VOLUME XXX, NO. 42
OCTOBER 19, 1977

THE PROCESSES OF CHANGE

THERE is a single undercurrent or theme having a "How long, O Lord, how long?" strain in most of the serious writing of the time. People want to know when the deep realization that there *must* be far-reaching changes in the way human beings live will begin to be translated into decisive acts. One setting of this question is provided by an interview with George McRobie in the *Futurist* for last April. The interviewer, Jean Drissell, asked Mr. McRobie, co-founder with E. F. Schumacher of the Intermediate Technology Development Group (in London), how, conceivably, the consumption patterns typical of the rich countries might be transformed into something better. To the key question, "How will this difficult attitude change occur?", McRobie replied:

> Probably in two ways: First, change will occur when a lot of intellectuals point their noses in the same direction and say, "Look, this is how things are, and they have got to stop."
>
> The other way that change will come is by force. I've had discussions with farmers and big ranchers, mostly in California, who say, "We are not going to be allowed by the developing countries to get cheap raw materials to feed animals or provide cheap food for the United States." Our food is subsidized by developing countries, but that will stop as population grows in developing countries, standards of living rise, and the developing countries process raw materials before exporting them. We are going to spend more and more on food, and that means we will spend less and less on other things. That in itself will force a change in consumption patterns. I see all this happening in the next five to 10 years.

Mr. McRobie also sees the possibility of a reversal of the migration to over-crowded cities in the beginnings of the rehabilitation of rural areas:

> . . . people do not migrate into the cities because they're attracted by cities, but because they're pushed out of the rural areas. The idea that people see the bright lights and gallop away is apparently not true. . . . The city is the rich country; the rural area is the poor country. The rural area is still used by the city as a source of raw materials, a source of people; the city sucks life out of the rural area, so the rural area becomes more and more stagnant. If there is an effort to put life and intelligence back into a rural area, as in the case of the International Rice Research Institute in the Philippines, things happen. How could they help but happen? The IRRI had the technology and the capacity to discover the needs of the farmers and provide them with useful, workable solutions.

Asked when the habit of exploiting nature will be given up, McRobie said: "When the present generation of school kids, who have a very different attitude, start taking over, about 10 years from now." Other pressures will combine with the attitudes of the young. Speaking of Britain, he said:

> We've lost control of the labor force. Totally. People are demanding things, acting in ways which were unthinkable 50 years ago, or 25 years ago, or 10 years ago. The old hierarchical disciplines have gone. Fear has gone. You say to a chap, "You'll be unemployed," and he'll say, "Stuff it. I don't care. I can live on social security. And if you kick me out in a way that is unfair, they'll all come out with me."

Some businessmen see the handwriting on the wall from what the young are saying:

> They're aware that they're under pressure from ecology because their own sons and daughters are saying to them, "We're not coming into your business, not on your life. You're a stinking lot. We're going to become sociologists or do something else."
>
> That's very bad for production, because somebody has to produce, and these guys are being told by their own children that they are doing a public disservice, while all the time they thought they were doing something good. And they're really worried. I think the same is true of a lot of American businessmen. You'll hear the same thing if you talk to the heads of business firms—not to the executives halfway down and certainly not to the damned advertising agents.

Henry Skolimowski, a teacher of philosophy, examines the grip of past attitudes and practices in an article in the Spring *Michigan Quarterly Review* He says that thinking about the potency and promise of technology and the technological approach has become the *philosophy* of the Western world.

> Our affection and attachment to it [he writes] is not a stupid infatuation with superficial gadgets. It is rather a residue of a long intellectual tradition, a residue of our longing for freedom via the instrument we have created and perfected. This instrument, though it may sound paradoxical, has been endowed with more than merely instrumental functions: it was conceived as an instrument of liberation, as the vehicle of freedom, as a Noah's Ark: of hope, of prosperity, of progress. All these longings are built into our notion of technology. . . .
>
> Let me repeat, technology is a state of Western consciousness. When we think "Technology" we invariably think "control" and "manipulation." This is one of the fundamental reasons which prevent us from taming the existing technology and for the same reason our "most efficient" ways of dealing with present dilemmas result in the further undermining of our civilization, for these more efficient ways consist in further manipulation and fragmentation, the processes which are at the core of our troubles.

This is not in the least an attack on technology *per se*, but a criticism of its mechanistic assumptions as a philosophy of life. In other ages, technology remained an instrument under control:

> . . . technology flourished in China in the 14th century, that is *before th*e Western Renaissance happened and *before* our scientific revolution occurred. There are two important implications of this state of affairs. First, it is not true (as we so often contend) that when technology flourishes it always brings about external change. In 14th-century China technology flourished but there was no need for change because technology perfectly met the demands expected of it. Technology was then kept in a subdued position, as a deferential tool, not the spearhead of progress. From the Western point of view the contention "there was no need for change" is an expression of backwardness, stagnation, decay. But the Chinese civilization was doing quite well at the time. We must realize that the difference in outlook on change between the 14th-century Chinese mind and the modern occidental mind is not a small peripheral issue, but that it signifies different castes of mind, indeed different world views. . . .
>
> Only history will tell where lies the ultimate wisdom: in ancient Chinese culture which deplored change, or in Western culture which has hailed change and has chosen it as a major modality of existence. Actually, history is already beginning to tell us. We are becoming increasingly aware and persuaded that the period of the explosive material growth is coming to an end and this definitely means the end of the period of incessant external change, thus the end of further change as a vehicle of progress. We are clearly heading toward a steady state—one form or another.

Well, what sort of citizen will we need to make a steady-state civilization all that it should be, or as much as it can be? What sort of attitudes need to be modeled to give the change momentum? As a man recently restored to current interest by publication of his biography (by E. P. Thompson, Pantheon), William Morris would be a splendid example. Poet, artist, craftsman, businessman, and determined utopian, Morris provided a climactic anticipation in the nineteenth century of attitudes that should or must prevail in the twenty-first. *A Saturday Review* (June 25) critic ends his appreciation of *William Morris: Romantic to Revolutionary* by saying:

> The chief question left after reading this excellent work is: How can we get such complete human beings as William Morris? Without such individuals we certainly will not get a *humane* collective revolution. Almost his last words were, "I want to get the mumbo-jumbo out of the world." In his dying days, Burne-Jones's wife, Georgiana, with whom Morris was very close, spoke to him of the life of the poor, and he burst into tears. And when Arnold Dolmetsch brought his medieval musical instruments to Hammersmith, where Morris was confined, and played just the opening phrase of a pavane and galliard by William Byrd, Morris cried out with joy. He said, "I cannot believe that I shall be annihilated."

We include this quotation in our collection not to suggest that Morris happened to be an emotionally susceptible man, but to show the

quality of the assumptions and longings which in his case were consistent with what now seems an ideal individual and social life. Such feelings need to be taken into account, since they may have been the inner resources which kept Morris going in a career which, according to his doctor, accomplished the work of ten men.

Morris was ancestor and prophet. Are there contemporary signs of change? Today there is increasing recognition of our best pioneers. Aldo Leopold in particular is one whose thinking is being incorporated into the basic attitudes of a great many people. The title of the concluding section of *A Sand County Almanac,* "The Land Ethic," is now almost a byword of the new feeling toward the land and all nature. Letters to the Summer *Sierra Club Bulletin,* amplifying a previous discussion of Leopold's idea, point out the built-in ethical imperatives added to a science which takes ecological considerations into account. One correspondent traces the multiple application and development of Leopold's views in recent years—in Christopher Stone's *Should Trees Have Standing?,* in Peter Singer's *Animal Liberation,* and in such books as Schumacher's *Small Is Beautiful* and Jacob Needleman's *A Sense of the Cosmos.* This writer, Bill Devall, concludes:

> Leopold pioneered in the "scientific management" of wildlife, and was one of the first to recognize that we should have designated wilderness areas. His land ethic was the culmination of a lifetime of experience in wilderness and farmlands. But we must build on his ideas. Important philosophical and political discussions have occurred during the last twenty-five years. The next step will be a comprehensive philosophical treatment of the emerging ecological consciousness.

The point of Henry Skolimowski's article in the *Michigan Quarterly Review* is that a way must be found to free ourselves from the scientific and technological rationality which relies on the methods of industrialism and dominates the thinking of the present. Interestingly, in an article in the *San Francisco Bay Guardian* (Jan. 20), Theodore Roszak suggests that the "sprawling" self-help and growth-center scene, which he names the "Aquarian Frontier," for all its romantic excesses, hedonistic preoccupations, and wildly extravagant vocabulary, has beneath and beyond it a profound reorientation of human thought. The introspective searchings of our past, even our immediate past, whether puritan or Freudian, he says, have been mainly operations dredging up guilt which plays upon fears.

> That at least [Mr. Roszak writes], has been our cultural orthodoxy. For many people, it is still the foundation of the personality and the basis of moral resolution. They therefore fear whatever weakens the ingrained sense of unworthiness. Moreover, I suspect that it is out of this restless sense of guilty fear that much of the work discipline and entrepreneurial energy of our society derives: these are the displacement of a tormenting discontent into the surrounding world. We turn out and away from ourselves because inside is terror and the abyss. Our escape is into history, our penance is "progress."

These tensions made by guilt, he says, are not necessary. There is another view of self: "Indeed, it is by now notorious that the imported Oriental disciplines teach our inherent divinity." The new spirit of psycho-religious inquiry leads Roszak to ask:

> But do we not sense within us the possibility of a finer, more positive and mature ethical conduct—a sense of authentic conscience that responds naturally to the good and needs no shame to make its power felt? Can we not begin to feel that conviction stirring within us, beneath the silly little guilts that people now, quite remarkably, find it so easy to declare to the world without shame? That, at least, is the brightest promise of these new explorations in the higher human potentialities: a morality born of innocence, a decency that springs from delight. . . . I suspect that a society of innocence (if there should ever be one) would lack all of the psychic compulsions on which industrial discipline is based. Innocent people will not submit to the punishment of alienation; they are apt to demand too many rights in the world—not last or least of all the right to relax and enjoy.

The concluding part of a comment by Gil Friend (of the Institute for Local Self-Reliance) on *The Unfinished Agenda,* a recently published guide to environmental issues (in a letter to *Not*

Man Apart for July), deals with the need to give environmental thinking a social radius:

> So many features of modern society which appear as aberrant behavior on a superficial level may in fact be properties of a system in which small minorities of people control concentrations of productive resources. The myth of many individuals' pursuit of individual advantage processed through the marketplace to yield maximal social benefit ("what's good for General Motors . . . ") breaks down in the face of such economic inequity, as does the essentially regulatory approach. . . . In each case, direct accountability, and, more crucially, an aligning of individual (or corporate) and social rationalities, is absent, and will remain absent without basic restructuring of our economic lives.
>
> Environmentalists must begin to go beyond bandaids—and even tourniquets—to explore that restructuring. Farmland owned by those who work it, housing by those who live in it, factories and businesses by those who work in them, mineral and natural resources by us all—production for human need replacing production for private profit. These are not solutions to all our problems, but they are necessary conditions to moving toward those solutions.

The point is that merely "bandaid" solutions which leave basic attitudes unchanged have the effect of making us ignore those "necessary conditions" which, while hardly solutions in themselves, are nonetheless the foundation for the far-reaching reforms that must take place. This returns us to Henry Skolimowski's paper in the *Michigan Quarterly Review*, which has this conclusion:

> We must understand that any attempt to humanize the present system by injecting human values into it is doomed to failure, for the system is extremely resistant to such "cosmetic" operations. The present order of Western man out of which have grown our ways of life, is based to a large degree on quantitative, instrumental values. It is in terms of these values that most, if not all, social and political assessments are made. The structure is exceedingly complex and its various parts beautifully support each other.
>
> It is not sufficient to decorate the present quantitative system with some human values by injecting human considerations here and there. As long as the quantitative instrumental basis remains unchanged and channels its imperative via descriptive science, via industrial profit-efficiency-oriented technology, via economics geared to free enterprise, the order of things will remain the same, and we shall have to endure the same quantity-ridden life which is imposed on us.
>
> In conclusion, philosophy of technology conceived as philosophy of man (i) insists that technology is subject to human imperative and not man subject to the technological imperative;
>
> (ii) insists that man respects the delicate balances of nature and permits only such an instrumentation of the world that enhances these balances without undermining them;
>
> (iii) insists that man's knowledge is not power to control and manipulate, but power to understand and to mesh into the larger scheme of things;
>
> (iv) insists that man's concept of progress does not mean the extinction of other creatures, but the enhancement of man's spirituality and sensibility;
>
> (v) insists that we learn a fundamental lesson from societies and civilizations, which we have contemptuously treated in the past, but which have preserved sanity, unity and coherence by consciously integrating themselves into schemes of things larger than the pursuit of material progress.

How shall we understand what it takes to accomplish such things? When we know the answer to this, we shall have some idea of what we—each one of us—ought to do. One suspects that the answer is mysterious, virtually mythic in content, if it is capable of such broad application. Yet a passage in a book recently published by the Garland Library of Peace and War, *The Radical "No"*—the letters and writings of Evan Thomas, edited by Charles Chatfield—seems to contain the ingredients of an answer. In April, 1917, this man who later became known as an absolute pacifist and a distinguished research physician, wrote from England to his mother in the United States:

> Yesterday, as I was returning to Manchester on the train, there [were] in the same compartment with me two soldiers chaffing at each other at a great rate over the luck of one of them. who was back [from World War I] for the third time with only a slight wound. In another corner of the carriage was a man

reading the *Nation,* a magazine now kept by order in this country and over which there has been much discussion of late. The man looked up and, addressing the by-no-means thoughtful looking Tommies, asked them what they thought about an argument in the *Nation to* the general effect that the Allies could not win the war, therefore, why keep on with the war when Germany had offered negotiations? One of the Tommies quit his joking and laughing long enough to look around, and in a quiet voice answer, "Well, by G—! We can try." The man made no answer, and a moment later the two soldiers were hard at it again grousing and laughing and joking; but there in a nutshell you have my objection to a certain type of liberalism.

That Lancashire soldier, who had probably never had more than an elementary education, had answered the very intellectual *Nation* in a sentence, and answered it in a way that ended all further argument. Also he had answered it in a way that upholds my belief in the real nobility of human nature. To argue that the war should be stopped because Germany can't be beaten is no argument at all. The bulk of mankind is not made that way. They want some better proof than mere words. Germany can't be beaten? "Well, we will have to have a go at her anyway and find out." That spirit to me is most hopeful and I rejoice when I see it, for it shows me the stuff that man is made of. It also proves that actions speak louder than words and that the only real proof of anything in life is action. Human nature does not stop and quit because you say a thing can't be done. That is the great hope of progress and also the great assurance of progress. Oftentimes it may lead a man to butt his head against a stone wall, or to walk over a precipice: . . . enlightenment and knowledge can remedy that. But without the other spirit all would be in vain. Man, in other words, learns by experience, not by precept alone. After all, the glory and wonder of man is that he is really so free from authority. Authority plays a huge part in his life, to be sure, but there is always that spark within that says, let's try and see. Therein lies man's claim to divinity and the hope of the future.

REVIEW
"THE FUTURE OF THE HUMANITIES"

THE value of this book by Walter Kaufmann is beyond question. Published at a time when the familiar scientific theory of knowledge is being challenged, along with a noticeable rebirth of interest in old philosophies, religions, and literary classics, *The Future of the Humanities* (Reader's Digest Press, $8.95) supplies the reader with a clear understanding of what "the Humanities" includes. It establishes their importance as a resource for education and explores the reasons for their present lack of vitality as the foundation of culture and civilization. The author, known for his work on Nietzsche and Existentialist thinkers, states his position at the outset:

> The humanities are in deep trouble. Those whose business is with higher education agree that something needs to be done. But as yet there has been insufficient discussion about what has gone wrong and about goals. My aim is to offer a diagnosis and a view of why and how the humanities should be taught. In the process it should become clear that what is at stake is nothing less than the future of humanity.

In answer to the question, "What are the humanities?", Mr. Kaufmann says:

> Six large fields are often referred to collectively as "the humanities": the study of religion and philosophy, art and music, literature and history. In colleges and universities the first four are usually pursued in separate departments, while literature is studied in many departments of which each is devoted to one language or group of languages, such as English or Romance Languages. These six fields are contrasted with the natural and social sciences. The humanities used to be considered rather more prestigious, but at least since the Second World War the natural sciences enjoy the greatest prestige and financial support, and the social sciences though unable to point to any comparable accomplishments, bask in the reflected glory of being "scientific." Many historians would rather be considered social scientists than humanists, and so would many professors in other "humanities" departments. This is one of the problems that face the humanities.

Mr. Kaufmann writes as an academic—a man who works in an institution of higher learning. He finds the conditions in such an institution set against what he is convinced ought to be done with the material of the humanities. He makes a persuasive analysis of what he believes to be wrong and offers some remedies. At root his diagnosis is based on the differences among human beings in their role as teachers. In his loose classification there are four basic types: Visionaries, Scholastics, Journalists, and Socratics. When the scholastics control education, the visionaries are shut out and the Socratics are ignored. Journalists plausibly exploit the status quo; they are not looking for the truth but only a "good story." The great and inspiring themes to be found in the humanities come from visionaries. But no one knows how to produce visionaries, nor is there any established means of recognizing them when they appear.

What then must we do? The answer is clear: We must cultivate the Socratic spirit. Socrates made no claim to being a visionary, a teacher of "the truth," but he fought all his life to keep the way open to recognition of authentic vision—and that, according to Mr. Kaufmann, is what teachers of the humanities ought to do. That is, they should be faithful to the *spirit* of Socrates, even though they fall short in the practice of his art.

What is a Socrates? He is a man who asks unpopular but necessary questions. He begins by being disturbing. The real Socrates began in this way, but he ended by being inspiring. In other words, people moved to alter their lives by Socratic utterance or reflection grow in integrity, courage, and determination to seek the truth. So there is *implicit* teaching in the work of a Socrates. But you do not promise or predict this result, but simply point out that great things sometimes happen from following the Socratic example.

How does one make a beginning? Mr. Kaufmann gives one example:

> Socratic teachers do not have to be visionaries. They do not need to develop views of their own. Teaching social philosophy, for example, a Socratic teacher might begin by having the students read Dostoevsky's "Grand Inquisitor," then Tolstoy's *My Religion*, T. S. Eliot's *The Idea of a Christian Society*, and Milton's *Areopagitica*. The students would be confronted with powerful and eloquent statements of radically divergent views. They would be free, of course, to agree with any of the authors read but would soon discover that they could not very well agree with many of them. They would be led to question the views presented to them—as well as their own views and the common sense of their parents, their friends, their society.
>
> Teaching comparative religion or the history of philosophy, a Socratic teacher might exert himself to bring to life each view—each vision—that is studied, lending it his own voice and confront the students with a series of challenges.
>
> The Socratic ethos is critical, but in many courses it would be implemented best by teachers who excel at sympathetic understanding. Precisely those lacking a powerful vision of their own that requires detailed development might find a sense of fulfillment in bringing to life the visions of others. But the point would not be purely histrionic or aesthetic. The central motive would be to question our orthodoxies and the students' views now from this point of view and now from that—and to question each one of these alternative points of view from the others. A strenuous task? Yes. A rewarding and exciting one that - the students would both enjoy and profit from? Yes. A task for which one needs to be a visionary? No. A task that one could *learn* to perform? Yes.

Something might be said here about the fact that we recognize as a vision or visionary only the more spectacular reaches of independent expression, while these wonders must have had their beginning in some simple reality of being human. We might say that this reality is formed by a combination of self-reliance and the determination to know. In the work of the great or very great, the radius of achievement growing out of this combination seems unique, but it is not. It is the example of a native capacity of all humans carried far beyond the common practice. If we assume this, the importance of the Socratic example is evident: Its critical testing protects us from being deluded by the flashy performances of others. It teaches us how to distinguish between what we know and what we merely "believe."

The four sorts of minds described by Mr. Kaufmann—the visionary, the scholastic, the journalist, and the Socratic—might be regarded as representing the varied potentialities of each human. The man whose imagination is active in a disciplined way is one in whom visionary power seems foremost. The scholastic has ordering capacity. A visionary without *some* ordering capacity is of little use to anyone, although now and then he may fertilize the thought of another having more balanced faculties of mind. The journalist represents the skill of simplifying and dramatizing, ideally for educational purposes. He has to learn to do this without distorting and without dropping out essentials, and without pretending to supply any finalities. But in practice, journalism is commonly guilty of all these abuses, mainly because journalism is a business, a way of making money instead of a service to readers.

The Socratic art provides protection against visions without good foundation, against order without freedom or escape hatches from conventional belief, and against journalism which, elevated to a minor art, becomes the sophists' stock in trade. The perversion of the Socratic undertaking is illustrated by the cleverly dramatic iconoclasts who have learned the trick of discrediting every form of intellectual or moral daring. This is no more than covert self-justification, since they lack deep convictions of their own.

At present, Mr. Kaufmann maintains, education is very largely in the hands of the scholastics. Who are the scholastics? They are persons or teachers who do not question the assumptions of their professional activity. They are found in the sciences as the "normal" or "book-keeping" scientists who, as Thomas Kuhn has suggested in *The Structure of Scientific Revolutions*, carry on " 'puzzle solving' within an

accepted framework," resisting any change in the framework. They stress rigor in method and rely on the consensus of the majority of scientists as authoritative. "They are usually hostile to contemporary visionaries, especially in their own field, but swear by some visionaries of the past." Their dominance today, blighting classical studies by their imitation of the scientists, has trivialized nearly all work in the humanities. Mr. Kaufmann says:

> The question facing us is not whether it would be better for all professors to be scholastics or for all of them to be Socratic. Since World War II our faculties have become more and more scholastic, and the question is whether we can afford the extinction of the Socratic ethos. . . . my interest in the survival of the Socratic type is prompted by a deep concern not for mere variety but for the future of the humanities. The point is not that it would be a great pity if we had one type less than we used to have; it is rather that *the humanities require a mix in which the Socratic type is an indispensable ingredient.*
>
> . . . the most crucial fact was that after World War II higher education was extended to far greater numbers of students than ever before. It ceased to be a privilege to which a few were entitled, and became highly competitive. Rather suddenly, masses of new teachers were needed, and in the process academia became infinitely more professional, scholastic, and anti-Socratic.

There seems a sense, therefore, in which *The Future of the Humanities* is a book at war with itself. The excellent reforms Mr. Kaufmann would like to see adopted have too many built-in resistances to them in the very structure and bigness of present institutions. Bigness requires bureaucratization, and there is never room for a Socrates where bureaucracy rules. To do what Mr. Kaufmann wants would mean expecting practically all teachers to perform like heroes. This is not likely to happen. For real changes to take place, it will be necessary to make integrity in teaching less expensive and conformity less rewarding—goals that are probably impossible in big institutions. The first step worth talking about, so far as we can see, would be to admit that real education may be the most "unprofitable" activity a human being can attempt.

COMMENTARY
MOTIVE AND KNOWLEDGE

THE paragraph of quotation from Evan Thomas which ends this week's lead illustrates a quality of perception that lies at the foundation of all effective peacemaking activities, while seeming on the surface to praise the courage that leads men to war. Quite evidently, for Thomas, the courage (indomitable resolve) was the essential, not the cause it served.

But wasn't Thomas, an absolute pacifist, here admiring an attitude that lends full moral justification to war, with all its hideous consequences?

On the contrary, he was isolating from war and honoring a quality which, if more widely possessed—especially by those in a position to take nations into war—would sooner or later renounce all military conflict and violence as a national policy. He saw in the self-sacrificial spirit of the soldier on the train the hope of all human good. He knew that real peacemaking could not exist without it. He is declaring that when men choose for the right reasons a bad course of action, sooner or later they see their mistake and correct it. But without integrity at the outset, there is little or no learning from experience. When doing what seems right is put aside for expedient considerations, the meaning or lesson in what results is invariably hidden or distorted. When people compromise with *themselves*, all experience speaks to them in the language of calculated deceit, and this, Thomas saw, continually reproduces the circumstances and beliefs that make for war.

There is among human beings a rare fraternity of those who, for reasons difficult to discern, respect the integrity they recognize in others above everything else.

> Oftentimes it may lead a man to butt his head against a stone wall, or to walk over a precipice: . . . enlightenment and knowledge can remedy that. But without the other spirit all would be in vain.

What sort of "knowledge" would serve as remedy? Well, honorable men might well become absolute pacifists when the several realities behind a recent statement by an American politician, objecting to the Panama Canal treaties, become wholly clear. He said: "No country has ever observed the terms of a treaty if it suited its national purposes to break that treaty."

CHILDREN
. . . and Ourselves
A HUNDRED YEARS AGO

FORTY years ago—in the *Nation* for Jan. 9, 1937—Bertrand Russell described the course of modern thought, and therefore of modern education, during the years when the full impact of the scientific revolution, called the Enlightenment in cultural terms, was making itself felt. At first scientists and other thinkers were able to believe that their work was a vindication and expansion of religious faith. Newton certainly thought this, and he was not alone. These early investigators were convinced that they were "setting forth the wonders of Creation and bringing men's imperfect beliefs into harmony with God's perfect knowledge." The Church, however, was an unwilling collaborator in this division of authority, and the *philosophes* who gave intellectual justification to the revolutions of the eighteenth century saw less and less reason to concede any part of the growth in knowledge to divine participation. As Russell said:

> When with the progress of the Enlightenment this belief began to grow dim, there still remained the True, the Good, and the Beautiful. Non-human standards were still laid up in heaven, even if heaven had no topographical existence.
>
> Throughout the nineteenth century, the True, the Good and the Beautiful preserved their precarious existence in the minds of earnest atheists. But their very earnestness was their undoing, since it made it impossible to stop at a halfway house. Pragmatists explained that Truth is what it pays to believe. Historians of morals reduced the Good to a matter of tribal custom. Beauty was abolished by the artists in a revolt against the insipidities of a philistine epoch and in a mood of fury in which satisfaction is to be derived only from what hurts. And so the world was swept clear not only of God as a person but of God's essence as an ideal to which man owed an ideal allegiance; while the individual as a result of a crude and uncritical interpretation of sound doctrines, was left without any inner defense against social pressure.

This seems a peculiarly accurate account, not only of cultural attitudes, but also of what happened to Russell himself, if we read his "A Free Man's Worship" (1903), in which he gloried in unrelieved pessimism, disdaining all "humanizing myths." And since, in 1962, he declared that his outlook on the cosmos and on human life was "substantially unchanged," adding that he no longer regarded "ethical values as objective," we can only admire the strength of his own "inner defense," while noting that such resources were available to very few others.

There was, however, a "golden moment" which marked the apex of the rule of the True, the Good and the Beautiful, coming toward the end of the nineteenth century, when the dogmas of religion had been rendered powerless by the impressive labors of Darwin, Huxley, and Spencer. The decay of moral conviction that Russell summarizes so succinctly had not yet become evident at this time. What may be the best example of this rather wonderful balance is the poetry of George Meredith, who reached some sort of philosophical peak in the 1880s.

Who reads Meredith today? Nobody, or practically nobody. We are not really suggesting reading him, but want to use his work to illustrate the kind of synthesis between science and religion that became possible as a result of the Enlightenment, even though, for reasons needing investigation, the harmony achieved was unable to last. Here we use Lafcadio Hearn as interpreter, since he saw the synthesis so clearly, and was able to expound and justify it with more enthusiasm than any other critic of his time, probably because he had himself found in Buddhism deeper and stronger grounds than Meredith was able to provide. The poem to which Hearn gives attention, for his students in the University of Tokyo, is "The Woods of Westermain," published by Meredith in 1883. The forest, Hearn says, symbolizes the struggle of human life. "He [Meredith] talks to you about the laws of the universe, the laws of life, the laws of nature—never about the laws of any God or any religion." The first lesson nature teaches man is—in

Spencer's words—"to be a good animal." From the very struggle for existence man—

> has found
> Firm roadway between lustfulness and pain;
> Has half transferred the battle to his brain,
> From bloody ground . . .

Hearn comments:

> At first he knew only desire, like an animal; his wants were only like those of an animal. But gradually nobler desires came to him, because they were forced upon him by his constant struggle with death. He learns that one must control one's desire as well as to fight against other enemies. From the day man discovered that the greatest enemy was Self, he became a higher being, he was no longer a mere animal. When the poet speaks of him as "transferring the battle to his brain from bloody ground," he means that the struggle of existence today has become a battle of minds, instead of being, as it used to be, a trial of mere physical strength. We must every one of us fight, but the fight is now intellectual. Notwithstanding this progress, we are still very stupid, for we try to explain the laws of the Universe according to our little feeble conceptions of moral law. Or, as the poet says, we insist on thinking about Nature "with the passion Self obscures"—with that selfishness in our hearts which judges everything to be bad which gives us pain. Until we can get rid of that selfishness, we shall never understand Nature.

Incidentally, Darwin himself might have approved Hearn's reading of the poet, and the poet's reading of nature and evolutionary law, since he wrote to Wallace in 1864: "I had got as far as to see with you that the struggle between the races of man depended entirely on intellectual and *moral* qualities."

Now come verses of considerable obscurity in which Hearn discerns a cosmic optimism:

> But that the senses still
> Usurp the station of their issue mind,
> He would have burst the chrysalis of the blind:
> As yet he will; . . .
>
> Yet will when his distempered devil of Self;—
> The glutton for her (Nature's) fruits, the wily elf
> In shifting rays;—
>
> That captain of the scorned;
> The coveter of life in soul and shell . . .
>
> He singularly doomed
> To what he execrates and writhes to shun;—
> WHEN FIRE HAS PASSED HIM VAPOUR TO THE SUN,
> AND SUN RELUMED.

Delighted, Hearn comments to his Buddhist English students in Japan:

> Here we might well imagine that we were listening to a Buddhist, not to an English poet, for the thought is altogether the thought of an oriental philosopher. . . . Let us loosely paraphrase the verses quoted:
>
> The end to which the senses of man have been created is the making of Mind. If man were not blinded and deceived by his senses, he would know what Nature is, because the divine sight, perhaps the infinite vision, would be opened to him. But the time will come when he shall be able to know and to see.
>
> What time?
>
> The time when the selfishness of man shall have ceased, when he shall no longer think of life as given to him only for the pursuit of pleasure; when he shall have learned that he must not desire to live too much, and that the body is only the shell of the mind; when crime and cruelty shall have become impossible—when this world shall have come to an end.

Yet man will still *be*, since he is part of the eternal:

> The earth will go back to the sun, out of which it came . . . and the universe will disappear, and there will thereafter be another universe, with other suns and worlds, and only then, after passing through the fires of the sun, perhaps of many suns, will man obtain the supreme knowledge.

The sun, Hearn seems to think, is made of Promethean fire, the mind of man of the same luminous stuff, and finding this in Meredith's lines, he puts them in capitals to impress his students with the fact that an English poet believed, with Oriental teachers—

> that the essence of life does not cease and cannot cease with the destruction of our world. Only the form dies. The forces that make life cannot die; they are the same forces that spin the suns.

Hearn is convinced that all this is quite scientific. In the science of tomorrow, it may be so. Meanwhile, what a way to teach literature!

FRONTIERS

A Great Land Repair Project

IN 1972, when fifteen-year-old Andy Lipkis first learned that the smog-polluted air of Southern California was killing the vulnerable conifers in the area at the rate of perhaps 50,000 ponderosa and jeffrey pines a year, he organized a student tree-planting corps to put into the ground smog-resistant species (sugar pine, coast redwood, and others) which have a better chance to survive. Today this group, now known as the Tree People of the California Conservation Project, each year involves some five thousand schoolchildren in planting and nurturing to stability many thousands of baby trees. The survival rate is high because of the careful selection and potting of seedlings and the care after planting (regular watering) of the little trees.

A similar and in some ways more difficult problem has been solved (in principle) in the eastern United States by a seventy-two-year-old man, William G. (Turk) Jones, who figured out a way to reclaim land left in acid ruin by strip mining operations. Calling Turk Jones a "Johnny Appleseed for Our Time," the *Reader's Digest* (August) tells how his brother-in-law, a road contractor, began to do strip-mining to keep his earth-moving equipment busy when no cement for roads was available. Since Pennsylvania had a law requiring strip miners to put mined land back in condition, the contractor asked Turk to do what he could (Jones had been a biology major at college). The raw wounds in the earth could be covered up, but the sulfuric acid pollution caused by ripping out the coal presented serious problems. Mr. Jones studied the forestry journals and found that a European species of white birch would grow in quite acid soil. He scattered a few pounds of birch seed, and a season later the barren land began to green. Then he learned that a fast-growing hybrid (quaking aspen mated with north European giant poplar) could be grown from cuttings. He stuck little rootless sticks of the hybrid into the soil, and was delighted to find that in one summer they grew seven feet tall. This astonishing success put Mr. Jones in the reforestation business, since a lot of strip miners needed to obey the law.

Today forestry people from all over come to his tree farm (on land where his brother-in-law first strip-mined), twelve miles from his home in Philipsburg, Pa., to study how Turk Jones makes trees grow and prosper under very adverse conditions. Already some of the hybrid poplars have a diameter of twenty-six inches, and there are 800,000 trees of more than 120 species on the farm. The barren moonscape left by strip-mining is seen no more, practically hidden by a layer of rich humus. However, Jones is careful to warn inquirers that while the methods he has developed will work in many places—he has grown trees in areas where the water table is 100 feet down—reclamation may be more difficult in the arid West. Meanwhile, in the Pennsylvania region of his tree farm, "there are ponds nearby, once acid enough to dissolve nails, but now teeming with bass and bluegill." And if anyone picnics at the farm, "30 hybrid blueberry bushes, six feet tall in season, yield berries for desert."

Planting trees may not be a miraculous solution for the world's economic ills, but it's probably the closest thing to it that people can start to do themselves. In his foreword to *Forest Farming* by Douglas and de Hart (Watkins, London), E. F. Schumacher strongly recommended tree planting as the salvation of India, saying:

> One of the greatest teachers of India was the Buddha who included in his teaching the obligation of every good Buddhist that he should plant and see to the establishment of one tree at least every five years. As long as this was observed, the whole large area of India was covered with trees, free of dust, with plenty of water, plenty of shade, plenty of food and materials. Just imagine you could establish an ideology which made it obligatory for every able-bodied person in India, man, woman, and child, to do that little thing—to plant and see to the establishment of *one tree a year*, five years running. This, in a five-year period, would give you 2,000 million established trees. Anyone can work it out on the back of an

> envelope that the economic value of such an enterprise, intelligently conducted, would be greater than anything that has ever been promised by any of India's five-year plans. It could be done without a penny of foreign aid; there is no problem of savings and investment. It would produce foodstuffs, fibres, building material, shade, water, almost anything that man really needs.

Mr. Schumacher puts in a separate paragraph the unique virtue of trees as a renewable fuel. They are the greatest collectors of solar energy known to man.

Early this year a professor in a college in Wadi, Rajkot, India, appealed along these lines in a letter to President Carter, pointing out that the high-technology aid programs brought to the developing nations by the Western industrial countries have caused millions of rural people to lose their jobs, driving them to the cities where they die of want, hunger, and disease. This Indian teacher, N. C. Tejpal, proposes that aid should always involve use of idle man-power. Using men instead of machines would allow a drastic cut in the use of fossil fuel. He also says:

> All over the world there are billions of acres of culturable land which might be made productive by propagating fruit trees, medicinal plants, and trees for fuel; this would create productive jobs for millions of people. Trees are renewable energy and nature's storehouse of sun energy. . . .

During his last visit to this country, Mr. Schumacher spoke of the possibility of such a program for England, emphasizing the importance of food-producing trees. Another teacher, Robert Paehlke, professor of political studies at Trent University in Ontario, Canada, provides (in Environment for May) an ominous survey of what is happening to the still plentiful forests of his country. Most of southern Canada is forest, and half the paper used by the newspapers of the "free world" is made from Canadian trees. Ten per cent of the world's productive forests are in Canada, including seventeen per cent of the world's coniferous growing stock. While in theory Canada is growing a little more than the lumber industry cuts each year, Mr. Paehlke fears that "sustained yield silviculture is practiced by only a few relatively more progressive companies." In every Canadian province except Prince Edward Island—where last September the New Alchemists installed their solar-heated and wind-operated Ark—pulp and paper are a major industry, and in British Columbia, which for years provided a quarter of all Canada's forest yield, it will take centuries to replace the giant trees now being cut.

For Canada, the problem is a difficult one. The country exports nearly go per cent of its forest products and the interested companies point out that these exports must continue if Canada is to have adequate funds on the foreign exchange markets.

This is the other way of thinking about the role of trees. Its only virtue is that it can't last.