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A POST-TECHNOLOGICAL FAITH?

THE books critical of science and scientific technology have become so numerous during recent years, with arguments so complete and well presented, that there is hardly room for dissent in intelligent opinion. The more influential of these books include Jacques Ellul's *The Technological Society* (1965), *Technological Man* by Victor Ferkiss (1969), *Pentagon of Power* by Lewis Mumford (1970), and Theodore Roszak's *Where the Wasteland Ends* (1972). There have of course been many others, along with numerous articles and papers, so that all these searching discussions and analyses may be said to have established a new plateau of thought about the human condition.

There is however a considerable vacuum left in the areas of affirmation and hope by all this criticism. If not by technology, then by what, will our great objectives be achieved? Part of the criticism, of course, was directed at those objectives, since an admired human activity tends to generate definitions of desirable objectives which are within the compass of its capacities, and to minimize the importance of other ends. But so much of our lives and hopes has been invested in the Western idea of industrial and scientific progress that it seems hardly possible to reverse or change the direction of so many of our activities without a profound and widespread alteration of our basic values and attitudes toward life. And this, as we all know, is not easy. So there is, for ample reason, a characteristic "last chapter" weakness in nearly all these excellent books.

But individuals, as we also know, are making such changes. Not all the "drop-outs" are youngsters. Attitudes *are* changing. A year or two ago the *Wall Street Journal* chronicled the careers of half a dozen eminently successful persons in their forties and fifties who had deserted highly paying jobs for new lives as artists or farmers or less commercially strenuous activities. Paul Goodman in *The New Reformation* spoke of those who are increasingly uncomfortable in their corporate roles and are working to humanize their situations in various ways—some by outspoken criticism of their employers. A reviewer in the *Saturday Review* for Oct. 21 reports that "Adam Smith," pen name of a sophisticated financial expert and popular author (*The Money Game*), in his latest book, *Supermoney*, warns that the "money game" doesn't work the way it used to—that *something else is going on.* Briefly explained:

> What is going on is a profound erosion of a value-system that has been the fundamental underpinning of our economy. Simply put, it's the carrot and the stick—the carrot being the expectation of reward and success, of betterment and possible riches, if not for oneself then for one's children and one's children's children, the stick being the fear and shame of the opposite. Well, they are beginning not to work so well anymore.

Adam Smith chooses gross indicators for evidence of a "trend," but in the kind of work he does, those are the indicators of interest and to which he has access. Higher on the scale of the needs/motives hierarchy in human beings are the changes which take place in the people who write the books critical of science and technology, and in the people who read them and find their own deeper feelings confirmed and articulated. If we had another kind of civilization, its changes would be sought and recognized at other levels and better, doubtless, understood. Meanwhile, we must make the most of what we are able to find out about ourselves, for if a cycle of change is to be successful and constructive, it will have to become more self-conscious than the one we are in now. We need, for one thing, to have a broader sense of destination than the back-to-the-land, communitarian and craftsmanship urge. These

longings are surely part of constructive change, but they don't go deep enough and they leave too many people out. So far, the larger movement toward change is animated partly by inchoate longing and partly by revulsion. The longing is for an undefined "higher" or more "meaningful" way of life, and the revulsion comes from the external ugliness and proliferating evil growing out of so much of what we do as a matter of course.

How, then, shall we fill in those "last chapter" blanks in the criticism of science and technology? Obviously, no brief magazine article can hope to do much in this direction, but what might be attempted is a suggestion for working on the problem. But first, to sharpen the issue, we begin with some review of the criticisms of technology to see what may be implied in the way of a positive outlook. For this purpose we shall quote from *Overskill* (Quadrangle and Ballantine) by Eugene S. Schwartz, a book that belongs with the other volumes listed at the beginning. Mr. Schwartz is an expert on computers who reached the conclusion that "Cybernetics is for automata, and the planned society is a prelude to the universal concentration camp." His book is a closely argued analysis of the assumptions, development, and excesses of technological civilization, reporting on a study which led him to believe "that the euphoric vision of science and technology is a myth—now become dangerous and threatening." *Overskill* is an exceptionally comprehensive over-all critique of the rationale of scientific method and of the fallacies in this "myth." It provides a concise consolidation of what may be called the growing "revisionist" literature of the philosophy of science, strengthened and tightened by the author's further analyses.

In a closing chapter, Mr. Schwartz lists seven parallel processes generated by present-day technological process, which, he maintains, are transforming both science and technology—which "are operating to nullify their effects, and will, in the long run, lead to their decline."

1. The technological process is undermining the premise of science that it is an independent enterprise that is free to discover the truths of the universe.

2. The technological process is undermining and destroying man's creative forces, which are the mainspring of science and technology.

3. The increasing complexity of techno-social problems in a finite and closed system tends to negate a "best" solution.

4. The efforts to control technology through prediction, planning and assessment will hasten the decay of creative forces and increase human alienation without helping to solve the crisis of science and technology.

5. The organizational structure and institutions of science and technology impose constraints on their further development.

6. Technological civilization becomes counter-productive—wealth becomes anti-wealth, and technology becomes a victim of its own development.

7. The destruction of the creative forces generates a counter-revolution to stave off mastery of the machine over man.

Each one of these points is developed with illustrations and argument. For example, the applications of science in technology extend the scope of technology to dimensions which make it an important tool of governmental power. This makes technology political, and it turns ordinary science into Big Science, which invariably becomes political. Since politics is mission-oriented rather than a search for truth, when science becomes the tool of politics, it deserts the quest for truth. Such science loses its international character: "The Manhattan Project has become the prototype of the scientific organization formed to carry out political ends: compartmentalization of work, divorce of scientists from ends, renunciation of personal responsibility, obedience to authority—and secrecy." This stultifies science even as it stultifies man, since natural laws become political secrets.

As the artificial environment created by technology becomes more complex, its management requires more and more control, so

lie in the direction of rigid controls."

> Big economy requires big government which

> toward disorder and anarchy will be stomped out as being inimical to "progress." "Law and order"

> Decision-making will become the province of experts who will substitute for the democratic political

> science and technology will become the arbiters of the fate of the real world. Decision-making based on

> a new priesthood. Until printing was invented, Lewis Mumford has observed, the written word was

> were privy to the secrets of nature and the wisdom of man. "Today the language of higher mathematics,
> computerism, has restored both the secrecy and the monopoly, with a consequent resumption of

How does technology become counter-productive?

> be increasingly devoted to the production of counter-technologies which are attempts to mitigate the more

> about in the first place. Anti-pollution devices on autos, factories, and power plants are becoming

> on jet planes, pneumatic tools, and heavy equipment. Scrap and waste will begin to be collected, sorted,

> nonphosphate, nonnitrate detergents, "harmless" food

> The green revolution will have to undergo profound changes to mitigate the effects of excessive nitrogen

> regarded as a precious commodity, and recycling and reclamation will have to be introduced in its

> have to be reclaimed and redeposited without scarring

> Since every technological process is a consumer of resources and energy, and every process is a

> be caught up in the necessity to provide counter-technology not to progress but in order not to

> faster merely to stand in the same place. Counter-technology will begin to predominate over technology

> continue to detonate at a faster pace.

Mr. Schwartz goes on and on, but that ought

predictions, but enough of them have already been verified to show the validity of his contentions in

technology have been different? Could it have developed, say, more slowly, more selectively,

suspect, if it followed the Baconian principle that

conquest of nature is
man. Not, indeed, without a very different ethos and metaphysic and conception of what life is for

We recall, here, the wonderings and musings
Tanizaki Junichiro, famous

following is from an essay by Tanizaki, published

would be like if it had gone its own pace and developed its own technology, instead of having

American heater on a very cold day, reflecting gratefully on its warmth, but disliking its extreme

> Suppose for instance we had developed our own physics and chemistry: would not the technique and

> would not our myriads of everyday gadgets, our

> they not have suited our national temper better than they do? . . .

> in ordered steps, while we have met a superior civilization and have had to surrender to it, and we

> thousands of years. The missteps and inconveniences this has caused have, I think, been many. If we had

> a material way than we were five hundred years ago. Even now in the Indian and Chinese countryside life

> Confucius were alive. But we would have gone in a direction that suited us. We would have gone ahead

> one day have discovered our own substitute for the trolley, the radio, the airplane of today. They would have been no borrowed gadgets, they would have been the tools of our culture, suited to us.

This was written nearly forty years ago, and if we had read it then we would probably have dismissed it as a vain and sentimental nostalgia, but today the response is likely to be different. Tanizaki sounds so *right,* when put beside Mr. Schwartz's inescapable conclusions. And we do not have the excuse of the Japanese—that they were made by a conquering power to adopt alien ways and hasten to technological disasters.

But a proper technology is at least imaginable, if not concretely describable. Yet a useful technology that will not become counter-productive will probably remain indefinable until we get some more important matters in proportion. We doubtless need to decide first about the quality and character of a proper life, to which a sensible technology would be subservient. Defining a good technology first would be putting the cart before the horse, which may be what is wrong with our lives, and with technology, too.

His effective criticism of technology was not the chief reason for selecting Mr. Schwartz's book for quotation here. Even more valuable is his analysis of the method of science in isolating what it regards as the significant laws of "causation," while assuming that all that is left out can be neglected or ignored. On this question he says:

> Abstracting an event from a process to make it discrete and subject to empirical study obscures the totality and richness of the process. In complex systems, as in a biological organism, the circularity of the process makes it more difficult to isolate variables and restrict the initial conditions. The many variables that characterize human behavior are even more difficult to isolate and measure.
>
> Sherrington has termed the concept of causation an anthropomorphism. "To pick out this or that contributory condition is a conspiracy of reaction and to label that particular one the 'cause' is arbitrary and artificial." Occam's razor has impoverished man's conception of the universe by the process of arbitrary selection and acceptance of the simplest explanation. Science has disconnected the unified world of nature, where all is connected to all, and has intervened in the natural cycles with a blind causality that threatens to destroy irreversibly the cycles that sustain life.

Mr. Schwartz quotes from Phillip Frank's *Philosophy of Science* the idea that "all causal laws" are determined by "dissecting the world process" to select the variables which permit the formulation of the laws of physics. Thus the web of universal interconnectedness is ignored by this abstracting process, which then hides from view the "totality and richness" of nature as it was before the selection of "relevant" causes. The reaction of an outraged nature to the aggressive manipulations based upon this narrow scientific view is now revealing other equally real and increasingly "relevant" aspects or variables in the vast continuum of nature.

Is there anyone who paid attention to this sort of limitation in scientific knowledge?—who, while giving science its due, was primarily concerned with the larger question of the quality and character of a proper human life? The answer is that Plato is such a thinker. He assessed the knowledge we call scientific, showing its inadequacy and its misleading character except in relation to the approximate certainties required by practical undertakings. Knowledge obtained through the senses, relating to systems of mechanical or physical causation, he showed (in the *Phaedo*), in no way gave a man guidance or enlightenment in how to live a good or meaningful life. This becomes clear in Socrates' account of his study of the Ionian natural philosophers, who would explain human behavior without reference to the governing human intelligence. What we call science Plato termed *doxa,* the mode of apprehension appropriate to the sense world, which he spoke of as the world of "Becoming" because it is always in flux. This, he held, could be only a subordinate sort of knowledge, even though, in its more abstract forms—which become mathematical—it participates in the quality of truth. Yet it is never the ideal truth which needs to be sought and known by the soul, if wisdom is

to be gained. Here the comment of Robert E. *Therapeia,* is pertinent:

> mathematical physics, we are introduced to the "essence of things." Leaving our "human nature perfection" and pass beyond the distinction between good and evil. (*The Open World.*) Evidently Dr. cross his mind that he is supplying only the mathematical meaning. Plato would say that such a mathematician; and Aristotle long ago recognized Good.

Therapeia
in which to pursue an initial investigation of philosophical issues of life. Using the index, the statements on the subject, and in the context of Cushman's helpful
appreciation of Plato's meaning, and then go to There is a section comparing the
doctrines, which were adopted by the modern Aristotle from a Platonic standpoint. Dr. disciplines of the mind, enabling the student to necessity for perceiving the higher truths of the maintain, is a kind of true knowing, but only a that the structure of the world of Becoming, or of so imperfectly, and this similitude may be impression that true knowledge can be obtained is the delusion suffered by the inhabitants of the of the shadows on the wall before their eyes. But with what is illuminated by the light which shines

Shorey has noted

conception of causation is shrewdly anticipated."

wisdom cannot be separated from understanding

other face of what is true.
conception and argument:

> knowledge because of their particular kind of
> Already in the Plato had prepared the way for
> *true*
> largely determined by their estimate of what is
> They are engrossed with sensible realities because
> intelligence partakes of the which turns
> "
> of the predictive value of such observation.
> utility; but, for Plato, that sort of utility is a
> Consequently a conceived in order to
> possibly represent the norm for verity.
> *higher in honor than the value-judgment by which its*

Therefore, self-knowledge was the way to the

for Plato.

REVIEW
ELEMENTS OF HEROIC LITERATURE

READING in Stanley Cavell's *The Senses of Walden*—a new book to have attention in some later issue we found exactly right the writer's idea that *Walden* was meant to be a "heroic" expression. The obstacles to such a project were enormous, but this didn't matter to Thoreau. The true hero confronts enormous obstacles as a matter of course. But the establishment of a heroic literature takes more than one hero, and the Americans, as Thoreau knew, were busy with other things.

Perhaps Elizabeth Seeger is correct in thinking that a heroic or epic literature is possible only in celebration of great beginnings: "The great epic stories are few and their number will probably not increase—unless, for our sins, a new flood washes mankind from the face of the planet, leaving only another Noah or a Manu to start the long course of civilization over again." What goes into epic literature? Epics, Miss Seeger says, were made by man—

> when intuition and experience were the only sources of his knowledge; when, amazed and stirred by the cosmic drama in the midst of which he found himself, he tried to find his part in it, his relation to the earth and its creatures, to the heavenly bodies, to his fellow men. In order to record them, he put them into stories that caught the rhythm of the turning earth.

While Thoreau did not write "stories," his purpose was to comprehend his relations with other men and the creatures of the earth, to feel the rhythms of the life about him and to record what was for him their scriptural significance. His writings, one might suppose, have the quality that would pervade a literature which had not yet been separated into "sacred" and "profane." Surely, a great and heroic literature can come only from writers of this sort. The same might be said of all the arts. The modern drama is descended to us from the mystery plays of antiquity, which were an acting out of cosmic events. It would follow that the restoration of the drama would require affective rediscovery of the majestic conceptions which gave the ancient mysteries their content.

And what of art? In the *Structurist* for 1970 (No. 10), Alfred Caldwell, who teaches architecture at the University of Southern California, regards the "Lost Cities of America" as a failure of architecture—"the collapse of the art of city-making." Art was once filled with meaning and a part of all the activities of man's daily existence. But now:

> Contact with the technology of Western Civilization, and with its exploitative force, has shrivelled the nature art of every Culture on the face of the earth. No peoples have survived the electric light bulb and the tin can. By beautiful ceremonial art, American Indians once sang up the corn and danced down the rain. Once art gave every meaning of life, and to every Culture. As ritual practice it explained birth and death—for Western Civilization, with its present high rate of suicide, the great futility. Thus art lifted life above the intrinsic absurdity of mere zoology. Every human activity from the commonest to the highest was once expressed by art. Every man was an artist. Ditches were dug by art and bread was baked by art. According to a medieval guild stipulation: "bread must be baked in justice." The art was a moral statement on cosmology, for the practical use of an everyday life, cast in the role of sublimes" allusions. It was what we now call superstition—we for whom everything that cannot be transmuted into dollar bills is folly and ignorance. We would not like that art if suddenly we were set down in the austere midst of what made it. We would suppose that even Michelangelo believed rot and nonsense and worked like a fanatic in sweat and filth to prove it.
>
> So we have killed the life that produced not only our own Western art, but the art of everyone else as well. However we want to be prettily confessed. We are filled with sentimental longings for art, but are empty of the life impulse to produce it. We are the sleeper dreaming he must run, and he cannot pick up his feet. The last man who imagined the life we have destroyed was Gandhi. He imagined peasants in their cottages, living in harmony, singing to Brahman, spinning cotton and making sandals. He called that Swaraj: Freedom for India. Aldous Huxley suggests that Gandhi's idea was an intolerable affront to Progress and War, and what we grandly call science and art; and therefore we killed him.

Science, John Stuart Mill proposed, is knowing, while art is *doing*. Art, then, is applied science. Nowadays we call this technology, and art in harness with technology is industrial design. We are a long way from the original meaning of art, which meant doing things skillfully, beautifully, and endowing them with meaning. For the ancient African, the *word* established human mastery over things, and speech was the procreative force. For the Yoruba priest, a poem was an incantation, the thought expressed an act of creation.

Mr. Caldwell begins his discussion of architecture with this idea:

> The first art was magic, a practical proposition meant to produce a practical result. Drawings on cave walls were not playing with shapes; they were not artistic nor doing your thing. They were ceremonial statements intended to control a situation. Geometric lines on artifacts were not a decoration, but symbolism, communication, incantation. Intellectually arcane, the work of art was addressed to men in this world, and to whatever is under the world and above it. All life was circumscribed by art and men existed in the verve. The first words were poems. Poets were really Shelley's "legislators of the world."
>
> For thousands of years, throughout all the course of human history, art retained its original practical necessity. It wasn't something nice; it was a necessity. And when we speak of the magic of a work of art we are unconsciously saying more than we suppose. The worst thing—the most damning thing—that we can say about modern art is that it is unnecessary. Remove it from modern life and nothing is changed. It is at best a kind of diverting bricabrac, an embellishment, in a word an irrelevance.
>
> The art is an irrelevance because the expectations of modern life are an irrelevance; and the expectations are all part and particle of the materialistic delusion. That is why this counterfeit art is always a kind of play. Art can be fun. On the contrary, the genuine work of art, since it is addressed to the eternal sense of things, is always the contemplation of significance. That is where the magic lies; that is what catches at the sleeve. It is as serious as the mad voice of Cassandra. Nothing can insure it, and no hovel is safe from it.
>
> Man is more than a consuming and producing animal. He cannot be an animal because he has lost his innocence. He can never achieve the Nirvana of animal existence. For what came out of the cave was something less than an animal, and something more. The more is the subject matter of art. It is the relevance of Man, the spell of harmony.

Mr. Caldwell may speak with a lonely voice, but he is not alone. He does not tell us what "the eternal sense of things" is, since this is the task and calling of the poet, the dramatist, the maker of spontaneous scriptures like Thoreau, but we know what he means, and not only from reading similarly anguished cries, but from within ourselves. The same meaning was beautifully expressed by W. Norman Brown, years ago, in a monograph on Eastern art in which he said: "Sculpture was not meant to be a reminder of a human being or of an apotheosis of man, but of something abstract, spiritual in its reality beyond apprehension by the senses, an ocular reference to universal knowledge that might somehow be comprehensible to humanity."

Aleksandr I. Solzhenitsyn, author of *Cancer Ward* and *The First Circle*, and whose new book, *August 1914*, has just been published, was awarded the Nobel Prize in Literature in 1970, but was not permitted to go to Stockholm to receive it and to give the lecture he had prepared. This lecture (printed in the *New York Times* for Sept. 30 and Oct. 7 of this year) is in its way an appeal for a literature of heroic strength and intentions. He begins by distinguishing between the partisanship of polemics and the integrity of a work of art which "bears within itself its own confirmation." Through literature, Solzhenitsyn maintains, peoples far apart from each other—separated not only by distance but also by custom and moral ideas—can be brought to an understanding of each other. Moreover, the practitioner of literary art, he says, cannot be an escapist:

> The writer is no sidelines judge of his compatriots and contemporaries. He is guilty along with them of all the evil committed in his native land or by his people. And if the tanks of his fatherland

> have shed blood on the asphalt of a foreign capital, the brown stains have for all eternity spattered the writer's face. And if on a fateful night a sleeping trustful Friend has been strangled—the rope leaves black and blue marks on the writer's hands. And if the young fellow citizens of his country impudently proclaim the superiority of debauchery to modest toil—then all of this evil stink mingles in the breath of the writer.

But people, he says, will demand to know what power literature can have against the naked might of nations—"in the face of the pitiless assault of open violence?" He answers:

> Well, let us not forget that violence does not have its own separate existence and is in fact incapable of having it: it is invariably interwoven with the lie. They have the closest of kinship, the most profound natural tie: violence has nothing with which to cover itself up except the lie, and the lie has nothing to stand on but violence. Everyone who has once proclaimed violence as his method must inexorably select the lie as his principle. . . .
>
> And simple is the act of an ordinary courageous human being of not participating in the lie, not supporting false actions! "So be it that this takes place in the world, even reigns in the world—but not with my complicity." Writers and artists have a greater opportunity: to conquer the lie. . . .
>
> And as soon as the lie is dispersed the repulsive nakedness of violence is exposed, and violence will collapse in feebleness.
>
> And that is why, I think, my friends, that we are capable of helping the world in its white hot hour of trial. . . .

Here, too, are elements needed for the rebirth of a heroic literature.

COMMENTARY
PLATO ON SCIENCE

A GENERATION ago, Plato's philosophic scorn (in the *Republic* and elsewhere) for scientific and technical knowledge was likely to generate resistance in nearly all readers, but today the situation is different. Robert Cushman (see page 7) collects a number of statements from Platonic works to show Plato's view of the matter. These experts, he said, "delight in information and are always eager to hear some new thing," but what they know, even though impressive in practical terms, "cannot be accounted wisdom." Cushman adds:

> Neither do any of the abstract sciences, such as mathematics or astronomy, qualify for the title. . . . the possession of mere technical knowledge assures only the doubtful competency of being equally able to instruct or deceive. As the *Republic,* Book VII, shows, Plato regarded sciences, such as arithmetic, geometry, stereometry, and astronomy, as helpful propaedeutic [preparatory] studies. In his scheme of *paideia,* they have an honorable and integral place. They are liberating in function facilitating emancipation of *nous* from bondage to sense an] Becoming. But learning, even of this sort, is no unmixed blessing. Aptitude in the pursuit of these "knowledges," devoid of moral earnestness, can easily be perverted to uses of social evil. Without virtue and love of the Good which measures man, the sciences are nothing, or worse than nothing. . . .
>
> Cushman points out that Plato does not overrate the importance of theoretical refutation of materialism. The force of logic is unable to overcome the total system of habits and prepossessions which exist in those who are convinced that empirical knowledge is the means to knowledge of reality. Materialism is an emotional preference stronger than intellectual persuasion and, under development, is not without theoretical structure for self-justification.

It is necessary, therefore, Plato maintained, to get at foundational preferences to which the mind is committed before the logical process of analysis begins.

> Accordingly Plato perceived that a "gentle" transformation of perspective must be induced. For this purpose a new and superior art of persuasion was required. wholly different from the polemical and contentious rhetoric of the Sophists. . . . For that reason Socrates turned from physical to ethical questions.

For Plato, virtue is a condition of knowledge of the nature of true Being for the reason that the higher cognitive faculty in man, the *Nous,* has kinship with the Good, but can gain conscious realization of truth only when freed of the biases and inversions of value produced by sense existence.

CHILDREN
. . . and Ourselves
THE PUBLIC SCHOOLS—A QUALIFIED DEFENSE

A VALUABLE addition to the controversy about the schools is provided by a long article by Robert M. Hutchins, "The Great Anti-School Campaign," which was published in *Great Ideas Today* by the Encyclopædia Britannica, Inc. As might be expected, Mr. Hutchins defends the public schools, even to the point of saying that they need to be compulsory, but his discussion is of a sort that makes agreement or disagreement with him of comparatively little importance, so far as benefiting from what he says is concerned. His article reviews practically all the essential criticisms now being made of public education in the United States, and he agrees with a great deal of it. He also examines the alternative proposals, which he finds for the most part unsatisfactory, or even threatening. But he does far more than this. In tracing the evolution of thought about public education, giving its substance from epoch to epoch, he supplies the reader with an awareness of considerations likely to have been overlooked.

The issue of the public schools is a very difficult one, like all public issues, since the inclinations, wants, and opinions of millions of people will be involved in their settlement. And in a matter like education, which is by nature unsettled in its character, there can hardly be "final" solutions. The ground of our present problems is made clear by Mr. Hutchins with quotation from an essay by T. S. Eliot:

> If education today seems to deteriorate, if it seems to become more and more chaotic and meaningless, it is primarily because we have no settled and satisfactory arrangement of society, and because we have both vague and diverse opinions about the kind of society we want. Education is a subject which cannot be discussed in a void: our questions raise other questions, social, economic, financial, political. And the bearings are on more ultimate problems even than those: to know what we want in education we must know what we want in general, we must derive our theory of education from our philosophy of life.

In short, people who are serious about getting better public education must in some sense be ready to write their own Plato's *Republic.* If they disdain to do this, they will not accomplish very much in improving education as a corporate undertaking. Since education is now an activity of government, and since government is very busy with other things, frequently making education subservient to the rather unlovely ends of those other things, we have not given much attention to public education in these pages. We have rather printed Gandhi's recommendations, in which the idea of complete independence of the political state is a central proposition.

The fact remains, however, that we have public education in the United States, and it was instituted for historic and honorable reasons, so that, in respect to the past, there is much to be said in its favor. Mr. Hutchins finds something important to say in its favor in the present. However, he also thinks that public education would benefit by reduction of the years in which it is compulsory—a step that could be made practical by an enlargement of adult education.

Why is public education so bad at the present time? Because, Mr. Hutchins believes, it has lost sight of its ends. Curiously, Adam Smith saw or foresaw the psychological effects of industrialism and believed that government would have to undertake certain humanizing responsibilities to overcome the blight to normal human life brought by the division of labor. The man who works in a factory, doing a few simple operations, day after day, all his life, "has no occasion," Smith wrote, "to exert his understanding," and "generally becomes as stupid and ignorant as it is possible for a human creature to become." He continued in *The Wealth of Nations:*

> The torpor of his mind renders him not only incapable of relishing or bearing a part in any rational conversation, but of conceiving any generous or noble, or tender sentiment, and consequently of forming any just judgment concerning many even of

> the ordinary duties of private life. Of the great and extensive interests of his country he is altogether incapable of judging. . . . But in any improved and civilised society this is the state into which the labouring poor, that is, the great body of the people, must necessarily fall, unless government takes some pains to prevent it.

This was written in 1776, when a man such as Adam Smith would have little inclination to think of education as a means to fit the "lower orders" for political responsibility, so that his emphasis was on serving the human needs of the individual. He proposed small schools for this purpose. In 1859, John Stuart Mill said in his essay *On Liberty* that the state should "require and compel the education, up to a certain standard, of every human being who is born its citizen." While the state should demand this education, in behalf of the welfare of each child, Mill would not have education itself in state hands, since he believed that a "general State education is a mere contrivance for moulding people to be exactly like one another." However, the state would defray the costs of all school expense in the case of children of the poor.

Both Smith and Mill, Hutchins points out, thought of education as for the good of the individual as a human being. "Neither argued that education ought to be a way of getting ahead." In time, however, that idea became the basic meaning of education, especially in the United States. This was the purpose of the land grant colleges, and the idea that education is the highroad to "better status" and greater income is now, as Mr. Hutchins says, "the universal creed."

Yet it is a creed with increasingly disillusioned believers. More learning in school does not really increase the capacity of students. Ivar Berg's *The Great Training Robbery* shows this, as do other reports. So, as Mr. Hutchins says:

> Adam Smith's and John Stuart Mill's concern with the development of the individual as a human being, saved from stupidity, ignorance, and torpor, able to carry on a rational conversation, conceive elevating sentiments, form just judgments, and use his mind, has passed through various stages of degradation until nothing is left but an exhortation to acquire a piece of paper, however meaningless, the magical powers of which as a passport to a better future seem to be declining. Insofar as the schools have cooperated in building up the impression that years of schooling confer economic advantage in proportion to their number, the schools could expect to suffer from the rage and disappointment of those who put in the years without reaping the advantage.

Turning to proposed alternatives to the public school system, Mr. Hutchins points out that completely "random" learning would leave the young ignorant of areas of which they know nothing, and to which they are not drawn by daily experience. Moreover, *all* learning cannot be made pleasurable, although "the art of teaching would seem to consist in large part of making what ought to be learned interesting to learners who bring little interest with them to the task." Grounding in theory is necessary for practically all serious or advanced studies and a curriculum is "an attempt to profit by the most obvious mistakes of the past and to make it unnecessary for the child to commit every last one of them all over again."

The vulnerability of Ivan Illich's ideas lies mainly in the fact that the networks of learning which the student may voluntarily take advantage of will still require administrators, will be a system, and, being managed by a public authority, would eventually be subject to the same limitations in the community which the present system suffers from. Education, Mr. Hutchins maintains, is *not* the bootstrap by which society raises itself to a higher level: "A society that wants to change its ways can use its educational system to do it, but an educational system cannot openly set out to achieve goals the society does not accept."

It has always seemed to us that Ivan Illich's proposals are best regarded as voluntary undertakings which should be kept independent of government authority. Surely they would soon be distorted by political control.

Toward the end of this article Mr. Hutchins says:

> The doctrine of every man for himself, or every nation for itself, loses its charm in an interdependent world. This doctrine has to give way before the idea of a world community. We have to understand and rely on our common humanity if we are to survive in any condition worthy to be called human. Everything else sinks into triviality in comparison with this task. To hear the United States Commissioner of education talk about "career education"—he has rechristened vocational training—or to read all the new programs, based on the whims of children, that one finds in the trade papers of what satirist Tom Lehrer calls the "ed biz," or to think about whether or not we should invent new combinations of letters to put after the names of students who have spent a certain time in a certain school, or, in short, to consider most of the topics of current educational discussion, is irrelevant, to borrow a word to the real issue we face. So is the great anti-school campaign, except that if it succeeds we shall be deprived of the one institution that could most effectively assist in drawing out our common humanity.

Mr. Hutchins would be the first to admit that the public schools are not doing this very well, now. But he thinks they can be helped to improve, and he values the critics of the present in pointing to the things that have gone wrong.

FRONTIERS

From England

THE War Resisters International, with headquarters in London (3, Caledonian Road, London, N.I.), has observed its fiftieth anniversary by publishing a "golden jubilee" issue of its quarterly, *War Resistance*, with 50 pages comprising the first and second numbers for 1972. Besides the introduction by Devi Prasad, editor, there are twelve contributions. Among the writers are Kenneth E. Boulding, Barbara Deming, George Lakey, Lewis Mumford, Theodore Roszak, E. F. Schumacher, and Michael Scott. The cosmopolitan background of the contributors is interesting evidence of the growth of the peace movement and of general recognition that its contentions are of foremost importance in our time. Sensing the opportunities this development presents, Devi Prasad stresses the need for broadly based thinking and action:

> Many peace movement people are associated with particular political or religious doctrines. I do not think that we will be able to make great headway if we plan our actions and mold our thinking according to particular doctrines. We have to be free from doctrinaire attitudes and also from narrow loyalties, such as those involved in nationalism. Although narrow nationalism is now generally considered to be a negative force, the thinking of very many of us is in fact still oriented towards it.

Devi Prasad also deprecates the idea that the peace movement, since it has global ideals, should be organized in "a single global structure":

> . . . the strength of the movement for a new society does not lie in organizational unification, but in the unity of objectives, in the spread of the idea, and in the different ways in which different groups work. The beauty of such a movement is that whereas in a political party there is always need for a party whip, to ensure that all the members of the party toe the line and create a unified front, we reject this whole concept, and hold that individuals and small groups must be completely independent to think, to plan, and to act upon their plans as they wish. The suggestion that all the movements should join together and create a world-wide movement has no meaning, because it would hinder the spontaneity of small groups and of individuals.

The extensive intellectual and moral resources of the war resistance movement are indicated by the distinguished contributors to this issue of *War Resistance.*

A well-organized and carefully chosen list of books, titled *Pacifism: a Selected Bibliography*, compiled by John Hyatt, is now available from Housmans, 5 Caledonian Road, Kings Cross, London N.I., at 75 cents. The texts are divided under two main headings, the History of Pacifism, and Pacifist Ideas, with twenty-five subdivisions. There is an author and title index and at the back are given a list of other bibliographies, the names of suppliers of pacifist literature, and the location of the important specialist libraries of pacifist materials in both Britain and the United States. This bibliography on pacifism has 52 pages and lists more than five hundred books.

Freedom for Sept. 16, the British anarchist weekly, has an excellent article by Colin Ward telling briefly about the life, works, and influence of the late Paul Goodman. Born in New York City in 1911, Goodman grew up in a fatherless family supported by a working mother. At college he came under the influence of Morris R. Cohen, an important thinker and teacher of the early years of this century. It was then that Goodman first read Kropotkin. He taught for a while at both the University of Chicago and Black Mountain, and during the war contributed to Holley Cantine's *Retort* and Dwight Macdonald's *Politics.*

> In 1947 the famous book that he wrote with his brother Percival (later Professor of Architecture at Columbia) appeared. *Communitas: Means of Livelihood and Ways of Life* is widely regarded as the most original and imaginative book on the building of urban communities ever written.

The merit of this volume was recognized by writers such as Lewis Mumford and David Riesman, and it is now available in paperback. Goodman collaborated with Frederick Perls and Ralph Hefferline in *Gestalt Therapy*, published in

1951 and many times reprinted. But Goodman could not earn a living as a writer until his *Growing Up Absurd* caught on after publication in 1960. This book, Colin Ward says, "elevated Goodman to the status of all-American pundit." He made good use of his popularity, as his later books, all of them widely read, will show. His *The Community of Scholars* came out in 1962, *Compulsory Miseducation* in 1964, *People or Personnel* in 1965, *Like a Conquered Province* in 1967, and, finally, *The New Reformation* in 1970. For years Goodman was, as he once declared, a kind of Joan of Arc for the student movement, but in the later 1960's he lost much of his following among the young. He was, as Colin Ward says, "strongly critical of the direction taken by the new left in the United States, regarding the worship of Guevara, Ho Chi Minh or Mao on the one hand, and sensitivity training or the psychedelic experience on the other, as no substitute for efforts to apply their skills to changing society." Goodman's decentralist and anarcho-pacifist convictions pervaded everything he wrote, and his disarming mode of communication gave wide currency to these ideas.

The curious and delighting personal economy of an English poet, Dave Carr, is described by the poet himself in *Peace News* for Aug. 15. Carr spends four hours a day selling single sheets on which his poems are well printed, for 4p (about ten cents) a sheet. This gives him a profit of about $15.00 a week. His wife makes the same amount on a part-time job, so that they have enough to live on. The two have simplified their lives and are able to "eat well and have a full social life." Carr sells about one sheet to every twelve calls he makes. He says:

> Poetry should be part of everyday life. I bring it with the milk, the Corona, the tally man, baker, circulars. "Poetry" I say. Some of them look astounded, some don't or can't take it in, some beam and speak of my job with words like "courage" and "refreshment," some giggle or smile and look at me with a look that says: come on, you're kidding! And I talk to them about society, how it is, and how it could be.