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A SLOW RECOVERY

WE owe much to Alfred North Whitehead, perhaps most of all to his thoughtful definitions of philosophy, one of which appears at the beginning of his essay, *Nature and Life*, published in 1934 by the University of Chicago Press. He said:

> Every age manages to find modes of classification which seem fundamental starting points for the researches of the special sciences. Each succeeding age discovers that the primary classifications of its predecessors will not work. In this way a doubt is thrown upon all formulations of laws of Nature which assume these classifications as firm starting points. A problem arises. Philosophy is the search for its solution.

To illustrate, Whitehead speaks of the idea that matter is the only thing we know—its motions, which lead us to study geometry and locomotion and its laws. This is the common-sense notion of the universe which began with Galileo and from which the early scientists hoped to explain "the meaning of life, the meaning of mentality, and the interrelations of matter, life, and mentality." The only question, he adds, "is as to how fundamental these truths may be."

> In other words, we have to ask what large features of the universe cannot be expressed in these terms. We have also to ask whether we cannot find some other set of notions which will explain the importance of this common-sense notion, and will also explain its relations to those other features ignored by the common-sense notion.

In summary he says of our thinking, in about 1930:

> There are bits of matter, enduring self-identically in space which is otherwise empty. Each bit of matter occupies a definite limited region. Each such particle of matter has its own private qualifications—such as its shape, its motion, its mass, its color, its scent. Some of these qualifications change, others are persistent. The essential relationship between bits of matter is purely spatial. Space itself is eternally unchanging, always including in itself this capacity for the relationship of bits of matter. Geometry is the science which investigates this spatial capacity for imposing relationships upon matter. Locomotion of matter involves change in spatial relationship. It involves nothing more than that. Matter involves nothing more than spatiality, and the passive support of qualifications. It can be qualified, and it must be qualified. But qualification is a bare fact, which is just itself. This is the grand doctrine of Nature as a self-sufficient, meaningless complex of facts. It is the doctrine of the autonomy of physical science. It is the doctrine which in these lectures I am denying. . . .
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> My quarrel with modern epistemology concerns its exclusive stress upon sense-perception for the provision of data respecting Nature. Sense perception does not provide the data in terms of which we interpret it.

He turns to Newton:

> Newton's methodology for physics was an overwhelming success. But the forces which he introduced left Nature still without meaning or value. . . . He thus illustrated a great philosophic truth, that a dead Nature can give no reasons. All ultimate reasons are in terms of aim at value. A dead Nature aims at nothing. It is the essence of life that it exists for its own sake, as the intrinsic reaping of value.

Here, Whitehead is saying in effect that reality as we experience it is the pursuit of meaning. Form or embodiment is the vehicle created by intelligence for the pursuit of ends. Life is the pursuit of goals or ends. Yet all ends are in some sense beginnings. In nature all death nurtures birth and life. Is that true of us humans too? We might like to think so, but find it difficult. Yet there have been those who thought this, and cultures which celebrated death in funerals which were joyous at the liberation of a soul from an old, worn out body; and people who believed birth to be a time for mourning—an old soul had been made captive by a new body. Such people think of human purpose as a realization which is fulfilled in soul, not in the body, which a mere instrument.

But Whitehead, of course, did not speculate in these directions, so far as we know. He was content

to declare that "the characteristics of life are absolute self-enjoyment, creative activity, aim." And for him "aim" involved "the entertainment of the purely ideal so as to be directive of the creative process." He added: "Also, the enjoyment belongs to the process and is not a characteristic of any static result. The aim is at the enjoyment belonging to the process."

If this is the case, why are we in pain of some sort so much of the time, and why do we continually create processes which produce pain and work against enjoyment? Whitehead might say that this is because we do not understand the process, how it works, and what is our part in it, or should be.

Whitehead, in these essays, finds science to be a contributor to our ignorance. As he puts it:

> Two conclusions are now abundantly clear. One is that sense-perception omits any discrimination of the fundamental activities within Nature. For example, consider the difference between the paving stone as perceived visually, or by falling on it, and the molecular activities of the paving stone as described by the physicist. The second conclusion is the failure of science to endow its formulae for activity with any meaning. The divergence of the formulae about Nature from the appearance of Nature has robbed the formulae of any explanatory character. It has even robbed us of reason for believing that the past gives any ground for expectation of the future. In fact, science conceived as resting on mere sense-perception, with no other source of observation, is bankrupt, so far as concerns its claim to self-sufficiency.
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> Science can find no individual enjoyment in Nature; science can find no aim in Nature; science can find no creativity in Nature, it finds mere rules of succession. They are inherent in its methodology. The reason for this blindness of physical science lies in the fact that such science only deals with half the evidence provided by human experience. It divides the seamless coat—or, to change the metaphor into a happier form, it examines the coat, which is superficial, and neglects the body which is fundamental.

In the two lectures of this essay, *Nature and Life*, Whitehead is intent upon showing that mind or mentality is the heart of existing reality, toward which all Nature moves. He says at the end:

> In so far as conceptual mentality does not intervene, the grand patterns pervading the environment are passed on with the inherited modes of adjustment. Here we find the patterns of activity studied by the physicists and chemists. Mentality is merely latent in all these occasions as thus studied. In the case of inorganic Nature any sporadic flashes are inoperative so far as our powers of discernment are concerned. The lowest stages of effective mentality, controlled by the inheritance of physical pattern, involve the faint direction of emphasis by unconscious ideal aim. The various examples of the higher forms of life exhibit the variety of grades of effectiveness of mentality. In the social habits of animals there is evidence of flashes of mentality in the past which have degenerated into physical habits. Finally, in the higher mammals and more particularly mankind, we have clear evidence of mentality habitually effective. In our own experience, our knowledge entertained and systematized can only mean such mentality, directly observed. . . .
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> Philosophy begins in wonder. And, at the end, when philosophic thought has done its best, the wonder remains. There have been added, however, some grasp of the immensity of things, some purification of emotion by understanding. Yet there is a danger in such reflections. An immediate good is apt to be thought of in the degenerate form of a passive enjoyment. Existence is activity ever merging into the future. The aim at philosophic understanding is the aim at piercing the blindness of activity in respect to its transcendent functions.

Whitehead, here, is endeavoring to cope with the historical reaction in Europe and America to the centuries-old blight of a highly organized and aggressive religion which drained from Nature the spirit of Deity and turned attention to an anthropomorphic, external Creator and his supposed ministrations in behalf of our salvation from eternal hellfire. The gods and spirits of the wild, the nymphs and dryads of the trees, all the hierarchies of nature spirits were condemned as servants of the Wicked Spirit who was intent on our damnation. The atheism which was rampant in the eighteenth century, and the materialism which became its religion, was the natural harvest of such denaturing beliefs, and led to a kind of worship of matter as the only faith which humans could safely adopt without fear of the consequences. Yet when the consequences of materialism overtook the world of

intellectuality and learning, it was easy for a man like Whitehead to recognize what had happened and to start working to free the mind of the West from the deadening assumptions of materialism. He had many forerunners and a host of successors, and a swing of the pendulum is now in process—indeed, there are signs of excess in the opposite direction. But at least, the conception of Authority—a single religious authority—has been effectively removed from the scene.

What Whitehead says in his concluding paragraphs recalls the work of a virtually unknown writer, R. H. Francé, whose little book, *The Germ of Mind in Plants*, was translated into English and published in 1905 by Charles H. Kerr. Francé, too, like Whitehead, was troubled by the effects of mechanistic thinking on our lives, although he was a nature lover rather than a philosopher. His work is especially interesting in the present, by reason of his anticipation of the spirit of many of the ecologists of our time. He begins with the complaint:

> *We have become separated from nature.* This sentence may appear to many somewhat startling and yet it is certainly true. The long and uninteresting story of this separation began with Aristotle and ended with blind faith in literalism and the illusion of authority. The chance statement of Aristotle that the plants have souls but no sensation, was accepted as inspired by the unfortunate trend of thought in the Middle Ages, which ceased to believe in the evidence of the eyes, when it differed from the written word, until Linnaeus, who stood wholly upon the shoulders of the Middle Ages, raised it to the position of a dogma. This man, who had such a mania for registration that he classified even his friends into categories and subdivisions, maintained, through his great authority, even into our youth, a dead scheme of life drawn out of scholasticism, that has gained him the name of the *Verus botanicus*, the true botanist. Wherever he went the laughing brook died, the glory of the flowers wilted, the grace and joy of our meadows was transformed into withered corpses, which this "true botanist" collected into the folios of his herbarium, and whose crushed and discolored bodies he described in a thousand minute Latin terms. This was called scientific botany, and the more mummies such a register of the dead could bury in his museum the greater the botanist he was held to be. This "true botany," however, was still the teacher of our teachers. The learning of these endless descriptions was one of the terrors of our school life. . . . When this was completed, we stood disenchanted and estranged from nature. So it came about that in the broadest circles of culture, the secret but universal judgment was, that botany was unspeakably dry, a pedantic cram, a sort of intellectual gymnastics. Respect for the teacher prevented us from saying this openly, but if one was a true lover of natural science, botanical books were generally the last for which he reached.

Intent upon showing the presence of intelligence or mind in plants, this author was appalled by the fact that almost until his time, while botanists admitted that plants were living things, they held that they lacked the power of sensation. Actually, Francé says, if we have time and patience, "then leaves, twigs, fruit and flowers, softly, but clearly whisper to us: "We are of one nature . . . thou also wert once as we." He speaks of the furious activity of the single-celled algae and their evolution into higher plants, then remarks that "the most lively of the plant organs is the root, or more correctly speaking, those fine worm-like rootlet endings, whose tips Darwin, not without reason, likened to a brain. The things this little white thread can accomplish are almost incredible."

> First of all it turns its tip slowly but constantly round in a circle, crowding itself firmly into the soil. Every one who has observed this compares it to a searching for nourishment. By this means the roots taste every morsel of earth in their vicinity. Stranger yet, when the earth is dry the roots turn away toward greater moisture. The physiologists call this hygrotropism—a sense of the nearness of water.
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> But the roots also turn downward. They have a sensation of gravity (geotropism). It is as if tiny ropes drew every growing thing constantly deeper into the earth. If we examine an old clover field or a moor, where this can be especially observed, we shall find that each year they have gone about five centimeters deeper into the earth, measured from the point where they first sprouted. This is accomplished only by a constant growth of the subterranean stalk, but it is this that gives it a firm position. Living beings know how to turn everything to their advantage. That is one sort of natural law which forms the deepest root of human egoism. . . .
>
> An activity equal to that which the roots maintain in the darkness is possessed in daylight by

> the tendrils, those gracefully entwined and many curled feelers, which with cords of green bind the roaming vines, gourds and melons fast to their support. . . . Like a polyp with a thousand tentacles, so tendrils upon tendrils reach searchingly into the air. And whoever will take the trouble to watch for half a day will discover that they are really searching and testing, since their tips are slowly circling around, about once in every sixty-seven minutes. At the same time the tendrils are slowly raising themselves into the air; others follow them, and so it is that on a warm sunny day (and only on such days are these things plain) there are hundreds of polyp-like arms reaching out from the peaceful arbor, trembling and quivering in their eagerness, not for prey, however, but only for a new support for their heavy stalk. . . . But tendrils are not the only things that swing in the sunlight, every sprout and every growing stem describes this quivering circle.

Francé now goes to the daytime and night-time habits of flowers and leaves. At dawn, he says, the hill-sides seem bare of flowers, but with the coming of the sun they open. Linnaeus, he remarks, knew this, but still held that plants were not sentient. Plants are also good weather prophets, closing their petals at the threat of rain.

Whoever climbs up on the high mountains to the snow line where the last flowers are peeping amidst the rocks will find there the experts in sensitiveness. The little Alpine gentian (gentiana nivalis) which lures us on with its friendly blue eyes, has so perfected this feature that in cloudy weather, such as is the rule in high altitudes, it opens its blue calyx every few minutes, for each fleeting ray of the sun, and closes them for every passing cloud. The sleep movements of the leaves are no less striking. . . . Bishop Albertus Magnus, who was denounced as a wizard, said over 600 years ago that plants slept the same as men, and this comparison was one of the charges in the complaint against him. Darwin gave much study to this phenomenon, and thought that this sleeping position constituted an important protection against cold, especially against frost, but later investigation gradually led to the conclusion that it is rather to prevent too heavy a deposit of dew, which is injurious to the life processes of the plant.

Francé devotes many pages to the exquisite responsiveness of the Mimosa and an equal space to plants which consume insects, such as the sun-dew and the fly-trap, all of which, for him, is intended to show that plants have some sort of organs of sense. Today, among botanists, this is clearly recognized, and it is assumed that many plants have rudimentary nervous systems which respond, however slowly, to external stimuli. At the end of his book, summarizing, France says:

> Wherever there are life activities and stimulus there must be apparatus to receive and transmit them. Of what use is such an apparatus, and such transmission if there is not something that can receive the experience and utilize its results? Such a reception is called sensation but the utilization of sensations implies something—that we have been accustomed to designate by that puzzling word *soul*.
>
> *Perception and souls in plants!* To have spoken of such things thirty years ago would have at once deprived us of the rights to be considered scientific botanists, and even now many botanists will not agree with us. We must accumulate an endless store of facts before mankind will believe that "Soul" is not something peculiar to man. . . . There is therefore no "animation," no sudden introduction of a "soul" by nature, but we are all united in the same encircling unity, whose internal yearnings and unconscious comprehensions form the germ of all nature religions, and give them their real sanction and their peculiar value.

While present-day ecologists have a much more sophisticated language than this German botanist of virtually a century ago, the intuition of both seem essentially the same. The word "soul," so imprecise in our usage, may be long in being restored as a term with disciplined meaning, and this may be a benefit rather than a limitation. Yet as France says in closing, we can still cling to "*the feeling of complete inner unity with the creative and transforming forces of nature.*" He adds that "the living world is but mankind in the making, and that we are but a part of all." From a man of the turn of the century, this is surely enough.

REVIEW
THE MARKET ECONOMY

ECONOMICS, it seems clear, is now the religion of the modern world—very nearly all of it—so that attention here to Worldwatch Paper No. 72, *The Changing Role of the Market in National Economies*, by William U. Chandler, seems wholly justified. Yet in reading this carefully written pamphlet, we found ourselves drawn to looking at other sources, and these, too, therefore, will have attention. Mr. Chandler is convinced by the figures he has assembled and presented that there is now a noticeable swing back to the market economy, news which partisans of capitalism will be glad to hear. Toward his conclusion Chandler says:

> Sustainable economics, in summary, requires several guidelines. Two criteria for choice of investment or consumption are particularly valuable: the net present-value criterion and the conservation criterion. The former represents efficiency and merely says that the investment has to be a good one, one that maximizes output while minimizing the cost of inputs. Under the theory of sustainability, it is a condition that can be met, however, only as long as the conservation criterion is met. That is, one can maximize the use of agricultural land as long as the productivity of the resource can be maintained. Only if the conservation criterion is met first and the present-value criterion fulfilled second can both inter- and intragenerational equity be achieved. Markets alone cannot accomplish this, but to a large degree they offer a self-administering check on resource waste: The resource user pays for inefficiency. Non-market systems lack this internal correction. Theoretically, centrally planned economies could make resource conservation a high priority. But the evidence to date shows that they have not. And economic and psychological theories suggest that without meaningful price signals to prompt them, economies are not likely to use resources efficiently.

Now comes a little history:

> If the nineteenth century was the age of the free market the twentieth is the age of the state. Current trends, however, could well make the next century more balanced between markets and state intervention. A shift back toward markets has been prompted by five recent developments: Mao's death and his legacy of underdevelopment in China the debt crisis in Latin America; the crisis of famine and underdevelopment in Africa; chronic underdevelopment in South Asia; and the burgeoning deficits in the West. These economic dilemmas have their roots in resource use, and policy responses to them concern environmentalists as well as economists.

After World War Two, a lot of small, underdeveloped countries came into being and centralized planning spread around the globe. State control of the economies peaked in the 1970s, when three fifths of the world economies were controlled by governments, although about 60 per cent of production output came from market economies. Then, in the eighties, hard times raised questions which led to change. Leaders, Chandler says, "began to realize that debts, deficits, inflation, and stagnation were signals that their policies were not sustainable."

> The need for change prompted a worldwide re-evaluation of the market mechanism. The extent of that change is hard to measure, if only because ownership and control are difficult to establish. Chinese farmers, for example, do not own the land they farm but they control it like private property. Despite similar ambiguities elsewhere, it is nonetheless possible to ascertain qualitatively the changing role of the market and its effects.

Chandler goes about the world and finds either a return to or the adoption of the market economy everywhere in recent years. He says:

> In summary, there has been a dramatic shift in the structure of national economies: The century-long trend toward greater government control has ended. This shift has not involved the essential macroeconomic measures that balance and stabilize economic systems, but rather the details of production and allocation of resources. To the contrary, government intervention for enhancing the environmental sustainability of nations is growing, and possibly not quickly enough. But many nations, having drawn the boundaries of sustainability, are increasingly leaving the internal workings of economies to market mechanisms. Those that have—notably China, Hungary, and Zimbabwe—are reaping the rewards. Those that have not—Mexico, Nigeria, and Egypt—are headed for trouble. Nations falling between these extremes—India and Pakistan—are making slow progress toward greater economic and environmental efficiency.

His conclusion:

> Governments controlling the fates of over half the world's people stand at a crossroads that will take them to greater or lesser market reliance. If they choose the

> Chinese path, they will probably reap the rewards of higher incomes, greater resource-use efficiency, and the chance to correct environmental problems. If they choose to retain centralized decision-making, they will probably bog down in the stagnation and inefficiency that have driven them to face choice in the first place and they will not likely find ways of controlling economic impacts on the environment.

This is Chandler's verdict, and it seems accurate enough. Yet, as we said, there are other ways of looking at these matters, for example, as they were seen by Karl Polanyi, a Hungarian scholar who came to this country after a distinguished career abroad, first teaching at Bennington College and then at Columbia (1947-53) until his retirement. He wrote as both a historian of economics and a philosopher (practically speaking), and the book of his that we have been reading (and will quote) is a collection of his essays, *Primitive, Archaic, and Modern Economies,* published by Beacon in paperback in 1971.

Polanyi wrote about the market economy, saying many critical things, but not declaring it should be abandoned, proposing, instead, that we should begin to think about it differently. Some passages from his paper, "Our Obsolete Market Economy," which first appeared in *Commentary* for February, 1947, will make plain the spirit of his thinking. He says:

> We find ourselves stultified by the legacy of a market economy which bequeathed us oversimplified views of the function and role of the economic system in society. If the crisis is to be overcome, we must recapture a more realistic vision of the human world and shape our common purpose in the light of that recognition.
>
> Industrialism is a precariously grafted scion upon man's age-long existence. The outcome of the experiment is still hanging in the balance. But man is not a simple being and can die in more than one way. The question of individual freedom, so passionately raised in our generation, is only one aspect of this anxious problem. In truth, it forms part of a much wider and deeper need—the need for a new response to the total challenge of the machine. Our condition can be described in these terms: Industrial civilization may yet undo man.

Turning to the market society, he continues:

> The birth of laissez faire administered a shock to civilized man's views of himself, from the effects of which he never quite recovered. . . . A chain-reaction was started—what before was merely isolated markets was transmuted into a self-regulating system of markets. And with the new economy, a new society sprang into being. The crucial step was this labor and land were made into commodities, that is, they were treated as if produced for sale. . . . Accordingly, there was a market price for the use of labor power, called wages, and a market price for the use of land, called rent. Labor and land were provided with markets of their own, similar to commodities proper that were produced with help. The true scope of such a step can be gauged if we remember that labor is only another name for man, and land for nature. The commodity fiction handed over the fate of man and nature to the play of an automaton running in its own grooves and governed by its own laws. . . .
>
> Market-economy thus created a new type of society. The economic or productive system was here entrusted to a self-acting device. An institutional mechanism controlled human beings in their everyday activities as well as the resources of nature. This instrument of material welfare was under the sole control of the incentives of hunger and gain—or, more precisely, fear of going without the necessities of life, and expectation of profit. . . . No wonder that the emergent human aggregation was an "economic" society to a degree previously never even approximated. . . . Such a forced conversion to a utilitarian outlook fatefully warped Western man's understanding of himself. . . . Man's *economy is,* as *a rule, submerged in his social relations.* The change from this to a society which was, on the contrary, submerged in the economic system was an entirely novel development.

"I plead," Polanyi concludes, "for the restoration of that unity of motives which should inform man in his everyday activity as a producer, for the reabsorption of the economic system in society, for the creative adaptation of our ways of life to an industrial environment." This is a point of view now wholly ignored except for the few who recognize what must be done if there is to be a continuance of truly human life.

COMMENTARY
A VOICE IN INDIA

IT is interesting to find in the Gandhian monthly *Marg* (May, 1986) a scholarly discussion of modern agricultural practices in comparison with the traditional practices in the East, especially China. The title of this article by Ashok Kumar is "Modern Civilization and Normal Civilization: The Need for Small Self-Sufficient Communities." Introducing Kumar, the editors of *Gandhi Marg* say that he examines the syndrome "that has brought many countries in the Third World to the brink of a crisis in their economies and eco-systems."

> High dams, disappearance or destruction of forests, use of chemical fertilizers, destruction of the nutrients and resilience of the soil, the depletion of minerals and dependence on high-cost energy to the neglect of natural, inexpensive and local sources, planning for export and money-oriented mass production have posed real dangers to the eco-system, economies and the peace, happiness and self-reliance that existed in the traditional culture of small communities whose economic and cultural life were interwoven with nature.
>
> A new obsession with maximization of monetary and immediate benefits that ignores the interrelatedness of man, other life and nature, is being canvassed in the name of Science and Technology. The question that Dr. Ashok Kumar raises is whether, by ignoring life processes and the interrelatedness that characterizes nature, modern civilization will pave the way for its own destruction.

Kumar begins by asking:

> Is it right to carry on a commerce which depletes the earth's capital resources? Regarding the industrialization of agriculture, already a dangerous situation has been reached which points to the temporary nature of the enterprise. With the present green revolution methods of food supply, the population can be fed for only a limited time, that is til the topsoil is exhausted. Thereafter there is extinction in store for all life.

He then points to the progressive exhaustion of minerals crucial to human health now being mined and sold out of existence—in particular chromium and zinc. Only recently has it been discovered that the body cannot be healthy without the needed amount of these elements, and there are others in the same category. Traditional agriculture restored these and basic nutrients to the soil, and has done so in some areas for thousands of years, while modern methods allow them to be carried off as wastes to pollute the streams and the ocean. Kumar generalizes:

> Green Revolution agriculture is business characterized by export of resources . . . Metals are mined and exported. Fuels are mined and exported. Machines are made and exported. Energy is produced and exported. Water is stored and exported. Chemicals are stored, synthesized and exported. People are exported. Food is made and exported. Topsoil is exported. Nutrients are exported. Everywhere, everything is consumed and exported. Poverty is everywhere produced.

He contrasts this way of life with a forest-based culture as practiced by traditional societies, "by living out kindly use of nature, to provide a long-term food supply by making food a cultural product." The authors he most frequently cites are F.H. King and Wendell Berry.

CHILDREN
. . . and Ourselves
JOHN HOLT ON COLLEGE

IN *Growing Without Schooling* No. 52, which came out last year—the paper is not dated, just numbered—the editors say that they have a file of unpublished articles by John Holt. They will undoubtedly publish them in the paper he founded in the neighborhood of ten years ago, and offered one in No. 52. As he very nearly always did, Holt comes out swinging:

> My own college experience contributed almost nothing to my education, and was for the most part an impediment to it. What do I mean by this? I mean, in the first place, that during my years of college I neither discovered nor was shown (with two very slight exceptions) anything about the world that seemed to invite further exploration. I did not uncover or become aware of talents or possibilities within myself which might seem worth further cultivation. I did not become in any sense better acquainted with my own society or with the world, or aware of problems which needed my attention. I was not prepared for or directed toward, in any way, the work which I was actually to do. In fact nothing that happened to me at college gave me in any sense the important notion that one of the great tasks of a growing person is to discover his work. All I did, like most of my classmates, was to go through college thinking that when you got through, you got a job—which was not at all the same thing as finding one's work. . . . All I learned about myself was that I was a capable student which I knew before I got to college. In any case, though it has its minor uses, it did not seem to me to be one in which anyone could take deep satisfaction. . . . In general, I would say that I left college thinking rather less of myself as a person than I did when I came in.

In short, his schooling was absolutely useless so far as a very important decision for a young person is concerned. Fortunately or unfortunately, the war (World War II) came along and young Holt worked in the submarine service for three years, giving him, one supposes, time to think. He considered the foreign service of the government, which seemed a useful way to work, but then he talked to a much older man who had spent years in the foreign service, who told him that "when one works in the foreign service of the government, the only foreign policies, international policies, that one is allowed to advocate are the extant policies of the U.S. government." One does not criticize them publicly or privately. "This," Holt said, "was exactly what I needed to know." In college he had selected industrial administration as his field, but later turned away from contemplating this career—"by the greatest good fortune." Then, out of the navy and at loose ends he tried working for world government, having read Cord Meyer, an ex-marine, on the subject. He did get a low-paying job in this area which he worked at for a while. Eventually he fell into teaching, and then, learning from experience, he fell out of it and discovered his life work, somewhat by accident, you could say. You could say, also, that the work was there and it grabbed him. You could say, finally, that he was smart enough to recognize it when the work knocked on his door. In conclusion, in this article, he says:

> The story seems to illustrate the kind of three-way coming together that needs to take place when someone finds true work. On the one hand you have a social condition or a need—something out there that needs to be done. In the second place, you have the young person, with interests, talents, and capacities—also tastes and concerns. In the third place you have some kind of place and opportunity for actual work, an opportunity which may in many cases have to be created—as, for example, Ralph Nader created his own work opportunity.

But the real question, here, is figuring out the kind of a man John Holt was. He probably didn't impress anyone especially in either high school or college. What impresses us, now, is that when he found himself doing what wasn't worth doing, he stopped and began to do something better. How many people are like that? Who will simply quit, regardless of what other people think, when he feels that he is doing useless work? And who, when he looks back on college, will ever say to others that it wasn't worth going there? It is most unconventional to say things like that. Holt was indeed an unconventional man, a quality of independence that slowly came to the surface of his life as he grew up. Thousands of parents are now grateful to him for what he did for them and their children. He, like Ralph Nader, saw something that needed to be done and he created for himself the work of doing it. Perhaps he was able to do this because of his intensity of purpose—which made it impossible for him to conform.

Actually, those who feel themselves denied by not being able to go to college—by having to go to work—might consider themselves lucky, and they will be lucky, according to Holt, if they get some kind of job and then start educating themselves. They will certainly do it better than any college will; they might run across a remarkable teacher who will help, even though he or she is not a teacher in a college, and doesn't even have a degree from one.

How does one educate himself? A clergyman, meeting Abraham Lincoln on a train, asked him how he came by his discipline—was it in preparing for the practice of law? Lincoln replied:

> "Oh yes! I 'read law,' as the phrase is; that is, I became a lawyer's clerk in Springfield, and copied tedious documents, and picked up what I could of law in the intervals of other work. But your question reminds me of a bit of education I had, which I am bound in honesty to mention. In the course of my law-reading, I constantly came upon the word demonstrate. I thought at first that I understood its meaning, but soon became satisfied that I did not. I said to myself, 'What do I mean when I *demonstrate* more than when I *reason* or *prove?* How does *demonstration* differ from any other proof?' I consulted Webster's Dictionary. That told me of 'certain proof,' 'proof beyond the possibility of doubt'; but I could form no idea what sort of proof that was. I thought a great many things were proved beyond a possibility of doubt, without recourse to any such extraordinary process of reasoning as I understood 'demonstration' to be. I consulted all the dictionaries and books of reference I could find, but with no better results. You might as well have defined *blue* to a blind man. At last I said, 'Lincoln, you can never make a lawyer if you do not understand what *demonstrate* means' and I left my situation in Springfield, went home to my father's house, and stayed there till I could give any proposition in the six books of Euclid at sight. I then found out what 'demonstrate' means, and went back to my law studies."

The thing to notice here is that Lincoln was almost totally independent of the services of institutions in getting his education. We don't know how he learned to read and write, but he certainly learned these skills well, as what he wrote demonstrates. There are, then, great differences among people in what they require. There are children who cannot get anywhere in learning much of anything without school, a teacher, and a system, while other children will learn what they need to know no matter what the obstacles or deprivations. Parents need to be able to recognize this often painful truth, and also the truth that the best educated people are the most independent, while they may also be the most kindly and considerate. We commonly tell the young to cooperate with the system, which is far from being the best advice. What we ought to tell them is to leave the system behind, without hurting anyone in doing it.

This brings us to some other unpleasant but necessary truths provided in the last November 23 *Los Angeles Times Magazine* by Ira Winn, a teacher at Cal State Northridge. He says:

> Each generation claims, in retrospect, that its own school experience was the "real" education, conveniently forgetting its own educational follies. It has always been easy to seek comfort in myth, and Clarence Darrow's enlogy to the class of 1918 at Senn High School in Chicago remains a fitting antidote against this tendency:
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> "You're no more fit to 'go forth and serve' than the man in the moon. You're just a bunch of ignorant kids full of the devil, and you've learned practically nothing to show for the four years you spent here. You can't fool me, because I once spent four years in just such a place."

If this was a shock to the students, it was only because here was an adult who was actually telling them the truth. Prof. Winn comments:

> There was no escaping then the failure of the great war still raging in 1918 to make the world safe for democracy. Several wars later, there is no room for an indulgent attitude toward civic apathy or ignorance or the wasteful and horrendous arms race. Nor can society ignore the growing and untoward influence of the media in shaping minds and the simultaneous decline in the influence of the schools. . . . We must remember that even in Japan, where conformity and pressure to perform are national and familial traditions, there is a growing rebellion against the rote learning system, the dulling pace and constant threat of failure imposed by the schools.

Prisons are run by the use made of promises of privilege and fear of punishment. It is hard to see much difference between prisons and schools.

FRONTIERS

Who or What Makes Meaning?

IN *Et cetera* for last fall, the editor, Neil Postman, who teaches Media Ecology at New York University, writes on what Alfred Korzybski, the Polish thinker and founder of the movement for the study of General Semantics, stood for, and on the basic conceptions of his philosophy. Essentially, says Postman, Korzybski "took it as axiomatic that what we call 'meaning' is not to be found in words but in people, and ultimately the question he posed was, By what process do people ascribe meaning to the world?"

The importance of this question can hardly be exaggerated, and Postman's discussion of it is so clearly expressed that what he says becomes worthy of examination. Korzybski identified humans as "time-binders," in contrast to plants which are "chemistry-binders" and animals which he named "space-binders." Postman says:

> Chemistry-binding is the capacity to transform sunlight into organic chemical energy; space-binding, the capacity to move about and control a physical environment. Humans have these capacities too, but they are unique in their ability to transport their experience through time. As time-binders, we can accumulate knowledge from the past and communicate what we know to the future. Science-fiction writers need not strain invention in their search for interesting time-transporting machinery: *we* are the universe's time machines.
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> Our principal means of accomplishing the binding of time is, of course, the symbol. But our capacity to symbolize is dependent upon and integral to another process, which Korzybski called "abstracting." Abstracting is the continuous activity of selecting, omitting, and organizing the details of reality so that we experience the world as patterned and coherent. Korzybski shared with Heraclitus the assumption that the world is undergoing continuous change and that no two events are identical. We give stability to our world only through our capacity to recreate it by ignoring differences and attending to similarities: although we know that we cannot step into the "same" river twice, abstracting allows us to act as if we can.
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> An abstraction, to put it simply, is a kind of summary of what the world is like, a generalization about its structure.

Here Postman is suggesting that when we think we are looking at and considering the world, we do not see the world as it really is—which is probably, for us, unknowable—but see a generalized summary, a collection of related ideas or concepts made up of abstractions, most of them made in the past. It is, as we say, a paradigm of the world, but not the real world. And as we know if we study a little history, paradigms change, making the "ages" of history. Postman goes on:

> The naming of things, of course, is an abstraction of a very high order (entirely beyond the capacity of animals) and of crucial importance. For by naming an event and categorizing it as a "thing," we create a vivid and more or less permanent map of what the world is like. But it is a curious map, indeed. The word "cup," for example, *does not in fact denote anything that actually exists in the world.* It is a concept, a summary of millions of particular things that have a similar look and function. . . .
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> Although these symbols become part of ourselves—indeed, Korzybski believed they become imbedded in our neurological and perceptual systems—we must never take them completely for granted. As Korzybski once remarked, "Whatever we say something is, it is not."
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> Thus, we may conclude that humans live in two worlds—the world of events and things, and the world of *words* about events and things. In considering the relationship between these two worlds, we must keep in mind that Language does much more than construct concepts about the events and things in the world; it tells us what sorts of concepts we ought to construct. For we do not have a name for everything that occurs in the world. Every language differs not only in its names for things but in what things it chooses to name. Each language, as Edward Sapir observed, constructs reality differently from all the others.

Scientists, Korzybski believed, are more effective than the rest of us in solving our problems. But this, we now see, is because their language leaves out a great part of the world. Yet it is true, as Postman says, that scientists tend to

be more conscious of the abstracting process; they tend to be more aware of the distortions in their verbal maps; they are "more flexible in altering their symbolic maps to fit the world."

Yet as so many have pointed out during recent years, while scientists deserve praise for the dogged determination, the care and sophistication with which they apply their method, and their willingness (in most cases) to listen to one another, much of their prestige is due to the simplification of their model of the world, their ruling out of subjective factors of causation—indeed they do not deal with "subjects" at all, except perhaps statistically. And the general semanticists, following Korzybski, participate in the same neglect of what may be called the entire moral universe, of which we know so little and to which, as a result, we give almost no attention.

On the other hand, there is a great lesson in general semantics concerning the universal relativity of what we call "knowledge," and the relativity of everything we name and think we "know" as a result. The ancient Indians spoke of this weakness as *Namarupa,* the delusion of Name and Form. They acknowledged that absolute truth is impossible to speak of in finite terms, which means that it cannot be discussed or communicated, although, ideally speaking, it must be a reality. And as Postman puts it:

> The territory, for example, is always changing, especially over time, but our words tend to be static: as realities change, our descriptions of realities do not. Moreover, the territory is not a world of "either-or-ness" or, for that matter, of "thing-ness." Yet our language depicts it as such. The territory never presents itself in all its detail, whereas our language creates the illusion that our descriptions are complete. Everything in the world is unique, but our language forces us into categorical thinking.

General Semantics, Postman points out, has not become a part of the academic curriculum, mainly because it is too broad in its subject-matter and implications. "In a word, to study and teach it is not likely to further the quest for tenure." Yet outside academia many have benefitted from the study and application of Korzybski's insights. Postman concludes:

> But beyond all this, it is indisputable that together with such figures as C. S. Pierce, William James, Ludwig Wittgenstein, and I. A. Richards, Alfred Korzybski helped to heighten our awareness of the role of language in making us what we are *and* in preventing us from becoming what we ought to be but are not yet.