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AN UNEASY INQUIRY

THERE are some subjects that have enduring importance and need to be understood, yet are without an easily accessible "handle" for definition. One of these is "Orthodoxy," the term having come to us from religious history, meaning the set of organized beliefs accepted by a majority or a large group within the existing society. The vernacular term now often used to describe the orthodox view is "mainline," as applied to generally adopted beliefs, against which individual or heterodox opinions are set in contrast. Meanwhile, the term "orthodox" has acquired a wider usage, being applied to any mass of prevailing opinions—those which, as Ortega put it in *Man and People*, need no defense because they are already taken for granted.

The shapers of cultural orthodoxy are sometimes spoken of as "the Establishment," a term of recent currency. This expression originated, according to Henry Fairlie, a British writer, who claims parentage (in the *Manchester GuardianWeekly* for Feb. 3, 1980), some twenty-nine years ago. In his *Guardian* article he deplored its subsequent "vulgarization."

> The definition I gave it—which the Oxford English Dictionary repeats, and more or less adopts as its own—was explicit and firm on one point. "The Establishment" is not those people who hold and exercise power as such. It is the people who create and sustain the climate of assumptions and opinion within which power is exercised by those who do hold it by election or appointment. . . .
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> Not only is it not power as such which they possess, but it is wholly mistaken to think in terms of any conspiracy. They are a number of men and women with certain very strong assumptions of their own, and with influence to make these assumptions prevail in society as a whole. . . . They keep power at arm's length—as if too fastidious to touch it—but lick it into shape at their dinner tables. It is this feeling that the rules are set by a number of little-known people which "the Establishment" was meant to capture, and although the notion may be hardly susceptible to sociological analysis, it is perhaps none the worse for that.

Changes in orthodoxy take place when there are those who emerge in a society with another set of "very strong assumptions," as in the case of the passage of American public opinion from loyalty to the crown of England, originally a deep-seated emotional bond, to the independent spirit voiced by Tom Paine and the founding fathers of the republic. This was a very painful time, with much confusion concerning right and wrong, and how one should act. There were, after all, fine men and women among the Tories, as historians have shown, yet their opinions were replaced by a visionary conception, voiced by both Paine and Washington, and others who were genuine pioneers rather than succeeding "Establishment" figures.

There is, however an irony here, for the vision of the high role of the United States in world affairs—seen not only among the leaders of the new country but also by distinguished European thinkers—as it became widely adopted, led to braggadocio and national conceit. As a Washington-based journalist remarked a few years ago, our successful war for independence led to a "tremendous surge of pride," and "a national sense of superiority" resulted, "which became a part of American folklore." The abortive war with Britain which began in 1812 was partly caused by this feeling.

A little more than a half-century later, the expression, "Manifest Destiny," gained currency, after its first use by newspapers in 1845. As a California historian, John Carl Parish, said in a paper, "The Emergence of the Idea of Manifest Destiny," published by the University of California in 1932:

> The phrase apparently caught the attention of a Congressman who carried it to the floor of the House of Representatives, whence it began echoing back and forth across the country. The slogan played its part in the stirring scenes of the three years from 1845 to 1848 during the period we admitted Texas into the Union, received title to Oregon waged a war that ended with the acquisition of two-fifths of the territory of Mexico, and came into possession of our western oceanic frontage. Thus equipped with a name to conjure with, the idea has continued to hold a place in our national consciousness.

For a time "Manifest Destiny" was used to express the right of Americans to possess the whole continent, but as Tristram Coffin showed in the *Washington Spectator* (July 1, 1980)

> This was expanded considerably by William Allen White in the *Emporia* (Kans.) *Gazette* in 1899: "It is the Anglo-Saxon's manifest destiny to go forth as a world conqueror. He will take possessions of the islands of the sea. . . . This is what fate holds for the chosen people."
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> The next year, a famous orator, Senator Albert Beveridge of Indiana, announced: "God has not been preparing the English speaking and Teutonic peoples for a thousand years for nothing but vain and idle self contemplation. . . . No, he has made us master-organizers of the world to establish system where chaos reigns. . . . He has marked the American people as His chosen nation to finally lead in the regeneration of the world. This is the divine mission of America. . . . The Philippines are ours forever. . . . We will not renounce our part in the mission of the race, trustee under God, of the civilization of the world."

At about this time President McKinley told a delegation from the Methodist Episcopal Church that he didn't really want the Philippines, but that "there was nothing left for us to do but to take them all, and to educate the Filipinos, and uplift and civilize and Christianize them, and by God's grace do the very best we could do by them, as our fellow men for whom Christ also died." This decision came to him, he said, after a night of anxious prayer.

One historian, Julius Pratt, writing in 1936 in E*xpansionists of 1898*, traced support for the Manifest Destiny idea to a passage in Charles Darwin's *The Descent of Man,* where the evolutionist called the American the "heir to all the ages," an idea picked up by John Fiske, eminent scholar and Darwin's disciple in America. Fiske wrote for *Harper's* in 1885 an article titled "Manifest Destiny," in which he saw the fulfillment by Americans of evolutionary theory. He said that the English who colonized North America were destined to go on until "every land on the earth's surface that is not already the seat of an old civilization shall become English in its language, in its religion, in its political habits and traditions, and to a predominant extent in the blood of its people." (This is taken from Pratt's first chapter, "The New Manifest Destiny.")

The emergence of new orthodoxies, brought about by literate Establishment figures, is by no means only political. Later historians, among them the clear-thinking Lewis Mumford, have thrown light on these transitions. In one of the early chapters of *The Pentagon of Power* (1970), Mumford speaks of the American Dream as conceived by Thoreau, Emerson, George Perkins Marsh, Melville, and Whitman, saying:

> This New World utopia, this promised land, was soon buried under the ashes and cinders that erupted over the Western World in the nineteenth century, thanks to the resurrection and intensification of all the forces that had originally brought "civilization" itself into existence. The rise of the centralized state, the expansion of the bureaucracy and the conscript army, the regimentation of the factory system, the depredations of speculative finance, the spread of imperialism, as in the Mexican War, and the continued encroachment of slavery—all these negative movements not only sullied the New World dream but brought back on a larger scale than ever the Old World nightmares that the immigrants to America had risked their lives and forfeited their cultural treasures to escape.
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> As a result of this setback, the mechanical New World displaced the "romantic" New World in men's minds: the latter became a mere escapist dream, not a serious alternative to the existing order. For in the meanwhile a new God had appeared and a new religion had taken possession of the mind: and out of this conjunction arose the new mechanical world picture which, with every fresh scientific discovery,

> every successful new invention, displaced both the natural world and the diverse symbols of human culture with an environment cut solely to the measure of the machine. This ideology gave primacy to the denatured and dehumanized environment in which the new technological complex could flourish without being limited by any human interests and values other than those of technology itself. All too soon a large portion of the human race would virtually forget that there had ever existed any other kind of environment, or any alternative mode of life.

Here Mumford is considering major alternations in what are spoken of as "world-views," and we may ask, can a world-view be called an "orthodoxy"? For its innovators, manifestly, the outlook they are generating is not an orthodoxy, but rather a series of fresh generalizations about "reality" growing out of a pioneering effort to formulate abstractions which apply to aspects of nature and life that have not before been recognized, but now seem of fundamental importance. Yet, with the passage of time, and when general acceptance of the formulation is achieved, the resulting view becomes an orthodoxy for those who accept it without themselves going through the exploratory and reflective process which established its assumptions. For the creators of a world-view, their outlook is much more than a set of "beliefs," and for maturing individuals who seek intellectual and moral growth through continuous reality-testing of the ideas they encounter in life, the weaknesses and passivity of orthodoxy as a frame of mind hardly exist.

These considerations are well illustrated in what we think of as "scientific progress." The real achievers in science are less likely to suppose that their discoveries are a form of final truth than their followers, who tend to see only security in what has been established, instead of a launching platform for further discovery. From this point of view, an orthodoxy can be regarded as the hear-say of an age, giving the time its historical character. The study of the history of science helps to illuminate this process.

In the early days of scientific discovery in Europe, the pioneers were obliged to be careful not to offend the authorities of the formidable religious orthodoxy of the time. When they failed to do this, they suffered the penalties of their daring, as in the case of Giordano Bruno, who was burned at the stake in 1600 for his refusal to retract what the Inquisition condemned as heretical statements. As a philosopher Bruno had championed the discoveries of Copernicus and declared that space is filled with a countless number of solar systems, each with its central sun and planets. He admitted that he could not understand the religious teaching of the Trinity and rejected the virgin birth of Christ. A half-century later Galileo was subjected to persecution by the Church for suggesting that the Deity could be constrained by natural law.

Such events exerted a powerful influence on men of science, who sought to isolate their investigations of the natural world from theological implications, the result of which was that science developed from a ground of materialistic assumption. Later scientists felt that the separation of their work from metaphysical and moral considerations was a great intellectual strength, since it enabled them to search for and consider the "facts" of the natural world without the bias of what they regarded as moral prejudice and religious emotionalism.

In time, however, the findings of science could not help but discredit elements of religious belief, although the grip of an orthodoxy felt to be the final truth by the majority of believers was relaxed very slowly. It was not until 1822 that the cardinals of the Holy Inquisition agreed that books might be printed "treating of the motion of the earth and the stability of the sun," as taught by astronomers; and at last, in 1835, came an edition of the *Index* in which condemnation of works defending the double motion of the earth was removed. Such are the complexities which attend the wearing away of a once powerful orthodoxy.

Can the term orthodoxy be properly applied to the prevailing view of the scientific community? It may apply, but with careful qualifications. In *The Structure of Scientific Revolution* (1970), Thomas S. Kuhn distinguishes between what he calls "normal science" and the temper of scientific revolutions. Normal science is the working out of the implications of a basic view, such as that of the Newtonian universe. He calls this basic view a "paradigm," saying that it is "like an accepted judicial decision in the common law."

> The success of a paradigm—whether Aristotle's analysis of motion, Ptolemy's computations of planetary position, Lavoisier's application of the balance, or Maxwell's mathematization of the electromagnetic field—is at the start largely a promise of success discoverable in selected and still incomplete examples. Normal science consists in the actualization of that promise, an actualization achieved by extending the knowledge of those facts that the paradigm displays as particularly revealing, by increasing the extent of the match between those facts and the paradigm's predictions, and by further articulation of the paradigm itself.

Normal science, Kuhn says, "seems an attempt to force nature into the preformed and relatively inflexible box that the paradigm supplies," and he adds that "scientists are often intolerant of new theories invented by others." These conditions certainly seem to provide at least the practical framework of orthodoxy, although the operational rules of science in general require the recognition of new facts and laws when they are supported by observation and experimental evidence. There is of course a time lapse during the transition from one scientific paradigm to another. Kuhn's book makes this clear, and he also notes its effect on the education of scientists, who are not given the works of the inventors or innovators in science to read, but textbooks summarizing the status quo in science. "Until the very last stages in the education of a scientist," Kuhn says, "textbooks are systematically substituted for the creative scientific literature that made them possible." He calls this "a narrow and rigid education, probably more so than any other except perhaps in orthodox theology." He also points out, however, that the method seems to work rather well, and elsewhere he notes that an established paradigm seems absolutely necessary for those who work to widen and deepen its application. This is a way of saying that some sort of scientific orthodoxy is essential, since without it there would be no recognized "field" of work for scientists.

Prof. Kuhn's book is especially valuable in producing awareness of the processes of change in relation to scientific knowledge or truth. The stages and alternations of the process cannot be dispensed with, but there is a great difference between moving painfully from old "finality" to new "finality," and working under the assumption that "this is what we think now, with evidence to support it, but tomorrow or next year we may have sufficiently strong reason to think differently." We said earlier that the scientific method freed itself of the pressure of moral considerations, but it should be added that science as a procedure is not amoral, whatever the philosophic implications of its findings. The morality of science lies in the integrity of its practitioners and their responsibility to their work and ideal goals.

Yet the limitations of scientific education—and of education in general, which has been so largely shaped by the influence of scientific method—still remain. The question of what and how we should teach is far from being answered. As Ortega wrote in the first chapter of *Some Lessons in Metaphysics* (Norton, 1969):

> What is considered in the courts as intolerable abuse—that justice not be done—is in teaching almost the norm; the student does not study, and if he does, putting his best will into it, he does not learn; and it is clear that if the student, for whatever reason, does not learn, the professor cannot say that he is teaching; at the very best, he is trying to teach but is not succeeding.
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> Meanwhile, generation after generation, the frightening mass of human knowledge which the student must assimilate piles up. And in proportion,

> as knowledge grows, is enriched, and becomes specialized, the student will move farther and farther away from feeling any immediate and genuine need for it. Each time, there will be less congruence between the sad human activity which is studying, and the admirable human occupation which is truly knowing. And so the terrible gap which began at least a century ago continues to grow, the gap between living culture, genuine knowledge, and the ordinary man. Since culture or knowledge has no other reality than to respond to needs that are truly felt and to satisfy them in one way or another, while the way of transmitting knowledge is to study, which is not to feel those needs, what we have is that culture or knowledge hangs in mid-air and has no roots of sincerity in the average man who finds himself forced to swallow it whole. That is to say, there is introduced into the human mind a foreign body, a set of dead ideas that could not be assimilated.
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> This culture, which does not have any root structure in man, a culture which does not spring from him spontaneously, lacks any native and indigenous values; this is something imposed, extrinsic, strange, foreign, and unintelligible; in short, it is unreal.

However, since some form or forms of orthodoxy are always with us, we could say that they are inevitable and therefore in some sense necessary and we might ask Is there a way to make a virtue of this necessity? Trees, it could be argued, are trees only because of the way in which they use their "dead" wood, their rigid trunks, their inheritance of a past "orthodoxy." Orthodoxies are also a form of habit, and we are obliged to admit that a great many of our habits—we call them good—are indispensable. Once they are established we use them to sustain ourselves during the time when we are too busy to think about ordinary daily functions. The habits, both good and bad, of societies are embedded in traditions, which therefore have a close relation to orthodoxy. On this subject William Coperthwaite wrote in MANAS for last Dec. 14:

> It is important to emotional security that we have traditions to lean on. The degree to which we can alter our traditions and still feel emotionally stable is probably quite small. We may feel able to change, but we change too many things at our peril. This does not mean that when we see an unhealthy tradition (like going to war) we should not try to replace it; but for all the elements we deplore and wish to change, there are myriads of others that evade scrutiny and, taken together, give us stability. Since tradition is so helpful in so many ways, we need therefore, to design society in a way that gives traditions positive direction. Traditions that are worthwhile need our support—so, perhaps, do the even neutral ones—while we reserve our tradition-changing energies for the manifestly bad customs and habits, not "blowing our dynamite" on minor issues.

An orthodoxy, then, is something we have "evolved," something which will not last, that is identified with the past, and is both a barrier and an avenue to the future. To paraphrase Socrates, An unexamined orthodoxy is probably not worth keeping, yet parts of it may be essential to our uneven and uncertain lives. We might add that an established orthodoxy is never what it was in its beginnings, nor can its inspiration be recovered except by finding and relocating that inspiration in fresh ways indicated by changing and growing times.

REVIEW
IN ACTION AND REPOSE

WHAT is philosophy? This very old question is raised by two books—one, a paperback (Bantam, $3.95) edition of Jacob Needleman's *The Heart of Philosophy* (reviewed here on April 6 of last year, but deserving of further attention), the other, a copy of *The Simone Weil Reader* (David McKay, edited by George Panichas) sent to us by a subscriber who warns that it is now out of print, but perhaps available in used bookstores. While reviews of good books which are no longer in print may be frustrating for the reader, we often give attention to them anyhow, on the theory that a sufficient demand may help to revive books that are really worth reading, and put them back into print. The idea is that even by doing impractical things, one may contribute a little toward making them practical.

What, then, is philosophy? Etymologically, as we know, it means "love of truth." Historically, starting with the Ionians of Greece, it means knowledge of the world. Then, according to Socrates, it means knowing oneself. The synthesis of these polar objectives might be thought of as illuminating the idea of the self by understanding the world in which the self must act, and illuminating the world by study of the being—ourselves—who examines and acts in the world. That, at any rate, seems to be what happens for the thinkers whom we account wise.

Another point of value might be that the best philosophy may not be found in books on philosophy—may rather be in brief asides in the writing of people who are deep in some particular grain of life—in an insight that seems almost accidental, yet throws light on all our strivings to know or to understand. For example, Aldo Leopold, a naturalist, contemplating the life of those who live on some "frontier" which divides the civilized from the wild and unknown, says:

> To the laborer in the sweat of his labor, the raw stuff on his anvil is an adversary to be conquered. So was wilderness an adversary to the pioneer.
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> But to the laborer in repose, able for the moment to cast a philosophical eye on his world, that same raw stuff is something to be loved and cherished, because it gives definition and meaning to his life.

How many arguments does—or should—this aphoristic statement settle or resolve? Doing both things at once—conquering and understanding—is the subject of the *Bhagavad-Gita*, the author of which decided that the best framework for the pursuit of meaning is a great war, not an arm-chair in which to sit quietly and reflect. Even our clichés—Don't just sit there, *do* something!—reflect this paradox and pinnacle of our lives. The casual anecdote may be at times far richer than the carefully devised abstraction. Who are we? is a question that has a thousand answers, yet the most fundamental answer may be the one which does not try to span the vaulted heavens but says, as a MANAS contributor put it recently:

> War in Nigeria? It is our body that suffers there. Starvation in Bangladesh? It is our children who hunger. A riot in a distant city?—That is our city—our heads being broken. Unemployment, welfare checks, slum conditions—all are ills of our body. If a small part of the social body that I identify with locally is to stay healthy, I *must* work to see that the whole is healthy.

From what does this compulsion arise? Obviously, it is a function of what we call "self-consciousness," which varies from individual to individual. Agreements can arise only from a similar sense of self. But such agreements, which are the key to social harmony or unity, cannot be enforced. Compulsion destroys human possibility; and while we may see this abstractly, we nonetheless ask, Can we do without it, fearing to answer yes. A Gandhi says we can. He, we object, proposed the impossible. Yet Gandhi, in effect, freed India. He did the possible by attempting the impossible. What claim could annoy a rationalist more than this? Yet the honest rationalist is on occasion driven furiously to think by such questions. And rationalism, in the broad sense, is the indispensable ground for beginning to think about the paradoxes which hint at the truth.

A paramount value in the thinking of Jacob Needleman is that he is no system-builder but one

who engages the attention of his readers with various expressions of the fundamental paradox of reflective life. He says in one place:

> The world we live in, in fact, contradicts the ideal reality toward which we are drawn by *eros*, and this contradiction remains inescapable as long as we live. How will we face this contradiction?
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> It is the same within ourselves. Our own thoughts, emotions, and physical habits continuously form themselves into the identity of ego which continuously opposes the wish for inner being, freedom of consciousness, and moral power. How will we face this contradiction within ourselves?
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> Great ideas have lost their power in our civilization and in our lives because man has tried to pass directly from the first stage of philosophy into practical action without being led into the second stage. That is to say, he has sought to move from a vision of higher truth to moral action without confronting long enough or deeply enough the contradiction between the movement toward unity and the movement toward dispersal in all spheres of existence, but especially within himself. He has tried to go directly from adolescence to perfection without living in front of his own two natures, the god and the animal within him.

There seems a sense in which Needleman philosophizes modestly, autobiographically, making of general value the issues he has encountered in personal experience. He is reality-testing all the way, and has the skill to help the reader to understand the parallel confrontations in his own life. As a philosopher, he comes at least half-way to the ordinary reader, and he does this without compromising dilution of basic ideas. That is why, we suppose, the Bantam editors decided to make his book into a paperback for mass circulation—a good decision, it seems to us. That such things can still happen is a pleasant thought.

The Simone Weil Reader, as its editor explains, is intended to show this extraordinary writer and human being "as a religious genius and philosopher." Feeling that religion ought to be the source of strength for enduring insecurity, rather than an escape from it, our preference is to stress Simone Weil's demanding integrity as a philosopher, over that of the "religious" aspect of her quest. Religion as a social or historical phenomenon seems so largely a mass of emotional self-deception, it may be best to concentrate on ways to emancipate ourselves from the deception before returning to inquiry as to the lost excellences of religion. On the other hand, there is a sense in which the highest philosophy becomes indistinguishable from religion. One could say that philosophy is very nearly the only means we have of keeping religion pure. That, indeed, was its function for Simone Weil, and the justification, therefore, of this book.

However, on the first reading of this girl philosopher of modern times—truly a Hypatia who lived fifteen hundred years after the girl philosopher of Alexandria, and who, in a sense, suffered the same fate—one is most impressed by her determination to *live* what she had come to believe, and also by how determinedly she fought with herself in order to be sure of what she believed. More important, you could say, than what she believed was how she reached her beliefs. Convictions consciously hewn from the recalcitrant rock of one's admitted ignorance become lessons in how to know or seek knowledge.

Simone Weil called herself a Christian, but for her the adjective meant her own understanding of the original inspiration of Christian verity, which had hardly any relation to denominational bodies or claims. In his introduction the editor says:

> She gave her complete loyalty and attention to an implicit religious faith, neglecting and at times rejecting Christian theology. . . . Toward any religion that considered its cause more just than that of the weak, Simone Weil showed great hostility, expressed fearlessly and in language at times etched in asperity. The Church is that "great totalitarian beast," though still the depository of "an incorruptible core of truth." Ancient Rome, both the Republic and the Empire, and Israel are the objects of her most stinging rebukes. Borrowing one of Plato's similes, she writes "Rome is the Great Beast of atheism and materialism, adoring nothing but itself. Israel is the Great Beast of religion. Neither one nor the other is likable. The Great Beast is always repulsive."

Finding out what Simone Weil felt in order to understand such statements requires the reader to incarnate in—soak in—what she thought and to grasp not only its intensity but the reasons for it.

COMMENTARY
THE SPIRIT OF RELIGION

THERE is profound irony in the fact that the truly distinguished founders of religion are always the enemies of some preceding orthodoxy. This was certainly true of both Jesus and Buddha; and Plato, too, might be included on the ground that his criticism of Homer and the mimetic poets (see Eric Havelock's *Preface to Plato*) was an attack on the conventional thinking of his time.

The restorers of the religious spirit, while they are not exactly "founders," are similarly at war with orthodoxy, and here another irony appears. If they are successful on a mass scale, the final result of their reform seems inevitably to be another orthodoxy, which was the outcome of Martin Luther's heroic efforts. How shall we explain this universal attempt to "preserve" the truth by embodying it in formula and even custom? How can we guard against this tendency in ourselves?

A further comment by the editor of *The Simone Weil Reader* (see Review), George A. Panichas, has application here:

> Detesting Romanism as being imperialistic and administrative she believed that ecclesiastical Catholicism continued the Roman tradition of exercising "tyranny over people's souls." These criticisms must be corrected with the high spiritual standards that she demanded of all religions and that forced her to remain "a Christian outside the Church." A religion which in any way subscribes to a false conception of greatness or accepts the dogma of power is not a true religion. Such a religion merely perpetuates "the coarseness of mind and the baseness of heart" that she connected with "the Roman domination." In the Roman subsistence in Catholicism she saw great violence done to the spiritual and mystical content of Christianity. . . . Her sympathy for the Cathars, it should be noted, was equalled by her sympathy for the Manicheans, the Gnostics, the Taoists, the Buddhists, the Pythagoreans, and the Greek Stoics. "By saying that the Catholic religion is true and other religions false," she declares, "one does an injustice not only to the other religious traditions but to the Catholic faith itself by placing it on the level of those things which can be affirmed or denied."

This seems evidence enough that no one's sectarian tendencies in religion can be strengthened by a reading of Simone Weil. She was a practitioner of religious philosophy, and a teacher of those with the courage to respond to a similar calling.

CHILDREN
. . . and Ourselves

BREAKING UP STEREOTYPES

READING from issue to issue of the quarterly *Teachers College Record,* a journal which always has instructive content, we are sometimes led to wonder about its readers, many of them, presumably, teachers. A lot of the material in the *Record* has an underlying philosophical current of some subtlety, really valuable, but hard to communicate at a level which makes for easy assimilation. Yet surely some proportion of the readers is stirred to the realization that philosophy—which has to do with basic human attitudes and how they work out in relations with others—is something that can be applied in *any* situation. Teachers, unfortunately, if they take their profession seriously, are often harassed and in some ways frustrated individuals if they work in the nation's public schools. Cultural lag is built into institutions, and the bigger the institutions the more oppressive the lag. It seems fair to say that being a good teacher in a present-day institution is likely to be an heroic enterprise, and equally fair to note that the proportion of those who have the needed qualities is probably higher among teachers than in other professions. The "heroes" among teachers are the ones who will get the most out of reading *Teachers College Record.*

One of the difficulties in writing about education is the ease with which the writer may adopt the assumption that schools are the best or only place where education goes on, and that the existing character of schools is normal and "natural." In that case, education becomes in large part the adaptation of the teacher to both the limitations and the defects of school institutions. But also in that case, the intelligent parent of the intelligent child may find little in the school experience that has to do with an uninstitutionalized person's spontaneous thinking about learning.

People who look to institutional solutions for human problems are driven by the necessity of numbers to rely on system more than insight. This becomes a habit—naturally enough—which leads to the elaboration of systems for meeting problems where only insight—unorganized and unorganizable intuitive perception, which can be schooled and increased by experience, but never "systematized"—will ever really work. There is a sense in which nearly all material in *Teachers College Record* is concerned with problems of this sort. One paper (by Gary Klein) compares the development of curriculum with education. Curricular changes or additions grow out of an analytical approach. What do we want to teach? What are the "elements" of the subject? So steps are designed for teaching it, with "procedures" for each step, with little attention to the fact that a lot of important learning is "non-procedural." Klein says:

> Instructional methods are often aimed at procedural tasks. Curriculum development approaches assume that tasks are basically procedural and can be decomposed into elements such as steps in a flowchart. They assume that concepts can be reduced to component features and elements, and that practice on the elements will yield mastery of the concepts. Competency-based curriculum approaches go further than this, and attempt to measure the learning process by evaluating the learner's knowledge of component rules and elements. In general, the development of a curriculum is an attempt to decompose a knowledge domain into components; the goal is to ensure mastery of the knowledge domain through mastery of the components. This is a reasonable practice for tasks that are procedural. Clearly there would be gains in the management of teachers, students, and materials if all aspects of the educational process could be broken down into manageable elements through the use of curriculum- development procedures .
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> Curriculum development can also provide a starting point for the teaching of non-procedural tasks and complex concepts. Some decomposition, however arbitrary, must be made to get the learner started.
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> However, curriculum-development approaches cannot assure the mastery of nonprocedural tasks. You cannot effectively break tasks down into basic procedures, or break concepts down into basic features, if the proficient performance of the task does not consist of following procedures and the understanding of the concept does not depend on identifying the features. This suggests that

> curriculum development is a limited tool for many tasks and concepts.
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> Are tasks such as reading and mathematics procedural or nonprocedural? If procedural, then it is a reasonable approach to decompose them into basic elements and rules, and teach students to follow those rules with greater speed and accuracy. However, if the tasks are nonprocedural . . . then reducing them to basic steps, minimal increments, rules and higher-level rules, may be counter-productive to producing proficiency. It may restrict students to the level of mediocre competency. . . .

Why do so many writers on education elaborate on curriculum and ignore this point? Because it is comparatively easy to discuss and develop a system, but difficult indeed to say how insight and intuition are developed in teachers. How do children learn to swim, play soccer, ride a bicycle? There may be manuals on these activities but the actual doing of them cannot be set down on paper, as Polanyi shows in *Personal Knowledge* in the chapter on "Skills." So people prefer to write about what they can set down.

In another *Record* article, concerned with the educational conceptions and goals of Paulo Freire, C.A. Bowers uses an Indian tribe in northern Alberta, Canada, to emphasize the difference between the abstract and theoretical approach of Western education and the hardly analyzable way of learning of these Indians, the Chipewyans. This tribe, according to an ethnographic study, have for a hundred years resisted the efforts of the public schools "to assimilate them into a Western mode of thinking." Bowers' essential point lies in asking: Have we the right to try to make them think as we do? These Indians, it is said, have "an absolute mistrust of hearsay knowledge, written accounts of events, and of history itself." Knowledge, for them, is what is acquired through personal experience. Should our modes of education be imposed on them, their conception of knowledge "reformed"? Prof. Bowers says:

> Events are viewed personally, and knowledge must enable the individual to survive life in the bush. Consequently knowledge that is concrete and pragmatic gives the Chipewyan "a sense of mastery, while the abstract means losing control." An example of how the integrative way of knowing differs from the traditional Western pattern of thinking was demonstrated by a Chipewyan who learned to drive a road grader. In contrast to the Western approach, which would involve reading manuals and listening to someone else explain the steps of the operation, the Chipewyan . . . sat on the side of the road watching the operation of the road grader. After watching for several days, the man operated the grader with skill and ease.

From the start, apparently, he was good at it, but he couldn't tell anyone how he did it. "The integrative way of thinking enabled him to learn from direct experience, and to be able to explain the operation in the abstract; to have knowledge in our sense, was useless—particularly in terms of other Chipwyans who would trust only what they learned from their own experience."

One critical point raised by Prof. Bowers is Ivan Illich's contention that modern literacy, whatever its cultural value, functions to subordinate people to the imperatives of the modern state.

> Before the emergence of the state, people spoke vernacular languages and lived in small, self-sufficient cultural groups where life was governed by traditional beliefs. Illich noted that at one time the Crown respected the autonomy of cultural traditions that existed within the realm, but that the emergence of the modern state required a common language in order to ensure central control. Thus universal education became a way of undermining the influence of local cultural traditions, just as secularization and the rise of rational individualism eroded other sources of constraint that interfered with the power of the state. As Illich stated: "The new state takes from people the words on which they subsist, and transforms them into a standardized language which henceforth they are compelled to use. . . . The switch from the vernacular to an officially taught mother tongue is perhaps the most significant—and, therefore, least researched—event in the coming of a commodity-intensive society."

Quite plainly, such discussions call into question the modern idea of progress, give new light on the value of decentralized community life, and break up the stereotypes in thinking about education.

FRONTIERS

Patterns of Sustainability

THE first issue of *Annals of Earth Stewardship*—a paper begun by John and Nancy Todd, formerly of the New Alchemy Institute on Cape Cod—has articles on various kinds of transition. Early in the issue William Irwin Thompson provides a psycho-social overview of broad changes now going on:

> We are already seeing the fall of economics. Since economists can neither model nor manage the economy, their world-view, based as it is on the production of objects and their quantitative valuation, is beginning to seem regressive.
>
> Economics doesn't work because there is no such thing as an economy; it is an abstraction that prevents the manager from seeing that there is only human culture inseparably embedded in an ecology. The shift in point of view in which this is realized is actually a shift in world-views. It is a shift from economics to ecology as the governing science of society. It is a shift from the Protestant Ethic and the Spirit of Capitalism to Zen and the Spirit of Cybernetics. It is a shift from industrial production of the Detroit variety to informational transformation of the California variety.

These abstractions can be spelled out with substantial content. The "informational transformation" Thompson speaks of is the subject of Paul Hawken's book, *The Next Economy*, which is already popular, becoming influential, and has been chosen, we understand, as a selection of the Book-of-the-Month Club, which will enormously extend its circulation.

Thompson calls the changes going on "a shift from *objects* to *presences.*"

> The modality of presences is an almost mystical and animistic perception of the involvement of all things with one another. The factory that produces mansions at one end and Love Canals at the other is possible in a world of *objects* separated in space; it is not possible in a world of interpenetrating presences. In the old warfare of materialism, you destroy objects: tanks or cities. In the cybernetic age, you realize that you cannot destroy a presence, for that is like attacking a cloud with a sword. The nation-state is trying to wield weapons as objects, but in bankrupting itself it is beginning to realize that weapons-systems that must never be used are not objects but presences. Thus, the cultural evolution of the weapon as object is to create a new perception of the inter-penetrating presence of each in all.

This seems a way of generalizing what intelligent military men have been saying for years—that no one can win a nuclear war; that nuclear weapons cannot be used for the attainment of military objectives; that their only and highly questionable value is as threat, which is a power with diminishing and perhaps self-destroying returns. The fallout and spinoffs which take place in growing toward maturity are often hard to understand, as is, for example, adolescent behavior. Who can make sense of its flailing gyrations? Not even the adolescent.

Another, down-to-earth—or down-to-water—transition is described by Sherrill B. Smith, Jr., in an article on Sail Power: "A once and future Energy Source for Boats." He says:

> Twenty to thirty years ago every analysis of fisheries potential for Third World cultures brought forth agreement that gradual mechanization was the obvious route to follow in all assistance programs. It seemed logical and morally right to share the technology available in developed countries. I recall the success story of Ceylonese fisherman Nagendram who, though jibed at by others in his village, willingly allowed FAO experts the use of his large catamaran for outboard motor experiments. In 1961, he bought an engine and eighteen months later he moved his family out of their hut and into a brand new, beautiful house. Next, he had a 27-foot boat built with an inboard diesel.
>
> At the time this was a model of what could happen throughout the Third World and it seemed so right. From our perspective in the 1980s, we see many mistakes in past fisheries development. The fuel crunch should not have surprised us, but it did. The world recession triggered by energy manipulations was not at all foreseen. We could not know that gasoline and engine parts would not be available and that whole village fleets in some places would, because of their new dependencies, be beached. The high cost or lack of credit torpedoed the hopes and programs of countless villages.

> Thompson [international consultant in fishing technology] and others in the field are calling for new fishing boat design for small-scale fishermen, for boats that do not depend on traditional fuels and unavailable engine parts. If we are now in a better position to know which way the wind is blowing, that, for all the world, sounds like a summons to sailing designs. Reliable wind is not a scarce resource in the tropical belts of most developing coastal states. Surely sail power is not the only technology available to assist in the next phase of Third World fisheries development, but it might be the most appropriate.

The last story in *Annals*, by Nancy Todd, tells about the founding and growth to comparative maturity of the New Alchemy Institute. Beginning in 1969, they had twelve acres of poor soil to restore, which they did, getting high yields from gardens and fish ponds. They developed a solar green house called a bioshelter and built the New Alchemy Ark, a combination greenhouse and solar-heated and wind-powered subsistence homestead. They began planting trees for a number of good reasons. The writer says:

> The New Alchemy farm of 1983 is not yet a farm in the image of the forest. Yet it is a good deal closer than when we first moved onto it in November of 1971. Then we cleared the brush and brambles from the pasture to establish our first gardens. We set up desks in the farmhouse and a rudimentary workshop in a part of the barn formerly occupied by cows. Although we had a strong sense of mission with regard to what we wanted to do and a determination to pursue our humanistic and ideological ideals within a framework of scientific rigor, the early effect, to the outside world at least, must have appeared pleasant but a little naive. . . . It was a gentle, peaceful place and people were drawn to it more with their hearts than with their minds. "Thank you," one world-famous Nobel laureate once said to me, "for a day in another world." Since then, long hours of physical labor—very little of it depending on machinery—persistence, devotion on the part of a large number of people, and a shared, sustained vision, have created the very different New Alchemy that greets the visitors in 1983. . . . As our farm in the image of the forest reveals a pattern of sustainability for our own bioregion, the hope is that the same kind of thinking and observation can be applied to other areas to create farms in the image of the prairie, the desert, or the savannah.

A gift of $10 will bring *Annals* to the reader. The address is Ocean Arks International, 10 Shanks Pond Road, Falmouth, Mass. 02540.