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AN AGE OF MANY NAMES

VARIOUS honorifics have been applied to the present period, most of them expressive of what may some day be seen as only its superficial aspects. "Nuclear Age" is probably the most familiar, which replaced "Age of Power." Before that, it was "Machine Age." It is the fashion, when writing a book about "progress," to think up a new name for the climax of historical development, which is usually the present moment. "Electronic Age" is perhaps owed to Marshall McLuhan's doctrines, and several designations beginning with Post-, such as Post-Industrial Man, are of recent origin. There are also various pessimistic and despairing terms, drawn from anti-utopians such as Huxley and Orwell, but these may be as exaggerated as the proud titles of a decade or more ago. Meanwhile, we have a name to add to the collection: The Age of Hungering Humans.

There is certainly more longing in the world than there is of understanding of what is longed for. How curious, that in an age of uninhibited power, an age which claims endless diversity in choices among the things men are supposed to want, and boasts of unlimited freedom, there should also be a widespread sense of repression and frustration, and a great deal of mindless revolt and violence for its own sake. So we speak of this time as the Age of Hunger—hunger in the midst of a plenty that does not nourish, and for an increasing number does not even attract.

What then, behind all these façades, do men really want? Avoiding circumlocution, it seems accurate enough to say that a sense of *human meaning* is what is wanted. Apparently, this is something that the typical circumstances and patterns of motivation and behavior of today do not provide.

How is this the case? Again without circumlocution, we may say that the conception of the world on which the major activities in the "advanced" societies are based, shuts out a human sense of meaning. We have some quotations in support of this view. In *Science, Faith and Society*, Michael Polanyi details the origins and progress to universal adoption of the empirical theory and methods of scientific research. In its beginnings, empiricism had a healthy effect. It returned men to the facts of life for what they knew or claimed to know. They learned to distinguish between what they believed and what they had actually experienced. To learn this seemed so important that men intelligent enough to become the shapers of all subsequent thought were convinced that the empirical method was all they would ever need. They were sure, as Polanyi says, that if "they remained firm in their conviction that the critical faculties of man unaided by any powers of belief could establish the truth of science and the canons of fairness, decency, and freedom," this would be sufficient to maintain an even course of progress for civilization. Polanyi continues:

> Thinkers like Wells and John Dewey, and the whole generations of mind they reflect, still profess it today, and so do even those most extreme empiricists who profess the philosophy of logical positivism. They are all convinced that our main troubles still come from our having not altogether rid ourselves of all traditional beliefs and continue to set their hopes on further applications of the method of radical skepticism and empiricism.

We come now to Polanyi's main point:

> It seems clear, however, that this method does not represent truly the process by which liberal intellectual life was in fact established. It is true that there was a time when the sheer destruction of authority did progressively release new discoveries in every field of inquiry. But none of these discoveries—not even those of science—were based

> on the experience of our senses aided only by self-evident propositions. Underlying the assent to science and the pursuit of discovery in science is the belief in scientific premises to which the adherents and the cultivators of science must unquestioningly assent. The method of disbelieving every proposition which cannot be verified by definitely prescribed operations would destroy all belief in natural science. And it would destroy, in fact, belief in truth and in the love of truth itself which is the condition of all free thought. The method leads to complete metaphysical nihilism and thus denies the basis for any universally significant manifestation of the human mind.

Readers wishing a more complete presentation of Polanyi's arguments should go to his major work, *Personal Knowledge* (University of Chicago Press, 1958). Here we turn to a recent paper by Leon R. Kass of the National Academy of Sciences in Washington, D.C., which appeared in *Science* for Nov. 19, 1971. Considering "The New Biology," Dr. Kass is critical of the proposed attempt by molecular biologists to remodel the human organism through genetic alterations or modifications. Until now, he suggests, technology has been applied to the world man lives in and the materials he works with, but the new medical technology contemplates operating on *man himself*. As Dr. Kass puts it: "Engineering the engineer seems to differ in kind from engineering his engine." The proposals for biological remodeling of man have been defended by likening them to other sorts of modification of human behavior through "human engineering," such as "toilet training, education, and moral teachings," but as Dr. Kass says, these latter methods of affecting behavior "are feeble and inefficient when compared to those on the horizon." He adds:

> This quantitative difference rests in part upon a qualitative difference in the means of intervention. The traditional influences operate by speech or symbolic deeds. They pay tribute to man as the animal who lives by speech and who understands the meanings of actions. Also, their effects are, in general, reversible, or at least subject to attempts at reversal. Each person has greater or lesser power to accept or reject or abandon them.
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> In contrast, biomedical engineering circumvents the human context of speech and meaning, bypasses choice, and goes directly to work to modify the human material itself. Moreover, the changes wrought may be irreversible.

Dr. Kass admits quite candidly that the portrait of man given us by science has little place in it for essentially human qualities. Darwinists claim a subhuman origin for man, turning to animal life for the determinants of human behavior or development, while the psychoanalysts regard the rational faculties as little more than a butler service for various appetites. The more recently developed social sciences look upon all ideas of human good as historically and culturally determined, which results in the relativity of moral values. This leads the writer to a further observation on the effects of scientific thinking, operating through the agency of modern technology:

> Such appear to be the prevailing opinions. Yet there is nothing novel about reductionism, hedonism, and relativism; these are doctrines with which Socrates contended. What is new is that these doctrines seem to be vindicated by scientific advance. Not only do the scientific notions of nature and of man flower into veritable predictions, but they yield marvelous fruit. The technological triumphs are held to validate their scientific foundations. Here, perhaps, is the most pernicious result of technological progress—more dehumanizing than any actual manipulation or technique, present or future. We are witnessing the erosion, perhaps the final erosion, of the idea of man as something splendid or divine, and its replacement with a view that sees man, no less than nature, as simply more raw material for manipulation and homogenization. Hence, our peculiar moral crisis. We are in turbulent seas without a landmark precisely because we adhere more and more to a view of nature and of man which both gives us enormous power and, at the same time, denies all possibility of standards to guide its use. Though well-equipped, we know not who we are or where we are going. We are left to the accidents of our hasty, biased, and ephemeral judgments.

This "scientific" view of man, Dr. Kass notes, fails to account for the characteristic human concern for justice, everywhere in the world; it does not explain the wonder of human speech and

it offers no theory of why men engage in moral discourse. From Francis Bacon and the subsequent rules of the scientific praxis, we suppose that making equals knowing. This seems a blindly Faustian outlook:

> If there are no fixed realities, but only material upon which we may work our wills, will not "science" be merely the "knowledge" of the transient and the manipulatable? We might indeed have knowledge of the laws by which things change and the rules for their manipulation, but no knowledge of the things in themselves. Can such a view of "science" yield any knowledge about the nature of man, or indeed, about the nature of anything? Our questions appear to lead back to the most basic of questions: What does it mean to know? What is it that is knowable?

This is a good place for Dr. Kass to conclude his discussion, since these are really questions about meaning for which our age has no answer and no discipline which applies to the kind of thought required. This is one of the reasons, no doubt, why the vast surge of longing which now manifests itself in so many ways seems so amorphous, so inarticulate in its expressions, and so wild and desperate, sometimes, in its declarations and resolves. We are children of a civilization which goes to extremes, and so, by reaction, we are driven by turbulent subjective forces which demand outlet and seem without rational basis for control. The resourceless moral relativism and cold intellectuality of science appear so barren to the youthful protagonists of revolt that rationality itself has come to be at a discount in this time of transition. Meanwhile, exemplars of the balanced and humane use of the intellectual faculties, such as Michael Polanyi and Dr. Kass, are all too few, so that, as Theodore Roszak has remarked, absence of restraint seems to matter more than presence of purpose, while brave doctrines of "liberation" are "nihilism's bait."

There is one culture-wide symptom of the universal hunger of the time that everyone will acknowledge and recognize at once—the extraordinary interest in what is called "creativity." Few words have suffered the monotony of repetition to which this one has been subjected, doubtless because it offers a lifeline of significant "identity" for so many people. The scholarly literature on the subject has grown enormously during the past ten years, and in a book recently reviewed by MANAS, *Creativity & Learning* (Houghton Mifflin, 1967), edited by Jerome Kagan, several of the contributors begin their papers by taking note of the fetishism that has grown up around this once "perfectly legitimate word." The popularity of the idea of creativity is evidence of the universal conviction that man is more than a "machine." In reading the book, however, we were struck by how hard it is to recall its contents, even though we reviewed it a year or so ago. A really "creative" book is one you can't forget, but a book about creativity—even a good one—you can't remember!

There is something unacceptable, perhaps, in explanations of why, in psychological terms, you are moved by a great piece of writing. Appreciation of this sort of analysis comes reluctantly. You want the writer to go home and try being a genius, instead of telling you what it takes. Yet some useful discoveries appear in the findings of these writers. Take for example the comment of E. Paul Torrance on the precept of Progressive Education that "a child must be taught to think critically rather than to accept blindly." From studies of creative activity, he found this precept to be inadequate. It is of course a rule which embodies the empirical attitude or method. He writes:

> We know now that it is not enough to be able to criticize the ideas of others. It is necessary that students be able to produce ideas of their own, to be critical of their own ideas and to use tests that keep them from deceiving themselves. Furthermore, we have learned that in the production of ideas it is sometimes necessary to suspend judgment temporarily to avoid undue interruptions in our thinking. After ideas have accumulated, it is then necessary to formulate criteria for judging these ideas and making decisions. If knowledge is to be used constructively in solving problems creatively, the learner must have a constructive, though not altogether uncritical, attitude toward information. He must be willing to entertain and test the possibility

> that the information may be true and useful. In two different experiments, I found that students who assumed a constructive rather than a critical attitude toward available information were able to produce a larger number of creative solutions and more original ones.

This seems a bit prosy, but the point is that critical thinking is sterile without a strong background of affirmative thought and conviction—precisely what the excessively analytical and sharply critical age in which we live lacks. So the affirmations called for by both Polanyi and Kass ought to be more in demand.

A team of contributors to *Creativity & Learning,* Philip Jackson and Samuel Messick, discuss the qualities of a creative work. It must have, they say, unusualness, appropriateness, transformation, and condensation. The first two qualities can be neglected as more or less obvious. Unusualness suggests the promise of surprise and delight, and appropriateness indicates that the surprise should be more than mere oddity or incongruity. The power to "transform" is a rich conception, meaning that the artist or writer brings together elements which enable you to see important things in a new light—perhaps a revolutionary light. This is of course true only of great works. Finally, condensation means that the work accomplishes a succinct generalization of varied meanings: the artist's simplicity is not empty but full. The work is full of analogues and metaphors; it can be *savored.* It is something to which you will be drawn to return again and again.

Perhaps books like this one are half-way houses along the path to a conscious revival of the creative spirit. All through, while reading it, we wondered about the advisability of putting it down and going to, say, the essays of Thoreau. Everything Thoreau did was some kind of a work of art. Even his one piece of "literary criticism," a discussion of the works of Thomas Carlyle, is an independent work of art, filled with the fire of Thoreau's genius. Thoreau illustrates the point made earlier by Paul Torrance about the necessity of a positive background of thinking. It was this in Thoreau's life which gave his extreme criticism of American society its enormous power. There is the strength of great tree-trunks in his sentences. In considering, say, the questions asked by Leon Kass—"What does it mean to know? What is it that is knowable?"—it might be a good idea to spend a couple hours with Thoreau's books, as armament for such reflections. What did Thoreau "know"? How did he "know" it?

It seems unlikely that Dr. Kass's basic questions will find any "basic answers," but this hardly means that it is profitless to think about them. What, instead of answers, might a man get from *enough* thinking about them?

We live in an intellectual *milieu* which does not take kindly to such simplicities. But what of the men whom we are most likely to admire and respect? Are *they* comfortable and at home in that *milieu.;* We think of a Gandhi, a Dolci, and a handful of others. The best men of our time are at odds with their surroundings. What is wrong with the age? Doubtless many things, but at root it has the defects of its virtues: it suffers from the sterility of excessive criticism and analysis. This sterility is felt everywhere. It shocks and disgusts the young. It drives men of sensibility to seek refuge in far-off places. It makes hermits out of men who might be very useful in the market place or in schools. It is responsible for the cultural malnutrition of the young, the moral distortion of the strong, and the loneliness and impotence of the old.

So, the growing surge of the quest for meaning is slowly coming to the surface and will eventually fill the vacuum. Yet it seems certain, first by hypothesis and second on evidence, that a vast wave of cultural change of this sort will carry on its crest, especially at the beginning, both the debris of the past and the shabby remains of false starts and failures in the present. In so far-reaching a movement of the human spirit, acting and reacting at all levels of human life, what else could be expected? And how could a culture

schooled to give attention only to externals, to the surface of experience, avoid a long series of quite shallow attempts to begin a new way of life? The press, of course, is a collaborator in fixing this focus on superficiality.

To create the materials for another great age of assimilation and refinement and criticism, vast creative undertakings will surely be necessary. Sweeping inspirations grounded in profound convictions concerning the potentialities of the human spirit will be needed for such achievements. We need a platoon of Platos, a company of Emersons, and squadrons of Blakes and Tolstoys to take part in a vast affirmation of the human qualities of human beings, and to make practical demonstrations of the same. We need whole troupes of people like Jane Addams, Simone Weil, and Hannah Arendt.

Is this a vain or extravagant anticipation? Probably. It would be vain, that is, to hope for a massive incarnation of creativity on any such scale. Why should such people, supposing them to be "available," come to expose themselves to a world like ours? It seems fair to assume, at any rate, that creative individuals of this stature do not produce themselves in response to anxious invitation, nor from supplicatory prayer, although some of them might be tempted by concerted efforts to deserve their presence. In short, a society that might be expected to be hospitable to a Plato, an Emerson, a Walt Whitman, and a Simone Weil would give evidence of its mood by honoring what such creative spirits stand for. So far, the best we have been able to do is to cry out with inchoate longing, and reveal our desperate hungers of the heart.

REVIEW
HEALTH FOR THE LAND

TO look for the means to prevent disaster is a natural reaction to America's journalistic style of focusing on the ills and abuses which have overtaken the country, but it is hardly the basis for planning a constructive and fruitful future. A pointed if limited analogy of such shortsightedness is suggested by the observations of Albert Szent-György, the discoverer of Vitamin C, concerning the attitude of the medical profession toward this dietary necessity. Because a small dosage of Vitamin C will prevent scurvy, it is supposed, he said, that this is the proper amount for people to take, whereas the fact is no one knows how much ought to be taken for the support of vigorous good health! In other words, the rules for solving a specific problem may give little indication of what to do in order to establish conditions that will eliminate an entire range of "problems."

Serious publishing in the United States now seems largely given over to describing the activities of "task-forces" devoted to the solution of endless specific problems. The magazines and even the daily papers are filled with accounts of these efforts, and every day new problems emerge to be defined and given attention. Ralph Nader is surely the culture hero of our age, which has manifest need for dozens more like him, if his approach is indeed the only way to meet our common difficulties. There is obvious value in this approach, yet long ago men realized that the truth about life has at least *four* modes, as the Buddha pointed out, and dealing wisely with the confrontations of experience requires at least a threefold way of regarding them, if not the fourfold vision of which Blake eloquently wrote.

It may be necessary to start out with the definition of problems. This, at any rate, is the normal rational response of men who find themselves oppressed by difficulties and suffering increasingly painful maladjustments. But somewhere, early in the course of this response, there needs to begin another kind of search or quest—for a more fulfilling calling or vocation. In terms of bodily analogy, we must want to be strong and healthy, not just to be free of scurvy. Not only the cessation of pain, but some kind of vision, is to be sought, and sought for its own sake, as valuable and good in itself, instead of merely as a solution for "problems."

A book that might serve to illustrate this distinction in relation to the now looming massive economic disaster that seems almost upon us, growing out of multiple abuses of the earth, is Louis Bromfield's *Pleasant Valley*, first published thirty-one years ago, during the second world war, and available as a Ballantine paperback. Bromfield was born in 1896 and spent his childhood years on his grandfather's farm in the Mohican Valley of central Ohio. After a year in the agricultural school at Cornell he came home to run the farm when his grandfather died. He did this for a while, but became restless and went back to college, this time to the Columbia School of Journalism. After less than a year the United States declared war on Germany and Bromfield went to France to join an American ambulance corps attached to the French army. Eventually he became a liaison officer serving the French and the British. He achieved distinction in the army and was decorated several times, obtaining an honorary B.A. from Columbia after the war. Meanwhile, he became a writer, settled in a French country town, Senlis, and began turning out successful books. For a long while he wrote a book a year and, as he said, "made lots of money." In 1939 he returned to the United States, hungering for the land and the place where he had grown up. He bought three farms in the Mohican Valley and began a fresh career as a farmer and rebuilder of the land itself. *Pleasant Valley* is the story of this enterprise, well-told, colorful, packed with the lore of the first settlers, and in places inspiring. Bromfield makes no bones about the fact that he had the money to do exactly what he wanted. He did things on a large scale, but always for a purpose rather than for display:

> The sense of responsibility was strong in both my wife and myself for it had fallen to both of us, not always to our pleasure, to take care of the indigent and black-sheep members of our own respective families even to such remote relationships as third cousins twice removed. It was handed down to us in turn from our respective parents. All through my childhood, our house was always filled with people temporarily down and out. Remote relatives came to my mother's house when they were penniless or ill; they came there to die and be buried from our house. They were married there. Some were conceived and born there. At times whole families descended on us during periods of ill luck. My childhood memories were filled with a sense of being crowded, of living in a moderate-sized house too filled with people, with strong and violent personalities always in conflict. It was not a good way to live.
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> And so, when at last it came to building a house in which we were to live for the rest of our lives, both my wife and myself were under the compulsion, born of childhood memories, of creating a house big enough to shelter all kinds of people and still provide us with a reasonable degree of privacy and human dignity. I earned much money by writing and in the background there was always Hollywood when the money ran short. As George once suggested, there should be plaques placed on each of the farm buildings announcing that "Twentieth Century Fox is responsible for the building of this sheep barn," or "Metro Goldwyn Mayer provided the money for remodeling this cattle-feeding barn." "United Artists, in payment for a short story, built this cottage."

The point here might be, what better use could an affluent American make of his money? Bromfield tells why he settled in Pleasant Valley. First, because he had loved the area from childhood. Second, it was hill country, and he didn't like flatlands. Then he said:

> But there was a third reason, more profound than either of the others. There were things I wanted to prove, that wornout farms could be restored again and that if you only farmed hill country in the proper way you could grow as on any of the flat land where something rich was lacking from life. An old friend of mine said I was buying "some fine scenery." I didn't argue that; there was no doubt of it. You could never find the lonely beauty of the Ferguson place in flat country. And I knew that wherever I had been in the world hill people were quite different from people who lived in flat country. They were freer, and wilder and more colorful. And there was a kind of challenge which I found irresistible, a little I think, like the challenge with which the wilderness confronted the first pioneers. In the space of a little over a century those first pioneers and their descendants had passed over the surface of America like a plague of locusts, "Mining" and destroying the land as they went, until at last they reached the Pacific Ocean. And then suddenly there was no more free land to destroy. That's all there was, there wasn't any more. And slowly, imperceptibly, the fact of that disaster began to make itself felt in the economy of a great nation. The shortage began to make itself felt in a living standard slipping slowly downward to the level Europeans had known for a thousand years. People didn't know what was going on. Neither farmers nor city people. I knew perhaps better than most because I had seen over the whole world what had happened to nations when their agriculture grew sick and their soil impoverished. What happened was first economic sickness and finally death, not only of agriculture but eventually of the nation and its civilization.
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> I knew in my heart that we as a nation were already farther along the path to destruction than most people knew. What we needed was a new kind of pioneer, not the sort which cut down the forests and burned off the prairies and raped the land, but pioneers who created new forests and healed and restored the richness of the country God had given us, that richness which, from the moment the first settler landed on the Atlantic coast we had done our best to destroy. I had a foolish idea that I wanted to be one of that new race of pioneers.

Well, that is what Louis Bromfield set out to do, and he did it pretty well. Malabar Farm has had quite an impact on agricultural practice in this country, as almost a show place. Bromfield took on "settlers" on his thousand acres on some kind of co-op basis, and that seemed to work satisfactorily. His agricultural methods were based on A1bert Howard's pioneering work, *An Agricultural Testament,* and Edward H. Faulkner's *Plowman's Folly,* but he took nothing for granted and the work at Malabar was a continual experiment in how to grow good crops. Most important of all, perhaps, was Bromfield's own heritage. He grew up in the company of a blind great aunt, a wonderful story-teller who spent many hours describing what she

remembered of Johnny Appleseed, whom she remembered well. Johnny Appleseed was a familiar figure in the Ohio country during the frontier days. He never slept under a roof, and while he often visited the settlers for dinner as he grew older he always took his food outdoors. He carried not just appleseeds, which the farmers saved for him, but fennel and Norway spruce, and many of the old Ohio farmhouses have great Norway spruces flanking their doorways. He was gentle, harmless, and no Indian would hurt him. "I think," Bromfield says, "every Indian, every settler, every trader in all that Ohio country must have known him well, much as my great-grandfather knew him."

These were some of Bromfield's reasons for loving the land. Another was that he learned from his father, who, as he says, all during his life "was passionately interested in two things—the restoration of ruined farms and the restoration of run-down or unruly horses." He continues:

> In my boyhood in our rich county there were farms which were already out of circulation through erosion or greedy farming. We always had two or three of these farms at a time and my father's efforts to restore them were primitive in comparison with what can be done in these times.

Yet his father's methods, he says, were sound as far as they went, and the whole family, boys and girls, took part in these salvage operations. When it came to Bromfield's own efforts at Malabar—this was the name he gave his farm—he had all this experience behind him, plus a trained agronomist as a partner. Moreover, he chose land that was not ruined beyond repair, since the foundation of glacial moraine made a basis for developing new topsoil.

But Bromfield was only one man! That, one could reply, is what makes him important. The kind of restoration our society needs will hardly come about except through the invention and resourcefulness of individuals. What Bromfield accomplished is vastly encouraging evidence of how much a single man can do; not only by himself, but as a focus in which he is joined by others. The model supplied by Bromfield is a model in attitudes and determination, not only a model for acts.

COMMENTARY
BROMFIELD AS PROPHET

A HARD-HEADED, technology-minded critic of Louis Bromfield's 1943 book, *Pleasant Valley* (see Review), might argue that Bromfield's pessimistic predictions about the American economy were poorly founded, since, as E. F. Schumacher has pointed out, during the twenty-five years which followed World War II, the industrial output of the world, including that of the United States, vastly increased. And this suggests an affluence far from confirming Bromfield's belief that the standard of living in the United States is "slipping slowly downward." Today, Bromfield might be identified as a forerunner of the present "doomsayers" who are said to unsettle public opinion needlessly with their dire predictions.

It is likely that the novelist spoke out of strong moral emotion, along with what he had observed of the decline of the farmlands of central Ohio and other parts of the country. Conceivably, he was not aware of the resourcefulness of industry and the adaptability of modern technology. But was he altogether wrong, or wrong in principle? Concurrently with the extraordinary progress in industrial activity that has taken place since 1945 there has been a distinct change in the *kind* of production behind a great deal of the expansion in both agriculture and industry.

For example, Barry Commoner (in *Environment* for last April) has pointed out that from 1950 to 1968 the total horsepower of automotive vehicles increased by 260 per cent, and the use of motor fuel by 90 per cent. Again the use of nitrogen fertilizer in agriculture rose 534 per cent per capita between 1946 and 1968. In industry, he shows, a large number of synthetic products have replaced natural ones. Commoner also points out that the enormously diversified plastics industry produces goods which do not fit into nature's disposal systems, often consumes large quantities of non-renewable fuels to obtain high temperatures needed for production processes, and in many cases requires the use of mercury as a catalyst in the manufacture of the synthetic compounds which have been massively produced during the last thirty years.

All this activity may have pushed the totals of the Gross National Product up to high levels, but the cost to the environment in sudden growth of this sort can no longer be concealed. Actually, a delay in recognizing the basic truth in Bromfield's analysis may only make the trends he saw increasingly difficult to change or reverse.

CHILDREN
. . . and Ourselves
A PLACE THAT DESERVES FAME

A BOOK that was published in 1970—one we wish we had known about the day it came out—is *Letter to a Teacher* (Random House), written by eight Italian schoolboys, fifteen and sixteen years old, and translated by Nora Rossi and Tom Cole. The authors are called the Schoolboys of Barbiana, a settlement of some twenty farmhouses in Tuscany, not far from Florence. Barbiana is a very small place, yet it has a church, built in the fourteenth century, and in 1954 Don Lorenzo Milani, a remarkable priest, was sent there from another town where he had conducted a night school for working people. In Barbiana he saw a related need. Most of the children of the farms scattered about the area had been flunked out of school or were bitterly discouraged by their experiences in school. Don Milani began a "private school" for them, starting with about ten boys between eleven and thirteen. After a while there were twenty boys in his school. He showed the older boys how to teach the younger ones, and they studied not only academic subjects but also the problems they had in their own lives. Intimately connected with these problems was the trouble with the Italian school system and its teachers. The school at Barbiana died with Don Milani in 1967, but the work with the children continues, being carried on by some of the boys he inspired and helped. According to the Introduction:

> When one of the translators visited Barbiana in the summer of 1968, a group from an orphanage in Florence was camped there, and some of the "old" Barbiana students—now aged sixteen or seventeen—were teaching the younger kids. Gathered around rickety tables, under the trellises, in the kitchen—children of all ages were hard at work everywhere. In the autumn, the school of Barbiana officially moved to Calenzano, where some of the former Barbiana students, together with old friends and other pupils of Don Milani, have opened a regular *doposcuola* for both young boys and adult students. It consists simply of one large room with a blackboard and some chalk, a few books and many voluntary teachers. Yet in that air, too, there breathes the enthusiasm of Barbiana and a sense of the future.

A *doposcuola* is an "after-hours" school, which is of particular importance in Italy, since the regular school-day comes to an end at 12:30 or 1:30 in the afternoon, leaving a great deal of time to the children. It is evident from *Letter to a Teacher* that at least some of the boys who wrote it were going to a regular school in the morning and attending the Barbiana *doposcuola* in the afternoon. In any event, a comparison of the two experiences laid the basis for the "Letter," which took the eight boys a year to write. While the Letter appears to be by a single person, that person is a composite of all eight, and the "teacher" to whom it is addressed is a type of the kind of teacher they all knew from exposure to the school system. The letter is far from being merely an emotional protest. Objections to the school system are closely argued, with many illustrations of the rigid and impractical character of Italian public education. The boys made a careful study of the entire system and included pages of statistical analysis and charts along with their text.

It is especially good news to learn that the original book, published in Italy, became a best-seller there, and that it has been translated into several languages besides English. Actually, what these boys say becomes a blow-by-blow confirmation of the fundamental criticisms of conventional education made more than a century ago by Tolstoy, and also of Ivan Illich's analysis in the present. The publishers have added "postscript" comments by Robert Coles and John Holt. In one place, Dr. Coles says:

> The book shines with candor and with the concrete, aphoristic wisdom I have been privileged enough to hear these past years from American "boys" whom I think these eight from Barbiana would be pleased to spend time with and come to know. "To come out alone is stinginess," struck me right off, because in Mississippi several years ago I heard almost the same thing from the fourteen-year-old son of a tenant farmer: "I do believe that the white man,

he wants us to get like him and look after no one but yourself and maybe your family." And in Boston's ghetto, only weeks before I sat down to read this book, a ten-year-old child told me, "If you worry about the next guy, you'll never finish your own work, that's what the teacher said; but he's my brother, the next guy, only I didn't tell her."

Holt begins his comment:

What does this eloquent, angry book, written by a group of Italian boys about their school in a forgotten community, have to do with America, American youth, American education?

A great deal. In fact, practically everything.

What makes these remarkable boys and their book important is this: they saw clearly that to be uneducated, ignorant, is to be isolated, shut off from their past, or their true place in the present; shut off, moreover, from any understanding of themselves and their own strengths and talents or the problems and needs of their fellow men, and thus from any possibility of using that strength and talent to meet those problems and needs. To be shut off, in short, from the whole human enterprise.

The "Letter" begins with an account of the experiences of a boy when he first comes to the school at Barbiana. Then comes a report of two "town" boys who have been flunked in the intermediate school—the three grades preceding high school which were made compulsory by Italian law in 1962. An extraordinary proportion of Italian schoolchildren, from peasant and worker families, are flunked by the teachers. The following tells about the two boys who came to Barbiana for help:

Sandro was fifteen; five feet eight in height; a humiliated adult. His teachers had declared him an imbecile. They expected him to repeat the first intermediate for the third time.

Gianni was fourteen. Inattentive, allergic to reading. His teachers declared him a delinquent. They were not totally wrong, but that was no excuse for sweeping him out of their way.

Neither of them had any intention of repeating. They had reached the point of dropping out and getting jobs. They came over to us because we ignore your failing marks and put each person in the right grade for his age.

Sandro was put in third intermediate and Gianni in the second. This was the first satisfaction they ever had in their unhappy school careers. Sandro will remember this forever. Gianni remembers once in a while. . . .

Sandro became enthusiastic about everything in a short time. In the morning he devoted hours to the same program he would have studied in the third intermediate. He would take notes on the things he didn't know and at night poke around in the books of the first and second intermediates. This "imbecile" took your exams at the June session and you had to let him pass.

With Gianni it was harder. He had come to us from your school illiterate and with a hatred of books.

We tried the impossible with him. We succeeded in having him love not every subject, but at least a few. All that we needed from you teachers was to pass him into the third intermediate and to give him lots of praise. We could have taken upon ourselves to make him love the rest.

Instead, a teacher said to him during the oral exam, "Why do you go to a private school, boy? You know that you can't even speak properly?" . . . .

We certainly do know that Gianni can't speak properly.

Let's all beat our breasts about that. But most of all, you teachers, who had thrown him out of school the year before.

Fine remedies you have. . . .

This was our first contact with you. Through the kids you don't want.

We, too, soon found out how much harder it is to run a school with them around. At times the temptation to get rid of them is strong. But if we lose them, school is no longer school. It is a hospital which tends to the healthy and rejects the sick. It becomes just a device to strengthen the existing differences to a point of no return.

And are you ready to take such a position? If not, get them back to school, insist, start from scratch all over again, even if you are called crazy.

While the boys went to school at Barbiana to become teachers, as most of them decided they would do, they had to pass examinations given in the regular schools. This was the comment in the

letter on an examination after three years of intermediate school:

> At the oral examination we had a surprise. Your students seemed to be bottomless wells of French culture. For example, they spoke with great knowledge of the castles of the Loire.
>
> We found out later on that this was the only thing they had studied all year. They had also prepared some selections from a syllabus and could read and translate them. If an inspector happened to pass by they could put up a better show than we could. The inspector does not venture outside the syllabus. Although you know perfectly well, and so does he, that that kind of French is useless. And for whom are you doing it? You do it for the inspector. He does it for the school superintendent. And he does it for the Minister of Education.
>
> That is the most upsetting aspect of your school: it lives as an end in itself.
>
> But your students' own goal is also a mystery. Maybe it is nonexistent; maybe it is just cheap.

The passage about physical education is too good to omit:

> 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.

Letter to a Teacher, as John Holt says, is an angry book. But there is more compassion in it than anger, and more generosity than bitterness. Students like these can hardly help but grow into wholly useful adults. They are that already, of course.

FRONTIERS

Two Extremes

READERS who missed the *New York Times* article, "The Seven Wonders of the Polluted World," by Richard Curtis and Dave Fisher, printed last year, may be interested to know that a shortened version of this minor masterpiece is available in No. 10, 1971, of the *Newsletter* of the Society for Social Responsibility in Science (221 Rock Hill Road, Bala Cynwyd, Penna. 19004). The writers tour the seven high-points (or bottomless pits) of the several different sorts of pollution which have gone completely out of control in various parts of the world. The account is composed in the sprightly style of Swift's *Modest Proposal*, and while the reader might like to believe that this tour is equally fanciful, he knows that everything reported is grimly true.

The tour takes its passengers twelve miles out of New York harbor, where sight-seeing commences with the spectacle of twenty square miles of filth, treacly to the bottom of the ocean, all dumped there over a period of forty years under permit from the Army Engineers. It is five million cubic yards of treated sewage towed to this spot by barge, plus six million tons of dredging spoils, annually, and 365 million gallons of raw sewage poured from the Hudson River, *daily*. Naturally, all marine life in the vicinity is dead. The refuse deposited in this area includes objects as large as "huge chunks of decayed piers," so that, as the writers put it, these waters are "scarcely safe for anything smaller than dreadnaught class ships."

Next stop is Venice, where a combination of refinery fumes and naphtha produced by soft coal used for heating, along with motorboat exhausts, dead rats and poisoned fish create a unique urban atmosphere for a city once known as the Queen of the Adriatic. Wastes from nearby factories emit so much vaporous sulphuric acid that the marble statues of Venice are eroding at the rate of five per cent a year, according to a local art authority.

Another sort of infection is overtaking London, where eager real estate operators are hiding the city's most beautiful architectural landmarks with a monotone of skyscrapers. St. Paul's is pushed out of sight by a bank building, and the House of Parliament, Westminster Abbey, and Big Ben (now called *little* Ben) are overshadowed by Shell Oil's new "tombstone of boardroom architecture" which has a twenty-four-story tower. On to Calcutta, where a city built in 1888 for a population of two million has seven and a half million humans packed within its limits. Some 77 per cent of the inhabitants have 40 square feet to call "home," and a quarter of a million live on the sidewalks. Population density in Calcutta is about 100,000 to a square mile.

Next stop Vietnam, where the feature of the day is what bombs and other modern efficiencies have done to the landscape and the forests. Sawmill operators there must spend one to three hours a day repairing saw blades because of the shrapnel in the trees they are cutting up, and a total of 6.5 billion board feet have been destroyed by defoliant and other destructive operations. We are now using bombs so big, one of them can level an area the size of a football field for helicopters to land on.

Tokyo's air pollution must be far worse than Los Angeles smog. "On a recent summer day the density of carbon monoxide in the air rose to 74.5 on a scale where 20.0 represents serious peril." The cherry trees are dying fast, and the Japanese have asked Washington for some sprigs or slips of the trees they gave America fifty years ago! Surgical masks are common on bad days.

Last stop in the tour is the Hanford atomic energy facility near Richland, Washington, situated only 240 feet above the water table of the Columbia river. There, just beneath the surface of the ground, are tanks preserving some 55 million gallons of concentrated radioactive waste, so hot that it will go on boiling of itself for years, and be violently toxic for tens of thousands of years. A few gallons of leakage of this waste into a city's

water supply would contaminate indefinitely, yet this nuclear installation is located in a seismically unstable area. For a happy ending, Curtis and Fisher remark gaily that the tanks haven't leaked *yet*, they've only come close to leaking, and only a few times.

To encourage investigation of the *SSRS Newsletter*, we might add that its reviews of scientific books bearing on such subjects are valuable, one in this issue being of Jay W. Forrester's *World Dynamics*, which is apparently a tough-minded "computer simulation in which human activity and its environmental setting are regarded as a unified global system." The absolute necessity and inevitability of an end to industrial growth is a major conclusion of the book. The reviewer looks to a more balanced sort of "growth" as a result—in, say, "courtesy, craftsmanship, and quiet, to mention only a few things."

But what the data that are used in such simulations do not include is the sort of thing that one can see by looking out on the streets, a lot of the time. In the *Radcliffe Quarterly* for December, 1971, Emily Townsend Vermeule, an archeologist who teaches at Radcliffe, tells about the return to simplicity and even a "primitive" way of life chosen by many of the students. This is what she sees on Harvard Square; and, musing about it, she says:

> For much of the wave of anti-intellectualism, among young and old, I think mass education is itself responsible. Many institutions and many students have confused education with earning a living. . . . So many years in school, the years to be composed of so many hours at such and such costs per hour standard quantities of standard information poured in, so much mastery of history and mathematics, of sciences and languages and citizenship, then the mind emerges as an officially-approved product tested by a licensed inspector, with the college brand-name upon it, ready for the consumer market.
>
> What next? *Time* magazine tells us there is small call for teachers or humanists, large demand for computer programmers and systems analysts. This is no accident, intelligence has been thoroughly confused with machines. . . .
>
> Think what some students are dropping out of college to do: to become artists, to be apprenticed as carpenters or landscape gardeners, run day-care centers for three-year-olds, learn difficult languages by traveling, in short, to get back in touch with their own creative powers, with the land and children building and exploring, back in action instead of passive products in a factory.

This is the other extreme of human decision and action and between the two, if one must choose, there can be hardly any doubt as to where the future lies. The one represents the stubborn excesses of failure, the other the tender, yet tenuously strong beginnings of something new.