the paper comes from lines by Robinson Jeffers), comments on Rand's conclusions, accepting wholly the major contention that energy consumption must be slowed down, but challenging the idea that this is "regrettable." For one thing, Mr. Nash sees a return to a labor-intensive agriculture as distinctly desirable, as contrasted with the energy-intensive agribusiness approach to farming that is now spreading so rapidly throughout California. Nash's brief, incisive contrast of the two ways to farm is packed with effective generalizations, and since MANAS has recently discussed this question, the following should be of particular interest:

> Agriculture that is energy-intensive is capital-intensive as well. Small farmers, without access to large amounts of capital, can't afford the equipment that uses energy (and can't, probably, long afford to be farmers). The family farm is phased out and gigantic agribusiness is phased in. . . .
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> What are some of the corollaries of energy-intensive agriculture? The "flight to the cities" by former farmers and farm laborers; irrigation and cultivation of marginal lands, which ultimately become saline and sterile; the corruption of well-meant laws designed to help the "little man" (as, for example a wealthy senator's raking in tens of thousands of dollars per annum for not growing things, or the Bureau of Reclamation's violation of basic reclamation law, the 160-acre limitation, by providing virtually free irrigation water to owners of huge landholdings); the sacrifice of more important qualities (such as nutritional value and flavor) to obtain the uniformity of size and the simultaneous maturing needed for machine harvesting of crops; and, worst of all, monocropping, i.e., the cultivation of a single crop exclusively throughout extensive tracts of land. Diversity promotes stability within an ecosystem, simplicity destroys it; and monoculture is as simple as you can get. It spreads a feast before insects and other pests, making it "necessary" to drench fields with pesticides (which "target organisms" develop immunity to, and "not-target-organisms" often fall prey to).
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> Surely we wouldn't accept all these minuses unless energy-intensive agriculture, on balance, offered a plus net?
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> Don't you believe it! Energy-intensive agriculture enriches the already well-to-do, no doubt, but in more important respects, labor-intensive agriculture is clearly superior. Without resort to monoculture, pesticides, or artificial fertilizers, labor-intensive agriculture can produce yields per acre (of superior quality) that energy-intensive agriculture cannot even approach. . . .
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> A similar case can be made against energy-intensive industry. Along with mass production, which admittedly has its attractions, energy-intensive industry tends to promote serious diseconomies such as planned obsolescence (it's "cheaper" and "easier" to replace it than to make it last) and use-it-once-and-throw-it-away items like no-deposit-no-return bottles. Energy intensive industry, like energy-intensive agriculture, demands uniformity; so instead of materials like wood (with its knotholes and grain) and leather (with its inconvenient irregularities), we

> get aluminum and plastics and cookies-cutter design and the choice of either standing chin-up or tip-toe or smothering in our own discarded non-biodegradables.

An early paragraph in the Rand study is the following:

> Electricity use in California has been doubling every 8 to 10 years, and every 8 to 10 years the electric utilities in the state have had to build as much new generating capacity as they have built in all their previous history. The growth of demand for electricity is expected to slow down only slightly in the future. California's electric utilities predict that by 1991 electricity consumption in California will be almost four times greater than in 1970. Meeting this demand means . . . about 60 new power plants throughout the state. The utilities predict that as many as 19 of these plants will burn fossil fuels and more than 40 more may be fueled by nuclear energy.

Ten years later, in the year 2000, a further increase in the demand for electricity is expected to require 70 per cent *more* energy, which would involve "the equivalent of almost 130 *new* power plants, each more than twice the size of San Onofre, the only major nuclear power plant operating in California today." And according to one estimate, if growth in demand matches the projections of the Federal Power Commission, and if the entire coastline is available for sites of plants, "then on the average in the year 2020 there would be a 1000-MW (megawatt) plant every two miles along the coast. . . ."

No wonder Rand predicts that growth in energy consumption will have to "slow down"!

The Rand report is available in three volumes for a total of $11.00 from the Publications Division, Rand Corporation, 1700 Main Street, Santa Monica, Calif. 90406.

Annual subscription to *Not Man Apart* is $5.00: Friends of the Earth, 529 Commercial Street, San Francisco, Calif. 9411.