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THE NEW ECONOMICS

[In August, 1968, the English magazine, *Resurgence,* sponsored a series of conferences concerned with the dimensions of government power, under the general title, "Fourth World." This article, by E. F. Schumacher, economic adviser to the British National Coal Board, was an address at one of these conferences, and is here reprinted from *Resurgence* for September-October, 1968. It will later form part of a book comprised of essays on the problems of the "Fourth World."]

IT WAS brought up on an interpretation of history which suggested that everything started with a few families and then the families got together in tribes; a bit later a lot of tribes joined together into nation states; the nation states became bigger and bigger and formed great regional combinations, "United States of this," "United States of that," and finally we could look forward to a single World Government.

Ever since I heard this plausible story I have been observing what is actually happening, and I have seen a proliferation of countries. The United Nations started twenty years ago with about fifty or sixty members, now there are 120 and the number is still growing. In my youth, this was called "Balkanization" and was thought to be a very bad thing. But what I have been witnessing, over the last fifty years in any case, is a very high degree of Balkanization all over the place, that is to say, large units breaking up into smaller units. Well, it makes you think. Not that everything that happens is necessarily right; but I am sure we should at least notice that it is happening.

Secondly, I was brought up on a theory which claimed that in order to be prosperous a country had to be very big, the bigger the better. Look at what Churchill called "the pumpernickel principalities of Germany," and then look at the Bismarckian Reich: is it not obvious that the great prosperity of Germany only became possible through this combination? All the same, if we make a list of all the most prosperous countries in the world, we find that in overwhelming majority they are very, very small; and if you make a list of the largest countries of the world, most of them are exceedingly poor. This again gives one some food for thought.

And thirdly I was brought up on the theory of the economics of scale; that, just as with nations so with business and industries, there is an irresistible trend, dictated by modern technology, for the scale of business organization to become ever bigger. Now, it is quite true that today there are business organizations that are probably bigger than anything known before in history; but the number of small units is not declining, even in countries like the United States, and many of these small units are extremely prosperous, and provide society with most of the really fruitful new developments. So the situation is no doubt a puzzling one for anyone who has been brought up the way I and most of my age group have been.

We are told, even today, that gigantic organizations are inescapably necessary, but where they have in fact been created, what happens? Take General Motors: The great achievement of Mr. Sloan of General Motors was to structurize this gigantic firm in such a manner that it became in fact a federation of firms, none of them gigantic. And in my own shop, the National Coal Board, which is the biggest "firm" in Europe, we are doing something similar. Strenuous efforts are being made to structurize it in such a way that, while remaining one big organization, it operates and feels like a federation of what we call "quasi-firms." Instead of a monolith, it becomes a well coordinated assembly of lively, semi-autonomous units, each with its own drive and sense of achievement.

Let us now approach our subject from another angle and ask what is *needed.* As in so many other respects, if one looks a bit more deeply one always finds that at least two things are needed for human life which appear, on the face of it, to be contradictory. We need freedom and order: the freedom of lots and lots of small units and the orderliness of large-scale, possibly global, organization. When it comes to action, we obviously need small-scale organization, because action is a highly personal affair, and one cannot be in touch with more than a limited number of persons at any one time. But when it comes to ideology or to ethics, to the world of ideas, we have to operate in terms of a world-wide unity. Or, to put it differently, it is true that all men are brothers, but it is also true that when we want to act, in our active personal relations, we can in fact be in touch only with very few of them. And we all know people who freely talk about the brotherhood of man while treating all their neighbours as enemies—just as we know people who have, in fact, excellent relations with their neighbours, but are at the same time full of the most appalling prejudices about all human groups outside their own particular circle. What I mean to emphasize is our dual requirement: There cannot be a unified solution of all human problems. For his different purposes man needs many different organizations, both small and large ones, both exclusive and comprehensive. Yet people find it most difficult to keep two apparently opposite necessities of truth in their minds at the same time. They always look for a final solution.

The question of scale might be put in another way: What is needed in all these matters is to discriminate, to get things sorted out. For every activity there is a certain appropriate scale, and the more active and intimate the activity, the smaller the number of people that can take part, the greater is the number of such relationship arrangements that need to be established. Take teaching: one listens to all sorts of extraordinary debates about the superiority of the University of the Air, or the teaching machine over some other forms of teaching. Well, let us discriminate: What are we trying to teach? It then becomes immediately apparent that certain things can only be taught in a very intimate circle, whereas other things can obviously be taught en masse, via the air, via television, via teaching machines, and so on.

What scale is appropriate? It depends on what we are trying to do. The question of scale is extremely crucial today, in political, social and economic affairs just as in almost everything else. What, for instance, is the appropriate size of a city? And also, one might ask, what is the appropriate size of a country? Now these are serious and difficult questions. It is not possible to program a computer and get the answer. The really serious matters of life cannot be calculated. We cannot directly calculate what is right; but we jolly well know what is wrong! We can recognize right and wrong at the extremes, although we cannot normally judge them finely enough to say: "This ought to be five per cent more; or that ought to be five per cent less."

Take the question of size of a city. While one cannot judge these things with precision, I think it is fairly safe to say that the upper limit of what is desirable for the size of a city is probably something of the order of half a million. It is quite clear that above such a size nothing is added to the virtue of the city. In places like London, or Tokyo, or New York, the millions do not add to the city's real value but merely create *enormous* problems and produce human degradation. So probably the order of magnitude of five hundred thousand inhabitants could be looked upon as the upper limit. The question of the lower limit of a real city, is much more difficult to judge. The finest cities in history have been very small by twentieth-century standards. The instruments and institutions of city culture depend, no doubt, on a certain accumulation of wealth. But how much wealth has to be accumulated depends on the type of culture pursued. Philosophy, the arts and

religion cost very, very little money. Other types of what claims to be "high culture," space research or ultra-modern physics, cost a lot of money, but are somewhat remote from the real needs of men.

I raise the question of the proper size of cities because, to my mind, this is the most relevant point when we come to consider the most desirable size of nations. I know one cannot draw the map as one sees fit, but it is still legitimate to ask what is the right size of a nation: And this question is closely interrelated with the question of the proper size of cities. Why? This idolatry of giantism that I have talked about is, of course, based on modern technology, particularly as it concerns transport and communications. It has one immensely powerful effect It makes people *footloose*. Millions of people start moving about, deserting the rural areas and the smaller towns to follow the city lights, to go to the big city, causing a pathological growth. Take the country in which all this is perhaps most exemplified, the United States. Sociologists are studying the problem of "megalopolis." The word "metropolis" is no longer big enough; hence "megalopolis." They freely talk about the polarization of the population of the United States into three immense megalopolitan areas: one extending from Boston to Washington, a continuous built-up area, with sixty million people; one around Chicago, another sixty million; and one on the West Coast, from San Francisco to San Diego, again a continuous built-up area with sixty million people; the rest of the country being left practically empty; deserted provincial towns, and the land cultivated with vast tractors, combine harvesters, and immense amounts of chemicals.

If this is somebody's conception of the future of the United States, it is hardly a future worth having. But whether we like it or not, this is the result of people having become footloose; it is the result of that marvellous mobility of labor which economists treasure above all else.

One of the chief elements of structure for the whole of mankind is of course *the state.* And one of the chief elements or instruments of structuralization (if I may use that term), are *frontiers,* national frontiers. Now previously, before this technological intervention, the relevance of frontiers was almost exclusively political and dynastic; frontiers were delimitations of political power, determining how many people you could raise for war. Economists fought against such frontiers becoming economic barriers—hence the ideology of free trade. But, then, people and things were not footloose; transport was expensive enough so that movements, both of people and of goods, were never more than marginal. Trade in the pre-industrial era was not a trade in essentials, but a trade in precious stones, precious metals, luxury goods, spices. The basic requirements of life had of course to be indigenously produced. And the movement of populations, except in periods of disaster, was confined to persons who had a very special reason to move, such as the Irish saints or the scholars of the University of Paris.

But now everything and everybody has become mobile. All structures are threatened, and all structures are *vulnerable* to an extent that they have never been before.

Economics, which Lord Keynes had hoped would settle down as a modest occupation, similar to dentistry, suddenly becomes the most important subject of all. Economic policies absorb almost the entire attention of government, and at the same time become ever more impotent. The simplest things, which only fifty years ago one could see to without difficulty, cannot get done any more. The richer a society, the more impossible it becomes to do worth-while things without immediate pay-off. Economics has become such a thralldom that it absorbs almost the whole of foreign policy. People say, "Ah yes, we don't like to go with these people, but we depend on them economically so we must humor them." It tends to absorb the whole of ethics and to take precedence over all other human considerations. Now, quite clearly, this is a pathological

development, which has, of course, many roots, but one of its clearly visible roots lies in the great achievements of modern technology in terms of transport and communications.

While people, with an easy-going kind of logic, believe that fast transport and instantaneous communications open up a new dimension of freedom (which they do in some rather trivial respects), they overlook the fact that these achievements also tend to destroy freedom, by making everything extremely vulnerable and extremely insecure, unless—please note—unless conscious policies are developed and conscious action is taken, to mitigate the destructive effects of these technological developments.

Now, these destructive effects are obviously most severe in *large* countries, because, as we have seen, frontiers produce "structure," and it is a much bigger decision for someone to cross a frontier, to uproot himself from his native land and try and put down roots in another land, than to move within the frontiers of his country. The factor of footlooseness is, therefore, the more serious, the bigger the country. Its destructive effects can be traced both in the rich and in the poor countries. In the rich countries such as the United States of America, it produces, as already mentioned, "megalopolis." It also produces a rapidly increasing and ever more intractable problem of "dropouts," of people, who, having become footloose, cannot find a place anywhere in society. Directly connected with this, it produces an appalling problem of crime, alienation, stress, social breakdown, right down to the level of the family. In the poor countries, again most severely in the largest ones, it produces mass migration into cities, mass unemployment, and, as vitality is drained out of the rural areas, the threat of famine. The result is a "dual society" without any inner cohesion, subject to a maximum of political instability.

As an illustration, let me take the case of Peru. The capital city of Peru, Lima, situated on the Pacific coast, had a population of 175,000 in the early twenties, just over forty years ago. Its population is now approaching three million. The once beautiful Spanish city is now infested by slums, surrounded by misery-belts that are crawling up the Andes. But this is not all. People are arriving from the rural areas at the rate of a thousand a day—and nobody knows what to do with them. The social, or psychological structure of life in the hinterland has collapsed; people have become footloose and arrive in the capital city at the rate of a thousand a day to squat on some empty land, against the police who come to beat them out, to build their mud hovels and look for a job. *And nobody knows what to do about them.* Nobody knows how to stop the drift.

So, when everybody and everything becomes footloose, the *idea of structure* becomes a really central idea, to which all our powers of thought and imagination must be applied; and, as I said, a primary instrument of structure is the nation state with its frontiers. A large country, I am quite certain, can survive this age of footlooseness only if it achieves a highly articulated *internal* structure, so that in fact it becomes a loose federation of relatively small states, each with its own capital city capable of offering all the culture and facilities which only a city can offer, *including government.* A city without government is obviously second-rate. But how can small countries be "viable"?

How can one talk about the economics of small independent countries? How can one discuss a problem that is a non-problem? There is no such thing as the viability of states or of nations; there is only a problem of viability of people: people, actual persons like you and me, are viable when they can stand on their own feet and earn their keep. You do not make non-viable people viable by putting large numbers of them into one huge community, and you do not make viable people non-viable by splitting a large community into a number of smaller, more intimate, more coherent and more manageable groups. All this is perfectly obvious and there is

absolutely nothing to argue about. Some people ask: "What happens when a country, composed of one rich province and several poor ones falls apart because the rich province secedes?" Most probably the answer is: "Nothing very much happens." The rich will continue to be rich and the poor will continue to be poor. "But if, before secession, the rich province had subsidized the poor, what happens then?" Well then, of course, the subsidy might stop. But the rich rarely subsidize the poor; more often they exploit them. They may not do so directly so much as through the terms of trade. They may obscure the situation a little by a certain redistribution of tax revenue or small-scale charity, but the last thing they want to do is secede from the poor.

The normal case is quite different, namely that the poor provinces wish to separate from the rich, and that the rich want to hold on because they know that exploitation of the poor within one's own frontiers is infinitely easier than exploitation of the poor beyond them. Now if a poor province wishes to secede at the risk of losing some mythical subsidies, what attitude should one take?

Not that we have to decide this, but what should we think about it? Is it not a wish to be applauded and respected? Do we want people to stand on their own feet, as free and self-reliant men? So again this is a "non-problem." I would assert therefore that there is no problem of viability, as all experience shows. If a country wishes to export all over the world, and import from all over the world, it has never been held that it had to annex the whole world in order to do so.

What about the absolute necessity of having a large internal market? This again is an optical illusion if the meaning of "large" is conceived in terms of political boundaries. Needless to say, a prosperous market is better than a poor one, but whether that market is outside the political boundaries or inside, makes on the whole very little difference. I am not aware, for instance that Germany, in order to export a large number of Volkswagens to the United States, a very prosperous market, could only do so after annexing the United States. But it does make a lot of difference if a poor community or province finds itself politically tied to or ruled by a rich community or province. Why? Because, in a mobile, footloose society the law of disequilibrium is infinitely stronger than the so-called law of equilibrium. Nothing succeeds like success, and nothing stagnates like stagnation. The successful province drains the life out of the unsuccessful, and without protection against the strong, the weak have no chance, either they remain weak or they must migrate and join the strong, they cannot effectively help themselves.

The most important problem in this second half of the twentieth century is the geographical distribution of population, the question of "regionalism." But regionalism not in the sense of combining a lot of states into free-trade systems, but in the opposite sense of developing all the regions within each country. This, in fact, is the most important subject on the agenda of all the larger countries today. And a lot of the Nationalism of small nations today, and the desire for self-government and so-called independence, is simply a logical and rational response to the need for regional development. In the poor countries in particular there is no hope for the poor unless there is successful regional development, a development effort outside the capital city covering all the rural areas wherever people happen to be.

If this effort is not brought forth, their only choice is either to remain in their miserable condition where they are, or to migrate into the big city where their condition will be even more miserable. It is a strange phenomenon indeed that the conventional wisdom of present-day economics can do nothing to help the poor.

Invariably it proves that only such policies are viable as have in fact the result of making those already rich and powerful, richer and more powerful. It proves that economic development

only pays if it is as near as possible to the capital city or another very large town, and not in the rural areas. It proves that large projects are invariably more economic than small ones, and it proves that capital-intensive projects are invariably to be preferred as against labour-intensive ones. The economic calculus, as applied by present-day economics, forces the industrialist to eliminate the human factor because machines do not make mistakes which people do. Hence the enormous effort at automation and the drive for ever-larger units. This means that those who have nothing to sell but their labor remain in the weakest possible bargaining position. The conventional wisdom of what is now taught as economics by-passes the poor, the very people for whom development is really needed. The economics of giantism and automation are a leftover of nineteenth-century conditions and nineteenth-century thinking and they are totally incapable of solving any of the real problems of today. An entirely new system of thought is needed, a system based on attention to people, and not primarily attention to goods—(the goods will look after themselves!). It could be summed up in the phrase, "production by the masses, rather than mass production." What was impossible however in the nineteenth century, is possible now. And what was in fact—if not necessarily at least understandably—neglected in the nineteenth century is unbelievably urgent now. That is, the conscious utilization of our enormous technological and scientific potential for the fight against misery and human degradation; that is, a fight in intimate contact with actual people, with individuals, families, small groups, rather than states and other anonymous abstractions. And this pre-supposes a political and organizational structure that can provide this intimacy.

What is the meaning of democracy, freedom, human dignity, standard of living, self-realization, fulfillment? Is it a matter of goods, or of people? Of course it is a matter of people. But people can be themselves only in small comprehensible groups. Therefore we must learn to think in terms of an articulated structure that can cope with a multiplicity of small-scale units. If economic thinking cannot grasp this it is useless. If it cannot get beyond its vast abstractions, the national income, the rate of growth, capital/output analysis, labor mobility, capital accumulation—if it cannot get beyond all this and make contact with the human realities of poverty, frustration, alienation, despair, breakdown, crime, escapism, stress, congestion, ugliness and spiritual death, then let us scrap economics and start afresh.

Are there not indeed enough "signs of the times" to indicate that a new start is needed?

E. F. SCHUMACHER

London

REVIEW
ZEN IN THE ART OF . . .

THERE are some books which, simply by being named, take on a quality of misdirection. They are not really about what their titles say they are about. Or, their content is not so much in what is said as in the resonances of what is said.

One could call this the presence of an alchemical factor. Books on alchemy seem to deal with the transmutation of metals, but they are about the transcendental correspondences of transmutation. It is easy to be misled by such ciphers, especially when the writer does not tell you whether or not he is using a cipher. For example, a correspondent critical of Plato remarks:

> If mankind sits in a cave watching shadows, then we must ask why and how he watches shadows, and not lament over the fact that he does. If Plato proposed a community of women, we must ask if he derived this idea from Spartan villages and polyandry and what the effect of such an arrangement would be.

Plato was not an "adjustment" psychologist. Even if ninety-nine per cent of the population mistook shadows for reality, Plato would still declare the reality of the sunlight outside; and his cave allegory, incidentally, is considerably more than a "lament." As for the virtual abolition of the family proposed in the *Republic*, one need not take this literally. It may be a device for criticism of family egotism and parental possessiveness toward children. Once a writer realizes that subjective matters are not effectively dealt with in the precise manner appropriate for objects having measurable dimensions, he develops another mode of communication. Thoreau put this well when he said that exaggeration is "truth referred to a new standard." He added:

> He who cannot exaggerate is not qualified to utter truth. No truth, we think, was ever expressed but with this sort of emphasis, so that for the time there seemed no other. Moreover you must speak loud to those who are hard of hearing.

These reflections are to introduce a book we almost didn't review: *Zen in the Art of Flower Arrangement*, by Gustie L. Herrigel (Branford, 1958). Several hurdles have to be jumped before a Western reader can get interested in a book about "flower arrangement." In itself, the subject seems a little precious—something like the ceremonial to-do about drinking tea. There may be niceties in such matters, but why have whole books about them?

Mrs. Herrigel's book (her husband wrote *Zen in the Art of Archery*) makes you retract nearly all such reservations. If you eliminate the "ceremony" aspect (which has its own fitness, for the culture in which it evolved), and read the book to understand the delicacies and sensibilities that flower arrangement means for the Japanese people, it becomes a source of delight. Involved is learning to see with fresh eyes and, by implication, a new attitude toward life. In one place Mrs. Herrigel speaks of "the man who puts all the emphasis on the relationship with people, looking upon flowers and animals as more or less agreeable attendant phenomena which happen to be there 'too'." She continues:

> In his eyes they might not be there at all, and the realm of human life would suffer no loss! Flowers as a gratifying adornment, animals in the Zoo, these occasional encounters are sufficient for him, who has so many more important things to do. But in reality the study of flowers is just as important as the study of life itself in its variety, and the contact with men and animals is as important as that with flowers. The budding flower artist is not a specialist who can afford to neglect everything that is *not* flowers; rather, he relates himself to everything.

Thus flower arrangement is only superficially flower arrangement; its meaning, that is, is not in its technique. And if the technique does not grow out of the discovery of meaning, its practice is not an art. The subject may have these implications in the home:

> The relationship with plants may be granted a certain significance even in the life of a child. Generally a flower is the first "live thing" that enters into his immediate circle. As soon as a plant is given into the charge of a child, the care he takes of it produces at the same time an inner relationship of protection and responsibility. Tending a plant and experiencing its growth also gives the child the task of watching over it lovingly. An instinctive sense of the connexion between human life and all Nature is awakened. It is an enrichment of the child's emotional life to observe the growth and development

> of plants. This sensitive understanding can then extend to the world of animals, to all Nature and the interrelationships in the cosmos.
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> With the child's observation of growth and development in Nature there comes a relationship to his own growth, a "growing into" the sphere of his own tasks. Standing there so alive the flower looks at everybody. Being together with flowers sensitizes the whole atmosphere. It is as though people could not behave meanly in the presence of flowers, and as though their nature were refined by having to do with them. There is no doubt that even a small bowl of flowers on the dining-table can alter a child's feelings, and that meals are quite different when eaten in barren surroundings.

One appealing quality of this book is the unobtrusive way in which it becomes clear that flower arrangement in Japan, and also Japanese art—indeed art generally in the Orient—is always expressive of philosophic meanings, and both its teaching and its development convey these meanings. The drawings used by Mrs. Herrigel to indicate various arrangements, besides giving visual pleasure, are graphic illustrations of Buddhist metaphysics, although there is a sense in which they would fail if they were not also spontaneous. This wonderful synthesis of the intuitive and the deliberate is always the secret of an artist's high achievement.

As for the "formality" of flower arrangement, there is a sense in which everything the Japanese do well has this quality. And, somehow, while we may not like formality, it can be used for instruction in matters the West almost totally neglects. Western visitors are sometimes entranced by the exquisite sensibility of the Japanese, and they do not have to adopt the forms and ceremonies in order to value what lies behind them. The American architect, Richard Neutra, speaks somewhat in this vein in a description of Japanese homes and ways of living:

> Anyone who travels in Japan notices that Japanese speech and behavior are less noisy, more subdued than the corresponding occidental expressions. Japanese children are trained early to delicacy of sound and touch. In a Japanese interior of oiled paper and thin silk, stretched over those incredibly slender frames of cryptomeria wood, an American child would seem noisy and destructive. . . . In a Japanese house, a fandango garnished with Spanish castanets would be a destructive turmoil and at the same time a frustrated performance acoustically crippled. Equally incomprehensible and puzzling would be a Japanese lyrical poem of a few short whispery lines, recited to an American after-dinner party in a heavy fireproof apartment with glass windows vibrating from Park Avenue traffic.

Thinking about the delight to the eye of Mrs. Herrigel's simple drawings, one realizes that Western artists have discovered the technical means to get similar effects, speaking of eccentric balance and dynamic symmetry. The Japanese have words for these effects, too, but they relate to archaic conceptions of all-pervasive natural relationships. And there is far more awareness of the role of "space" in Eastern art. Laurence Binyon's little book, *The Flight of the Dragon* (Wisdom of the East series), is a wonderful introduction to such considerations.

As for learning flower arrangement, Mrs. Herrigel's closing remarks give ample evidence that her book is about much more than this. Speaking of the pupil's progress, she says:

> Spontaneity and individuality seldom appear during the initial stages. Only through patient practice and continual inner transformation does habit gradually wear away, until the work manifests "pure form." At higher stages of development the pupil's "originality" can venture forth more freely, till finally it becomes more and more purified and blends with the "pure truth" in a perfect unity of art and nature.
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> Thus the "truth" finds, in the essential nature of the artist, the theatre in which it takes on visible form. To embody the truth of "Heaven itself"—this is the highest task, whose solution is granted only to the best poets and painters. . . . Yet behind the visible forms there is always the form that cannot be expressed and cannot be represented, the eternal mystery which he struggles in vain to apprehend, unless it reveals itself unhoped for.

COMMENTARY
A MATTER OF PEOPLE

E. F. SCHUMACHER (see lead article) is not the first man to write about the importance of avoiding a precocious mobility of population. Twenty-five hundred years ago, Laotse said in the *Tao Te King:*

> Were I ruler of a little State with a small population, and only ten or a hundred men available as soldiers, I would not use them. I would have people look upon death as a grievous thing, and they should not travel to distant countries. Though they might possess boats and carriages, they should have no occasion to ride in them. Though they might own weapons and armour, they should have no need to use them. I would make people return to the use of knotted cords. They should find their plain food sweet, their rough garments fine. They should be content with their homes, and happy in their simple ways. If a neighboring State was within sight of mine—nay, if we were close enough to hear the crowing of each other's cocks and the barking of each other's dogs—the two peoples should grow old and die without there ever having been any mutual intercourse.

The advantage Mr. Schumacher has over Lao-tse is that he explains *why* small social units are better than large ones:

> What is the meaning of democracy, freedom, human dignity, standard of living, self-realization, fulfillment? Is it a matter of goods, or of people? Of course it is a matter of people. But people can be themselves only in small, comprehensible groups.

So Lao-tse, despite his paternalistic language, is not so "reactionary," after all. He defends a principle, a conception of human good. Mr. Schumacher shows what happens to societies when that principle is neglected.

At issue, for us, is the meaning of "progress." Diversity of experience—one of the things contributed by mobility—brings a multiplicity of ends and means. This may mean good, or it may not; everything depends on the human beings involved. This was essentially Tolstoy's view; he regarded the externalization of progress as modern civilization's most fateful mistake:

> The law of progress, or perfectibility, is written in the soul of each man, and is transferred to history only through error. As long as it remains personal, this law is fruitful and accessible to all; when it is transferred to history, it becomes an idle, empty prattle, leading to the justification of every insipidity and to fatalism.

The entire burden of meaning in the contemporary movement of self-discovery concerns existential ideas of human good, so long displaced by "progressive" and "economic man" conceptions. Progress, in short, is *personal*, as Tolstoy says. Values inhere in *people*, not in goods, not in "vast abstractions" of social achievement. Economics, for Mr. Schumacher, is a humanistic discipline.

CHILDREN
. . . and Ourselves
DESIGN WORKSHOP—TEXTURES

[This is a discussion by Robert Jay Wolff of teaching design to high school students—one of a series of lectures on the subject.]

THE first exercise could start with an investigation of the tactile quality of all kinds of materials selected at random. For the first day have a collection of scraps of all kinds and pass them around. Ask the students to test themselves, to see how keen their sense of touch is. Have them try out each other by blindfolding and allowing recognition by touch only. You can add to the interest of the experiment by showing that textures of opposite quality, smooth and rough, warm and cold, soft and hard, when combined tend to create the sensation of a third texture, making identification of the two more difficult. Illustrate this by placing a piece of cellophane behind a piece of wide-mesh chicken wire, letting them run their fingers over both. The resulting tactile sensation will have little to do with the expected feel of cellophane or chicken wire. It will be something new that has been created by the combination of both. Point out that by juxtaposing contrasting textures in this way, touch charts can be made that will provide many surprises as you run your hand over them. Let them try it with pieces snipped off from your collection of rubbish.

They will now be putting their hands to a job for the first time. No doubt they will get the idea and make a plunge for the results you have predicted. But this is the moment to begin that long and never-to-be-neglected insistence upon clean workmanship, upon disciplined procedure and intelligent ways and means, upon patience and craftsmanship. They must know that results in design are never any better than the skill which builds them. If you have a good idea and don't have the patience to execute it with skill, it would be better to give it up because shoddy craftsmanship will materialize it as a bad idea. Do not make the mistake of segregating experimentation and finished work, making one a matter of fun and play and the other a matter of serious business. These simple beginnings where technique is no more demanding than a kindergarten exercise should be used as a means to develop an easy, self-generated discipline, arising out of a respect for and understanding of the problem at hand. Point out that good craftsmanship must become an ingrained habit. It is not something that you can turn on like hot water when you need it. Explain that impatience and anxiety to get a thing over with should not be confused with the desire to do it.

Your technical problem here is a small one but an important one. Emphasize precision cutting and neat gluing. If the textures are mounted on a strip of wood or cardboard, point out that attention will have to be given to the problem of anchoring the chart so that it does not slide along with the hand as it presses down and moves over it. Friction must be designed into the underside so that it remains fixed or, better, a grip constructed for the other hand to hold it steady. Solutions can also be suggested in the form of a cartwheel or a three-dimensional construction. However, it would be best to keep things as technically simple as possible at this stage. Do not soften the impact of the sensory experience under a complex structure, the building of which becomes dominant. On the other hand, allow latitude for structural ingenuity within limits.

Once this first excursion into the cementing of intentions with a functioning design has been completed, the teaching task simplifies itself. You have demonstrated that the things you have been talking about can be made to work, that the visual and tactile interests which were mere observations on the field trip have crystallized into concrete form.

The exercise just completed falls well within the limitations which have been set up for the first stage of a high-school program. It is a typical exercise for the preliminary workshop. It

combines creative exploration of one of the fundamentals of design without emphasis on specific skills such as drawing, painting, carpentry, etc., and without being channeled into the stereotyped "art" object where the incentive is predominantly imitative rather than creative. Further, the exercise fulfills all six of the guiding considerations which have been suggested as a basis for evaluation of preliminary workshop procedure. It draws upon sources in nature, it can be associated with similar considerations that are present in good design, both past and present; it allows for original and imaginative solutions; it provides for the development of sensitive and creative craftsmanship; it stresses only one of the elements of design and avoids complex content; it is within the range of all abilities.

Under certain circumstances schedules will require an accelerated program and it will be necessary to get on to the next element. On the other hand, there may be time for an expansion of the first texture exercise, either in the form of an additional project or an enrichment of the first. Circumstances will dictate the pattern to the individual instructor. There are any number of possible variations on this theme which an ingenious teacher will fashion to suit his own problem. For example, the first exercise may not provide a strong enough appeal to the imagination in some cases. Additional content may be added to the purely censorial material in the form of simple narratives demonstrated by texture sequences. There are many possibilities here, for example sequences which, by touch alone, identify and describe certain types of environments such as urban, or farm, or seashore. A journey could be described, indicating the transition of tactile sensations as one leaves the city and travels through the countryside to the seashore. This could be handled as a book with each page introducing a new aspect of the changing situation. Visual textures might be inserted as an additional means of tactile communications, sections of illustrations cut from magazines, sky, clouds, water, smoke, and so on. Here care should be taken to exclude photographic vistas which give composite views. Photographic textures should be taken out of their context in the total scene, just as a piece of bark is separated from the tree and shown as a tactile entity in itself. In other words, each item in the sequence should be chosen as an independent tactile sensation. The meaning of the whole series should be deduced from the sum total of sensations.

We can ask ourselves whether exercises, such as these, address themselves to the imagination and interest of the student. Do they make sense in the light of his strong conventional acceptances? Can he overcome his resistance to this unexpected and unusual work by its challenge to his originality and imagination, by its direct connection with the everyday world, and by its relationship, indirect as it is, to professional practice? I believe he can, with the help of a resourceful, understanding and enthusiastic teacher.

ROBERT JAY WOLFF

New Preston, Conn.

FRONTIERS

On "Structuralism"

A FEW months ago, a reader asked for some comment in MANAS on Lévi-Strauss's theory of "Structuralism." The subject then seemed remote from general interest, and while the French anthropologist's book, *The Savage Mind* (University of Chicago Press, 1966), has had some attention in these pages, the few discussions of Structuralism we have read seemed formidably obscure. However, a paper by David Michael Levin in the *American Scholar* (Winter 1968-69), "On Lévi-Strauss and Existentialism," explores the meaning of Structuralism in terms of basic philosophical issues, and is not obscure at all. It reviews the debate between Sartre and Lévi-Strauss on the issue of human freedom and responsible choice. Sartre, as the champion of the Existentialist view, comes off rather badly in this comparison, yet the fact is that the meaning and importance of the French anthropologist's ideas become exceedingly clear through their comparison with the absolutist demands of Sartre. And Prof. Levin argues that Lévi-Strauss saves Sartre's idea of freedom from inaccessible abstraction.

What is Sartre's position? It is that the limitations of our lives are no excuse for failing to behave like men. There is no ground of apology for not exercising our freedom. Our free acts make our limits, and it is not the other way around. So, Sartre says, we must study the reality of our freedom, not the complexity of our limitations. Life is action, not apologetics.

Or, in the language of Dr. Glasser's Reality Therapy, when the offender explains to the counselor, in extenuation of his law-breaking activities, "I come from a broken home," the counselor should reply: "Very interesting, but what are you going to do *now?"* In other words, conditioning theory blocks out initiative for change.

This, quite obviously, is why Sartre has little use for science. He thinks it is all conditioning theory, all explanation and excuses, and useless, therefore, to a free human being.

Well, much of social science has the form of conditioning theory, but Prof. Levin shows that Lévi-Strauss's anthropology is an endeavor to grade and compare the patterns of social life as fields of decision. There is no denial of human freedom. Prof. Levin quotes from the last chapter of *Structural Anthropology* and adds an interpretive comment:

> "Anthropology aims to be a semeiological science, and takes as a guiding principle that of 'meaning'." Structures, then, are the natural *expressions* of freedom, although, to be sure, their advent necessarily amounts to a certain "inhibition" of this freedom. But such inhibition is no different, in fact, from the way in which a language might be characterized, in a dramatic way, as "coercing" the thoughts that it is intended to express.

Well, language *does* coerce our thought. It cannot help but do this, and we cannot use language freely without understanding its tendentiousness and other bad habits. Only a man who masters the limitations of language learns how to turn its use into art. For the man with something to say, semantics is a freeing discipline. As an exceptionally fine writer, Sartre must be quite aware of this.

It is the same with social forms, which are also limitations. These, too, are capable of "poetic" usage, and allow paradoxical bonuses of freedom to the man who understands them thoroughly. Sartre, one suspects, is really arguing for the absolute *obligation* of moral choice, whatever the circumstances. And he is so determined to avoid the trap of plausible excuses that he will allow no scientific study of limitations. That, seen from the other side, a science of limitations may become a science of opportunities, does not attract him. The idea is too dangerous as a source of compromises of the moral ideal.

After showing how, in his view, Sartre evades Lévi-Strauss's meaning, Prof. Levin writes:

> Why, then, do we continue to respect the judgments of Sartre? Because we can sense, as the motive behind his outrageous pronouncements, a terrible fear which our own hearts respond to: Sartre is sage enough to perceive that any understanding, based on the concept of structure, can readily lend itself to reactionary or malevolent ends. Any such understanding can deftly conceal the possibility of living choices.

How can we fail to sympathize? The man who has discovered an absolute truth naturally fears the self-deception possible from making subdivisions. Just *do it*, he says. So the anarchists, knowing well their one Big Thing, will give you no theories of government.

No doubt there are times and relationships in which cleaving to absolutes is man's only protection against betrayal. Yet there are other times when recognizing a timeless value (freedom, truth) in a finite frame of action is as necessary as drawing a breath. Prof. Levin puts this latter view with clarity:

> For, if freedom is not to remain a mere abstraction, a metaphysical state or essence, then it must be accorded the power that comes from a *mastery* of the forms of life, such as they are; and this, in turn, challenges man to understand both himself and his world in terms of their significant structural properties. . . . Sartre's repudiation of structuralism on the grounds that it denies freedom in the name of reason, is thus completely misguided. Science, as the highest stage of self-consciousness, is an essential condition for the possibility of freedom.

Sartre's indifference to the need for "a *mastery* of the forms of life" may have the apparent or "logical" consequence, as Prof. Levin says, of leading to "the kind of intellectual paralysis and moral skepticism that can purport nothing but the final abrogation of our possibilities for freedom," but his actual influence, especially on the young, has been quite the reverse. People filled with moral longing have a natural instinct for seeing the application of principles to limited situations. No more than Sartre do they want sociological yardsticks applied to the obligations of human freedom. That choice must take place in some setting is taken for granted.

Even so, it seems beyond question that a philosophical anthropology *could* throw light on the settings of human decision, bring more understanding and tolerance of other people, and add wisdom to moral resolve. Not long ago an American psychotherapist, Dr. Joseph L. Henderson, in a study of traditional settings for choice (*Thresholds of Initiation,* Wesleyan University, 1966), contended that these forms of the quest for meaning contradict the Existentialist claim that man is alone "in the midst of an alien universe." He is both alone and not alone:

> At the critical turning points of individual development, man is alone with himself and can fall back on absolutely no preconceived, prelearned patterns. Yet the psyche is not without content; far from being alone in his self-confrontation he may feel more richly companioned than he has ever been in belonging to a religious group.