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FOOD, CLOTHING, SHELTER

IT is a commonplace of both reform and revolution that when changes are sought, they are almost invariably changes in conditions rather than changes in men. Then, since accomplishing changes in conditions requires—or seems to require—power, the focus of the drive for change is fixed on the acquisition of power; for without power, it is said, nothing can be done. Yet conditions, whatever their apparent origin, are really the result of human attitudes. They grow out of what people want, admire, and are willing to work for. So, regardless of power relationships, the quality of human beings eventually determines the conditions of life.

The really important changes, therefore, are changes in men. This was the Platonic contention, and the reason why Plato gave no attention to the question of power. He was not interested in how to get power. He had seen enough of power-seeking—too much of it. The motives and habits of men who sought power had led him to give up the thought of political action. As Alvin Gouldner says in his book on Plato's sociology (*Enter Plato*):

> . . . the mobilization and the use of power is neither inconceivable nor mysterious to Plato. It is familiar to him. He has seen it done time and again and has lived close to those who have done it. The trouble, from his standpoint, is that he has not seen it done successfully, in the sense of leading to a stable and desirable polity. Power brought forth counter-power, and what one side did, another undid. Further, power was used incompetently and for selfish ends. Plato concludes that the customary use of power in Greek society is a corrupt and corrupting thing, a kind of dirty politics at its worst. Time and time again he remarks that power corrupts those who have it the more so the more they have of it, especially when they are not themselves subject to a restraining authority such as the laws. "[T]he very bad men," Socrates says to Callicles, "come from the class of those who have power." Again, "if anyone gives too great a power to anything . . . everything is overthrown," and excess and injustice result. "No human nature invested with supreme power is able to order human affairs and not overflow with insolence and wrong" unless they are themselves governed by laws. . . . Plato has lost confidence in the ability of the established loci of power to use it wisely. From his standpoint, the major conventional power centers are morally bankrupt. Neither oligarchs nor democrats, neither aristocrats nor the *demos,* neither the poor nor the rich, are expected to use power for the moral purposes he sought. Indeed, none of them has been able to maintain Athenian power the city is defeated by Sparta while Sparta is, in turn, vanquished. Thus Plato's utopianism is in some part to be understood as a result of his despair about the proper uses of power.

While there are endless differences between Plato's time and our own, there is one manifest similarity: we, too, have every reason to have "lost confidence in the ability of the established loci of power to use it wisely." This applies in almost every direction. Little can be said in defense of the use of military power by the dominant governments of the present. The books which come out, month after month, year after year, are masterly exposes of the follies, cruelties, and futilities of the wars and other military exploits of the powerful nations. The only *normal* response to all this, as the coming generation has abundantly demonstrated, is horror and rejection. Private industry is similarly on trial, in terms of both social and environmental issues. The story of commercial and industrial power is unrelievedly the story of irresponsibility, whether you turn to the sociological studies of C. Wright Mills or the ecological revelations of Rachel Carson and Barry Commoner. The best books about economic enterprise, government, national and state politics, and municipal affairs, all tell the same story. Power serves its own ends, not the good of the people. The meticulously accurate studies by Ralph Nader, pursued with a pure passion for the public interest, are final evidence of the truth of Plato's judgment concerning power, and the most

recent publications of his research groups, concerned with regulative government bureaus, make it clear that remedies do not lie in that direction.

While all this may be said to be very nearly self-evident, there is little alteration in the efforts of well-intentioned persons, most of whom go on trying to devise controls over power that have a better chance of working, and attempting to win public support for individuals who seem the least vulnerable to corruption. Even though it is admitted that the very means of seeking or gaining power for even "good people" involve so many compromises that corruption tends to set in right at the start, the efforts still continue, mainly on the ground that there is nothing else to do. What, after all, *is* the alternative?

Plato's alternative, which Gouldner speaks of as "utopian," was to propose that the social community be made over into a school for the systematic development of human character. While there is much to be said in favor of this proposal, we shall not repeat it here. The books of Plato are available, and one must mournfully add, they have been available for a long time. Are there no more compelling or attractive ways of approaching his solution? We started out, for example, by suggesting that a great deal of attention is given to plans for changing conditions, whereas what we really ought to be doing is working to improve human beings. Better conditions will come about naturally if men begin to live better lives.

How, then, should the pursuit of excellence in human life be conducted? After we review the classical virtues—courage, honesty, prudence, wisdom, kindness and compassion—what shall we say? There are certain elementary modes of learning which all teachers have found to be the natural vehicles of those unpredictable self-discoveries that are essential to human growth. These modes of learning are closely related to the ways in which men support themselves in their daily lives. The Quakers have an expression—Right Livelihood—which covers the basic idea. Gaining food, shelter, and clothing are the indispensable economic activities of human beings, and a critical consideration of them in all their aspects could easily bring new light on what will be practically needed to alter the quality of life and the attitudes of people. We are not going to consider what is "feasible," but what ought to be done—what *will* be done, one might say, sooner or later, by those who care about the restoration of excellence to human life.

We might begin with the demand for excellence in food. A first step in this direction is to produce a first-hand encounter with it. While not every family can raise food for the table, more people can than do. If it became a principle of parents to raise all they can for their own table, there would be many more first-hand encounters with excellence in food. Children would learn to eat vegetables they have scorned. They would become sensitive to natural flavors. Then there is home-baked bread. There could even be home-ground flour, if not home-grown wheat. Handmills are not expensive, although it takes a healthy man to operate one. If you think home-baked bread is good, then the treat of home-ground flour will be even more appreciated.

It isn't that there is any deep lesson in any of this, but that, over all, the more people relate for themselves to the sources of their food, the more natural their lives become, and a change of taste is always at the beginning of any lasting change in life. What about people in the slums? There it is more difficult, but last year a young man from East Harlem came to California to learn how to build what he called a "food cabinet"—an ingenious arrangement of redwood planks in V-formation, one trough above another, five in all, about six feet long, closed in in greenhouse style, with a big metal reflector on one side to shine the sun's rays in at every level. The food cabinet, it was said by its inventor, a California orchardist, would feed a family the year round, if proper care was taken of the soil in the troughs. The man

from East Harlem hoped to get people in the ghetto to build food cabinets for their roofs and fire-escapes, and start growing vegetables for themselves. Wild ideas like that can be the beginning of a cycle of progressive self-reliance, in some cases.

There is no salvation in food. But there is health in food. People who don't know anything about food production are cut off from one of the vital aspects of their own lives. They have little opportunity to learn about the rhythms of nature. They are ignorant of a vital symbiotic process affecting them and every other human being. All the lore of growing things is a closed book for them. They become less and less children of the earth. It is a serious sickness not to be able to feel one's kinship with the earth. Psychiatrists have written learnedly about this ill, and Wendell Berry, in *The Hidden Wound,* made it the theme of his study of the American South. The unhidden wound—what the whites have done to the blacks—is plain to all; but the *hidden* wound is what the whites did to themselves in turning over to the blacks the arduous labor of working the land. The whites knew how to "own" the land, but they could not understand *living* on it, working with it, enjoying it, from moment to moment. They lost touch with the intimate reality of life as a good thing in itself.

Most everyone knows, today, about the Rodale publications, *Organic Gardening* and *Prevention,* issued at Emmaus, Pennsylvania. These magazines have done much to spread knowledge concerning the health of both the soil and man. Today, many of the communes being started by the young are farming according to organic gardening principles. It is true enough that sometimes a "cultist" atmosphere has infected these undertakings, and a similar influence is found in health food publications. This shouldn't bother anyone who learns to understand it. Such tendencies are inevitable in a society which has no central philosophy of life, which has lost its ideals of human excellence, and is reduced to working its way back, little by little, through partial causes and step-by-step reforms. Why, one may ask, has business become a "rat-race," a never-ending round of competitive climbing on the corporate status ladder for the executive, with meaningless work and wage slavery for the employee, and a constant struggle to keep up with technological progress for the small manufacturer whose equipment always needs to be updated? All these undertakings and occupations should be leisurely, easygoing; they are *not* the most important thing in life. But they have been made so, and forced into fiercely competitive patterns in a civilization which recognizes no nonmaterial goal. Inevitably, the vacuum of human purpose is filled by the objective of ever-increasing production matched by constantly stimulated consumption. All our Sacred Things have been marketable goods for at least a century. The Holy Grail is not an Economic Prize, but we have made it so. This is the reason why the mood of "cult" tends to creep into any activity people undertake as an alternative to the conventional way of doing things. It serves as surrogate religion.

Something along these lines would also explain why doctors, fashion authorities, and sometimes great architects—one thinks of *Fountainhead*—so easily fall into the role of priests. The emptiness of the inner life must be compensated for, somehow. All these weaknesses will disappear when the symmetries of a good human life are understood and begin to be reflected in new social institutions.

Clothing is more difficult to discuss, since what people wear is now in flux, due, mainly, and happily, to the hippie revolution in costume. Yet there are families with looms which make textiles for home use. Meanwhile, it is a depressing thought that nearly everything a man wears lasts but a short time, these days. The buttons come off the shirts and the weave of the fabric opens and frays. We know a man who got some twenty yards of *khadi* (hand-woven cotton made from hand-spun yarn by Indian villagers), and was

fortunate enough to have a friend who made the material into shirts. Those shirts are going to last *forever!* Putting one on has the same pleasant effect as eating a home-cooked meal, he said.

This idea isn't as unreasonable as it sounds. Some forty years ago Ralph Borsodi and his wife worked out a plan of subsistence farming on the land, in Suffern, New York. He commuted to his job in the city, and she wove cloth and made her own clothes at a cost cheaper than they could be bought, despite the advantages of "mass production." And Borsodi, being an economist, kept careful cost records on all the economic operations of their suburban "homestead." His book, *Flight from the City,* tells the whole story. He found that the cost of distribution more than ate up the savings of mass production on conventionally manufactured goods. A large range of products could be made better and more cheaply in the home. And the Borsodis had the joy of raising much of their own food, building their own house, and fabricating their own things. How did they find time for all this? Well, they did. And he wrote books about it, too.

Reform in clothing could most easily be developed by women, many of whom long ago gave up being slaves to fashion and the nonsense of the women's magazines. This is not a subject that can be written about to any profit except in specialized craft journals—it needs to be acted out. Yet there is one basic rule given by E. F. Schumacher in his article, "Buddhist Economics," which may be repeated here. In this passage, Schumacher is comparing Western economic theory with what he calls Buddhist economics. His conclusion about clothing is reached after a statement of general principles:

> While the materialist is mainly interested in goods, the Buddhist is mainly interested in liberation. But Buddhism is "The Middle Way" and therefore in no way antagonistic to physical well-being. It is not wealth that stands in the way of liberation but the attachment to wealth, not the enjoyment of pleasurable things but the craving for them. The keynote of Buddhist economics, therefore, is simplicity and nonviolence. From an economist's point of view, the marvel of the Buddhist's way of life is the utter rationality of its pattern—amazingly small means leading to extraordinarily satisfactory results.
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> For the modern economist this is very difficult to understand. He is used to measuring the "standard of living" by the amount of annual consumption, assuming all the time that a man who consumes more is "better off" than a man who consumes less. A Buddhist economist would consider this approach excessively irrational: since consumption is merely a means to human well-being, the aim should be to obtain the maximum of well-being with the minimum of consumption. Thus, if the purpose of clothing is a certain amount of temperature comfort and an attractive appearance, the task is to attain this purpose with the smallest possible effort, that is with the smallest annual destruction of cloth and with the help of designs that involve the smallest possible input of toil. The less toil there is, the more time and strength is left for artistic activity. It would be highly uneconomic, for instance, to go in for complicated tailoring, like the modern West, when a much more beautiful effect can be achieved by the draping of uncut material. It would be the height of folly to make material so that it should wear out quickly and the height of barbarity to make anything ugly, shabby or mean. What has just been said about clothes applies equally to all other human requirements. The ownership and consumption of goods is a means to an end, and Buddhist economics is the systematic study of how to gain given ends with the minimum means.

Shelter? Here, do-it-yourself activities are under severe limitations. Yet it is always possible to do *something* which applies the idea in principle. The man we spoke of earlier, from East Harlem, belongs to a theatre group that develops and produces its own dramas in that part of the city. It is very much a "people's" undertaking in the arts, and the members of the group found that they were able to relate more closely with the people of the neighborhood by acquiring practical skills. In short, they learned to help their neighbors. One of them learned enough plastering to repair ceilings and walls. Another mastered the rudiments of wiring and could solve simple electrical problems. Vitally needed repairs in ghetto flats are often left undone for weeks, and these players help to solve such problems. The

basic idea of the group is self-reliance and self-sufficiency, as the qualities most needed by ghetto inhabitants, who tend to be passive sufferers. Simple example-setting, along with the dramatic presentations, carry this idea.

Meanwhile, there is a growing literature to help the prospective owner-builder. The *Whole Earth Catalog* lists much of this material, including the plans and books of Ken Kern, who is probably the most resourceful and practical pioneer in this direction. There are also, of course, the Fuller "domes." What about the "architecture" of the future? Nobody knows. Perhaps the best meditative guide for reflection on this subject would be the paperback, *Architecture without Architects,* published by the Museum of Modern Art a few years ago. Then, Sybil Moholy-Nagy's *The Matrix of Man* is an informative and scholarly study of the evolution of urban communities over many centuries. It becomes evident that the *people* will determine these things, not the planners, although planners who understand the people can do much to help along constructive developments.

The old systems of external control and denaturing division of labor, along with the exploitive psychology of consumerism and the dogmas of economic progress will of course continue for a while. The lives of many people are bound up in these systems. The problem, today, is to get viable alternatives going, through ingenuity, vision, determination, and stubborn insistence on the right of human beings to live as much as they are able according to principles and a light of their own. Practical knowledge of the means to food, clothing, and shelter is a vehicle of this determination. As more people move in this direction, new possibilities will become apparent. Only in the matrix of on-going constructive change will better ways of changing appear. Politics is not involved in such undertakings, although they are bound to have broad political consequences as people grow more independent, more knowledgeable, more free. What political solutions overlook, in their drive for power as the means of changing conditions, is that there is a great deal of unused freedom we already have that is wasting away and being lost. Freedom does not grow from law. All law can do is validate, legalize, or "recognize" a pre-existing condition. Freedom grows from the use of the freedom we have. Using this freedom creates space for more freedom to act in the future.

REVIEW

TEXT ON ECONOMICS

THE ideas on which the society of the future will almost certainly be based are already in the world; they are not "secret" except from neglect, and once they are better known the people who recognize their validity will begin to put them into practice. This is the way all humanly organized changes for the better have come about in the past: seminal ideas slowly filter into the minds of men, and from the resulting strength and vision behavior is modified, new forms of action are established, and the life of mankind is enlarged.

But for all this to take place, the ideas need to be circulated. They must reach people, if they are to become influential. It is for this reason that MANAS writers often speak of the importance of the reading materials used in schools. It seems obvious that all the conventional texts will have to be replaced, sooner or later. The sooner the better. Teachers in the experimental schools of today are using fewer and fewer texts. Often they can't find anything suitable to use in their teaching and are obliged to put together materials themselves. We have already discussed this problem in MANAS in relation to history. Now a small book—a large pamphlet, rather—which was published about nine years ago in India brings to the fore the question of what ought to be done about another academic subject—Economics. This booklet, *Roots of Economic Growth,* is by E. F. Schumacher, who is economic adviser to the National Coal Board of England. Originally published by the Gandhian Institute of Studies, it is distributed by Navachetna Prakashan, Box 116, Rajghat, Varanasi 1, India. A dollar would be an adequate sum to send for a copy. (Many readers will recall articles by Mr. Schumacher that have appeared in MANAS during recent years.)

Everything that this writer says is well within the grasp of the ordinary reader, making the booklet a fine take-off point for studies in economics at the high-school level. It combines simplicity, clear reasoning, and common sense. As a professional economist of full stature—one who was for years associated with Beveridge and Keynes—Mr. Schumacher is thoroughly conversant with the typical Western conceptions of this "Science," but writes mainly to abolish its "independence" and to base all economic thinking upon humanistic and philosophical principles. No impartial reader can remain unpersuaded by what he says.

We are going to quote a great deal of the first of the six essays in this booklet, in order to establish the keynote of Mr. Schumacher's views. He writes on his first page:

> Well, let us say it straight out: What is looked upon as *the* science of Economics is based on *one* particular outlook on life, on one only, the outlook of the Materialist. Every concept of Economics is rooted in this outlook. Even where Economics admits that man does not live by bread alone, it counts as "cost" any activity that fails to cater for material wants. Economics distinguishes between "productive" and "unproductive" activities, and only those are called productive which in one way or another, directly or indirectly, cater for material wants. Not that Economics had failed to concern itself with "Welfare." But even welfare is a term completely rooted in materialism—although in a slightly more subtle fashion.
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> This one-sidedness of Economics is surprising and indeed abnormal. Yet it is understandable all the same. For two reasons: first, because *up to a point,* as I have said, everybody is inescapably concerned with material economic things, if, indeed, he wants to live in a becoming way. *Up to a point,* therefore, Economics is about life as such, irrespective of any ideas of meaning or purpose. The second reason is of an altogether different kind: Economics as a science has arisen only in the West and at a time when Western Materialism. ruled supreme throughout the world. Non-materialists have been too weak, so far, to think these matters out from their own point of view. And it is one aspect of their continuing weakness that they have thoughtlessly and all too easily accepted the spurious claims of Western Economics to be the only possible body of economic thought, to be final, and objective, applicable to all men at all times.

Because Economics, *up to a point,* can rightly claim universal validity, it has been accepted as possessing universal validity throughout. What do I mean by up *to a point;* The essence of materialism is not its concern with material wants, but the total absence of any idea of Limit or Measure. The materialist's idea of progress is an idea of *progress without limit.* I quote from an official report relating to Burma:

"There is no known limit to possible improvements in materials, methods and products. Improvements in methods go on year by year. . . . The standard of living increases as a result, year by year and decade by decade. Each generation is better off than the one before. Every man can look forward to the prospect that his children will live better than he did and his grandchildren better than his children. This must come about in Burma also. Burma must become a progressive nation, so that her people not only live better in 1960, but look forward to continued improvement, without limit."

This is not progress *up to a point,* but progress *without limit.* Is this compatible with Buddhism or Christianity or with anything the Great Teachers of mankind have proclaimed? Of course not. It is compatible only with the most naked form of Materialism.

Economics, as taught today throughout the world—before the iron curtain and behind—recognizes no limit of any kind. It is, therefore, the Economics of Materialism and nothing else.

Mr. Schumacher is not of course against material comforts and amenities, but he is against letting them be regarded as benefits when they are plainly excesses; and he is most of all against letting the idea of material plenty stand as the sole criterion of human good. Disorder and ruin are worked in the lives of countless millions by reason of this misconception of human good. When material plenty is taken as the norm, the quickest way to achieve it becomes the paramount consideration, and all other aspects of human community are neglected. This, as Schumacher shows, giving various illustrations, means bringing high technology to the underdeveloped nations. He points out that a plant equipped to out-produce and undersell all local skills and methods of fabrication turns out to cause unemployment rather than prosperity in an industrially backward area. What were poverty and simplicity now become deprivation and *misery,* followed by degradation and dehumanization, which poverty need not involve at all.

Schumacher makes it clear that Gandhi's thinking concerning village welfare and rural India—where 85 per cent of the people live—can be regarded as humanistically based economics issuing in definite principles. As he puts it:

His [Gandhi's] economics were derived from the concepts *Swadeshi* and *Khaddar.* This is what he said about Swadeshi:

"In your village you are bound to support your village barber to the exclusion of the finished barber who may come to you from Madras. If you find it necessary that your village barber should reach the attainments of the barber from Madras you may train him to that. Send him to Madras by all means, if you wish, in order that he may learn his calling. Until you do that you are not justified in going to another barber. That is Swadeshi. So when we find that there are many things that we cannot get in India we must do without them. We may have to do without many things. . . . It has been urged that India cannot adopt Swadeshi in the economic life. Those who advance this objection do not look upon Swadeshi as a rule of life. With them it is a mere patriotic effort; not to be made if it involved any self-denial. But Swadeshi, as defined here, is a religious principle to be undergone in utter disregard of the physical discomfort to individuals. Much of the deep poverty of India is due to the departure from Swadeshi in the economic life. If not a single article of commerce had been brought from outside India she would today be a land flowing with milk and honey."

The point, here, is that regions need their self-sufficient economies and should not be invaded by suddenly disruptive influences. Change in the economic area must of necessity be slow, so that there can be infra-structure of organic adaptation every step of the way. By this means progress need cause no suffering and growth can proceed at an even pace. The harmonious lives of human beings are more important than a large supply of material goods. The goods are only means to ends, they are not ends in themselves.

These general ideas are found again and again in thoughtful comment on the economic troubles of the Western societies. Charles Reich, in *The Greening of America,* gives a corollary of the "no limit" feature of Western economic theory when he observes that the society dominated by modern technology is obsessively preoccupied by a single objective—*more production.* No other value is permitted to interfere. As Reich put it: "Only such single-valued mindlessness would cut the last redwoods, pollute the most beautiful beaches, invent devices to injure and destroy plant and human life." Materialist economics has but one value, and, as Reich says: "To have just one value is to be a machine."

Writing in the March 1969 *Community Comments,* Griscom Morgan showed how neglect of the principle Gandhi called "Swadeshi" is responsible for the decline of the small communities and towns all over the United States. The attractions of the city are the equivalent of invasion by city techniques, to the detriment of community life. The restoration of rural areas can come only by the same kind of support that Gandhi recommended for rural India. A program of this sort was developed during the 1930's by William Bailey, a small town banker, who did so much for the economic restoration of the county in which he lived that he was the first small-town banker to be elected president of the American Bankers Association.

The full spectrum of economic considerations, from the human point of view, is covered, however briefly, in this booklet by Mr. Schumacher. Students who start thinking about economics in these terms will never go back to the old, one-value way of regarding even the practical problems of human life.

COMMENTARY
AN ABNORMAL PHENOMENON

THAT the writings of E. F. Schumacher are quoted in this week's lead article as well as in Review was not by editorial design but happy coincidence. Unfortunately, there are no books available by Mr. Schumacher which we can recommend, since he has not yet written one, so that the pamphlet noticed in Review and numerous contributions to periodicals remain the only sources of his ideas. Reprints of some of his articles may be obtained by writing to the Intermediate Technology Development Group, 9 King Street, Covent Garden, London, W.C. 2, England.

One of Schumacher's basic interests is in finding the best way to give economic help to those who need it most. Why, he asks, are so many of the peoples of the world the victims of want?

> What has come over them? On the whole throughout history, all healthy societies have managed to solve their problem of existence, and always with something to spare for culture. Grinding poverty with malnutrition and degradation; with apathy and despair, as a permanent condition of people, not as a result of war or natural catastrophe—this is a most abnormal and, historically speaking, an unheard-of phenomenon. All peoples—with exceptions that prove the rule—have always known how to help themselves, they have always *discovered a pattern of living which fitted their peculiar natural surroundings.*

After discussing this question at length, Schumacher reaches the conclusion that a kind of paralysis has overtaken many of these sufferers, due to the impact of the modern West and the techniques of the industrial revolution, for which they were unprepared. He compares this effect to the loss of faith in themselves felt by the Aztecs when they met Cortes and his men, mounted on horseback and equipped with firearms. The West reached its present pitch of economic development gradually, but the underdeveloped peoples are now confronted by the achievements of high technology suddenly, and they are overwhelmed.

The greatest single cause of poverty in underdeveloped lands, Schumacher believes, is "the existence of a modern transport system." Without such rapid transport, each village enjoyed a natural "tariff" imposed by distance to shield it from the competition of other villages and towns. This contributed to gradual processes of domestic development, with progress carried forward by "the people" at their own rate. "All these possibilities," Schumacher points out, "are destroyed by cheap and fast transport." Village industries die out when their markets are taken away from them. The entire countryside declines.

The restoration of local resourcefulness and skills, in his view, lies at the root of economic recovery for a great many of the disadvantaged peoples of the world.

CHILDREN
. . . and Ourselves
LIBERAL EDUCATION FOR YOUNG CHILDREN

THREE weeks ago, we reported here on Robert McClintock's essay on Liberal Education—in which he explained that liberal education means education for those who are by nature free: "Liberal pedagogy simply assumes realistically that educational responsibility and initiative reside in the person becoming educated." We now have material showing that the same principles apply in the kindergarten and the early grades. The Education Development Center, in Newton, Mass., is pursuing an Early Childhood Education Study, supported by Head Start, and has recently begun publication of a series of Occasional Papers developed during this work. One of these presents contributions by David Hawkins and Tony Kallet, and contains an extract from the "Plowden Report," concerned with the primary schools of England. (Charles Rathbone is editor of these Occasional Papers, which are available at a dollar from the Educational Development Center, 55 Chapel Street, Newton, Mass. 02160.)

Many paths lead to the same discoveries—the most important ones in education, these days, having to do with the way children learn. John Holt found out what he knows by direct observation of three-, four- and five and six year-olds.

Paul Goodman laid stress on the same discovery all through his *New York Review of Books* article, "The Present Moment in Education." As he put it: "in all societies, both primitive and highly civilized, until quite recently most education of most children has occurred incidentally." Leslie Hart, in the *Saturday Review,* called it "random education." Ivan Illich remarks: "Everyone learns how to live outside of school. We learn to speak, to think, to love, to feel, to play, to curse, to politick and to work without interference from a teacher."

David Hawkins found his way to this general view—or to the principle which lies behind it—during his years as a college professor. He begins his paper:

> As a college teacher, I have long suspected that my students' difficulties with the intellectual process comes not from the complexity of college work itself, but mainly from their home background and the first years of their formal education. A student who cannot seem to understand the working of Ptolemaic astronomy, for example, turns out to have no evident acquaintance with the simple and "obvious" relativity of motion, or the simple geometrical relations of light and shadow. Sometimes for these students a style of laboratory work which might be called "Kindergarten Revisited" has dramatically liberated their intellectual powers.

What happens in kindergarten? Mr. Hawkins uses a reflection of the Water Rat in Kenneth Grahame's *The Wind in the Willows* for the keynote of his paper, which is called "Messing About in Science." "Believe me," said the Water Rat, "there is *nothing*—absolutely nothing—half so worth doing as simply messing about in boats." He went on dreamily—"Simply messing . . . messing about in boats. . . ." In short, Mr. Hawkins discovered the extraordinary fruitfulness of simple messing about. He went to a grade school and taught elementary science there to find out how it worked. He found out the same thing that John Holt reported in *How Children Learn:* the children need most of all to do some messing about, and they need to take their own time in doing it. On the occasion Holt describes, the children, mostly five-year-olds, had been given a special sort of wooden blocks. This is what the teachers learned:

> If, when a child came in for the first time, they tried to get him "to work" right away, to play some of their games and solve some of their puzzles, they got nowhere. The child would try to do what he was asked to do, but without joy or insight. But if at first they let the child alone for a while, let him play with the materials in his own way, they got very different results. At first, the children would work pieces of wood into a fantasy. Some pieces would be mommies and daddies, some children; or they would be horses and cars, or big animals and little animals. Then the

children would make various kinds of patterns, buildings, and constructions out of the pieces of wood. When, through such play and fantasy the children had taken these materials into their minds, mentally swallowed and digested them, so to speak, they were then ready and willing to play very complicated games, that in the more organized and businesslike situation had left other children completely baffled. This proved so completely true that the experimenters made it a rule always to let children have a period of completely free play with the materials, before asking them to do directed work with them.

So, teaching elementary science, David Hawkins found that the "messing around" period was indispensable and even the heart of the matter, in the sense that nothing good could happen without it. He gives an example:

Simple frames, each one designed to support two or three weights on strings, were handed out one morning in a fifth-grade class. There was one such frame for each pair of children. In two earlier trial classes, we had introduced the same equipment with a much more "structured" beginning, demonstrating the striking phenomenon of coupled pendula and raising questions about it before the laboratory work was allowed to begin. If there was guidance this time, however, it came only from the apparatus—a pendulum is to swing! In starting this way I, for one, naïvely assumed that a couple of hours of "Messing About" would suffice. After two hours, instead, we allowed two more and, in the end, a stretch of several weeks. In all this time, there was little or no evidence of boredom or confusion. Most of the questions we might have planned for came up unscheduled.

Why did we permit this length of time? First, because in our previous classes we had noticed that things went well when we veered toward "Messing About" and not as well when we held too tight a rein on what we wanted the children to do. It was clear that these children had had insufficient acquaintance with the sheer phenomena of pendulum motion and needed to build an apperceptive background, against which a more analytical sort of knowledge could take form and make sense.

Second, we allowed things to develop this way because we decided we were getting a new kind of feedback from the children and were eager to see where and by what paths their interests would evolve and carry them. We were rewarded with a higher level of involvement and a much greater diversity of experiments. Our role was only to move from spot to spot, being helpful but never consciously prompting or directing. In spite of—because of!—this lack of direction, these fifth-graders became very familiar with pendula. They varied the conditions of motion in many ways, exploring differences of length and amplitude, using different sorts of bobs, bobs in clusters, and strings, etc. And have *you* tried the underwater pendulum? They did! There were many sorts of discoveries made, noted, lost, and made again. I think this is why the slightly pontifical phrase "discovery method" bothers me. When learning is at the most fundamental level, as it is here, with all the abstractions of Newtonian mechanics just around the corner, don't rush! When the mind is evolving the abstractions which will lead to physical comprehension, all of us must cross the line between ignorance and insight many times before we truly understand. Little facts, "discoveries" without the growth of insight, are *not* what we should seek to harvest. Such facts are only seedlings and should sometimes be let alone to grow into. . . .

All this is basic. But the paper does not stop with the messing about period. Mr. Hawkins goes on to the subtle question of when to begin to give organization to discovery in conceptual terms, with attention to what not to do.

If you once let children evolve their own learning along paths of their choosing, you then must see it through and *maintain* the individuality of their work. You cannot begin that way and then say, in effect, "That was only a teaser," thus using your adult authority to devalue what the children themselves, in the meantime, have found most valuable. So if "Messing About" is to be followed by, or evolve into, a stage where work is more externally guided and disciplined there must be at hand what I call "Multiply Programmed" material: material that contains written and pictorial guidance of some sort for the student, but which is designed for the greatest possible variety of topics, ordering of topics, etc., so that for almost any given way into a subject that a child may evolve on his own, there is material available which he will recognize as helping him further along that very way. Heroic teachers have sometimes done this on their own, but it is obviously one of the places where designers of curriculum materials can be of enormous help, designing those materials with a rich variety of choices for the teacher and child, and freeing the teacher from the role of "leader-dragger" along a single preconceived path,

> giving the teacher encouragement and real logistic help in diversifying the activities of the group.

Mr. Hawkins brings his discussion to a close by noting that sometimes, during the "messing about," children make discoveries of natural phenomena that are new even to physicists. Readers may recall that William J. J. Gordon, when he was teaching applied physics at Harvard, reported similar experiences by students who were helped to preserve their own independence of mind in pursuing their studies. "Perhaps," he said, "the greatest danger in the teaching of science is to present students with a *fait accompli* universe."

FRONTIERS

Preparations for Change

THERE are vast differences between the way in which a single human being decides upon far-reaching changes in his life, and then begins to make them, and the way a large nation or mass society undertakes changes. For one thing, it is probably misleading to speak of a nation as "undertaking" changes. Save in those rare instances when there is great leadership, a nation doesn't undertake changes at all, but is swept into them by a multitude of causes which often have little in common except that they spread dissatisfaction and loss of confidence.

The trial, conviction and sentencing of William Calley is an illustration of the curiously contradictory causes of change in a mass society. Here is an event which has no uniform meaning for the American people, yet is vastly unsettling. It makes everybody declare that *something is wrong,* although there are widely different conclusions as to what that "something" is.

The fact is that we don't begin to know enough about human nature and psychology and moral responsibility to be able to say what ought to be said about the horror which took place at Mylai. No comment, however penetrating, can win general agreement, although certain observations, such as those of Robert Jay Lifton, who called the Vietnam war an "atrocity-producing situation," seem just right.

Meanwhile, the stir around the country has been impressive. In Michigan, the entire Huron County draft board resigned in protest to the Calley conviction. The five men involved were all veterans of World War II. One said: "Why should I put my name on an order for induction of a man, who might have to face trial for carrying out an order of his superior officer?" Another member of the board said that "something has to be done to focus attention on the desperate need to end the Vietnam War." He added: "Most people think he is guilty, but what about the others over him that haven't been tried and probably never will be?" This same veteran said further, "Society itself is guilty, when we transport a man to another country to fight in an undeclared war. Who knows what we might do in the same situation?"

According to the Huron *Daily Tribune* for April 2 (which reported the above), another Michigan draft-board chairman resigned, and five boards in Florida were said to have quit. There may have been other such resignations around the country. Sympathy for Calley, expressed in telegrams to the White House, ran a hundred to one.

The *Nation* has two excellent editorials on the subject (April 12 and 19), one on the verdict, the other approving a letter addressed to President Nixon by Captain Daniel, who conducted the prosecution. Daniel's letter, the *Nation* writer said, should help to prevent politicalization of the issues of the trial. Discussing the verdict, the *Nation* said:

> In a sense, the verdict is a triumph of justice. The odds strongly favored a whitewash of the higher echelons, with Calley, and perhaps Medina, becoming the scapegoats. But if this was the plan, it failed to reckon with the brilliant and vigorous prosecution of Capt. Aubrey M. Daniel 3rd, who demonstrated beyond cavil that a massacre had indeed occurred, but that its agents could not be limited to those immediately on the scene. Now the Army is on the hook; it cannot possibly ignore the consequences of the verdict. Paradoxically, the trial and conviction of Calley has not disposed of the case; instead, it has made a national issue of the morality of the war.

On the question of what now ought to be done, the *Nation* quotes with approval the recommendation of Neil Sheehan. In a recent review of a number of books on war crimes in Vietnam, this writer proposed a national inquiry into the war crimes charges. "What is needed," he said, "is not prison sentences and executions, but social judgments soberly arrived at, so that if these acts are war crimes, future American leaders will not dare to repeat them." Since neither the Army nor the incumbent administration can be expected to pursue such an inquiry, Mr. Sheehan urges a

full-scale Congressional investigation. Has American intervention in Vietnam, he asks, violated the Nuremberg Principles forbidding wars of aggression?

The *Nation* would like to see the inquiry expanded to investigate "the circumstances that caused us to become involved in this shameful war, why we conducted it in such a shameful manner, and why, as a people, we have been so reluctant to acknowledge its real character." The editorial concludes:

> What we need, then, is a "social judgment" on how we permitted cold-war tensions to commit America's power and resources, its energy and leadership, to a sterile policy of containment which in turn prompted us to shore up European colonial regimes, to support corrupt and dictatorial setups in countries such as Spain and Greece and Taiwan, and to improvise client states to suppress revolutionary struggles for independence and statehood. Easing the Dutch out of Indonesia was our last exercise in liberation politics; in Indochina we first supported the French and then decided to succeed them. If Mr. Sheehan's proposed inquiry were broadened to include such matters, then the issue of responsibility could be driven home and the inquiry might serve the purpose he had in mind.

Well, if the ignoble record of national policy can be summarized with such ease, the only real solution would seem to be to stop acting as a "nation" entirely—to permit, that is, no "collective" justification for any act that we cannot accept individually. The nation-state is plainly outmoded as a social form. The longer we put off recognition of this fact, the more painful will the admission be, when it is finally forced upon us. The Calley trial may have little meaning except as preparation for this change. As Norman Cousins says (*SR,* April 24) in his editorial on the subject, "Lieutenant Calley has confronted us with questions that no longer can be buried in the recesses of mind."