

THE LOGIC OF REORIENTATION

[This article is condensed from a paper by Edward Goldsmith which appeared in *Teach-In for Survival*, published by Robinson & Watkins Books Ltd., London, in 1972, With Copyright by the editor, Michael Schwab. Mr. Goldsmith is editor of *The Ecologist*, the monthly magazine which for its January 1972 issue presented "Blueprint for Survival," the work of a number of scientists on the waste, pollution, and exhaustion of the planet's resources, offering interrelated programs of change "for the creation of a more stable society." Both *Blueprint* and *Teach-In* are available as books. Mr. Goldsmith's contribution to *Teach-In* (which is made up of the talks by the participants in a "Teach-In" at Queen Elisabeth College, London) appears here by permission of the author and the publisher.]

THE environmental crisis is a crisis of values. Our society as a whole is moving in the wrong direction. It is geared to achieving something that is quite unachievable . . . a materialist paradise on earth, from which drudgery, poverty, social inequality, ignorance, unemployment, famine and disease will have been eliminated once and for all.

It is fashionable to pour scorn on the conventional visions of paradise proposed by the principal religions of today and, *a fortiori*, the more outlandish sects that have sprung from them. None, however, is as naïve as this vision of ours today. Its achievement would violate not only the fundamental laws of thermodynamics but also practically all the basic values of biological, ecological and social organisation. It must devise for itself a different goal—one that is achievable without destroying the biosphere of which we are an integral part.

Now, the behavior pattern of a society is like that of any natural system. It is determined by that model of its relationship with its environment that it has built up during the course of its experience. In the case of a society, this model is referred to as a world-view or "weltanschauung." It is precisely this world-view which must be

changed. In other words, we must totally revise the basic beliefs that our society entertains regarding its relationship with its environment. Let us briefly examine some of the basic beliefs which underlie our present social behavior pattern.

Firstly, we strongly believe that Man is above rather than a part of Nature. The implications of this are enormous. It means that we feel justified in regarding ourselves as somehow exempt from its laws. We accept that animals cannot be taken from their natural habitat and introduced into a totally alien one with impunity. Yet we do not hesitate to force members of our species to live in an environment which is even more different from that in which we evolved and to which we are adapted. It means that we feel justified in exercising the most terrible tyranny over other forms of life, and that we regard the rest of nature as something put there to serve our day-to-day requirements. Clearly, everything must be done to make people realise that they are as much part of nature as the most humble forms of life: amoebas, slime-moulds and the like.

Another of our basic beliefs is that Man is free. By this is meant that he does not have to accept any constraints on his natural inclinations. Freedom, taken in this sense, has nothing to do with the freedom of which the Greeks wrote and which simply meant that the state was subject to constraints imposed by the society as a whole, as opposed to the arbitrary whim of a dictator, i.e., it formed part of a self-regulating society. Freedom in our sense of the word simply means disorder or entropy. As the biosphere evolved out of the primaeval dust, so did the original entropy give rise to order or negative-entropy. This is the same thing as saying that as matter organised itself into ever more complex forms so did constraints accumulate, and hence so was there a corresponding reduction in what we call freedom.

In refusing to accept constraints, whether we know it or not, we are denying the possibility of a family, a society, an ecosystem, in fact of any sort of organisation. We are opting for social entropy and eventual breakdown.

Fundamental to our world-view is the belief that human problems are due to something called "ignorance," which can be combated by something else that we call "education." We are convinced that if we build enough schools, and universities, we will teach the population of the world to behave in a rational and humane manner. Wars will be avoided, crime and other deviations will be banished, people will understand the importance of keeping the population down and will cease having too many children, etc. . . . We in this country already spend over two thousand pounds each year on education, which is roughly forty pounds per head, or nearly double the total income of an inhabitant of a country like Nigeria. Our educational system could conceivably be introduced into but a handful of rich industrialised countries. There is not the remotest chance that most countries in Africa, Asia, and South America could spend anything like the amount of money on education that we do. Even if they did, would this really be to their advantage? Is there any evidence that "education" is solving the problems that it is supposed to solve? Are the rich "educated" nations more peaceful than the poorer ones? Are they more humane? Are they less prone to criminal behaviour and other social deviations? The opposite appears to be true; the more we study the behaviour of simple tribal societies the more we find them to be free from the social problems at present afflicting our urban society. On theoretical grounds alone we can predict that institutionalised education cannot provide the panacea for our social ills. The fact is that what we refer to as "education" has little in common with that essential process that education is in a simple stable society—a process whereby information is communicated via the family and community to a growing child so that it becomes capable of fulfilling its essential functions as a

member of its family, community, and ecosystem. Like all behavioural processes, the educative one is made up of a series of steps that must occur in the right order, proceeding from the general to the particular. It is the generalities that are most important, as they colour all the particularities into which they are differentiated.

It is for this reason that the earliest part of one's education is the most essential, that the mother is the most important educator and that the family unit is so essential, as is also the small community to whose influence a child must be more and more subjected as he grows up. The educative process is, in a stable society, indistinguishable from the normal process of growing up. It involves constant feedback between the child and the different components of his social environment. It is only with us, as the family and the community gradually break down, that we tend more and more to institutionalise education. However, such institutionalised education gradually loses its purpose. It cannot adapt a child to fulfilling its functions within the family and the community, as those cease to exist as viable self-regulating units of behavior. It slowly becomes an arbitrary process whereby increasingly random data are communicated by professional educators to alienated and goal-less children. At best it can provide them with the means for fulfilling certain economic functions within our technological society. It cannot, however, satisfy psychological and social requirements, and must thereby have but a superficial effect on basic behavioural tendencies. Clearly, we must completely revise our idea of education. For it to fulfill a useful social function it is necessary, first of all, to decentralise our society so as to re-create the family and the community, the essential framework for any sound educative process.

Another of the tenets of our industrial society is that the modern "scientific method" provides us with an objective means of understanding the world in which we live. It is essential to realise

that science is not in the least bit objective. At the moment when it has suddenly become apparent that our society is heading towards disaster like a moth towards a light, it appears a little paradoxical that scientific knowledge has never accumulated faster, and that something like 90% of the scientists who ever lived are at present at work. Is it not after all the object of science to provide facts for the making of a public policy that may best serve the interests of our society? Why then are we not moving in a more sensible direction? The answer is that the main body of scientists has accepted the basic tenets of the technological world-view, hook, line, and sinker. They are accepted as gospel, and to criticise them is to draw upon oneself the wrath, even the sanctions, that heretics have often met with from the established church. Indeed, rather than serve as the critics of our technological society and offer us some protection against its worst abuses, scientists have been involved in it, as instrumental to it. Rather than act as objective judges of the technocracy society, they have provided it with a priesthood. Its world-view is formulated with up-to-date "scientific terminology," and is sanctified by an impressive array of empirical data conferring on its basic tenets a degree of indubitability that few religious dogmas have so far enjoyed.

The reason why this has been possible is that scientific knowledge is defined in a very subtle way. It refers specifically to data accumulated as the result of experimentation. Information deduced from basic principles does not qualify unless it can be tested empirically in the artificial condition of a laboratory. Now it is quite obvious that many chemical pesticides are useless as they accumulate up food chains and thereby do more damage to predators than to the target species that they control. In the same way, it is quite evident that efforts to eradicate infectious disease by waging chemical warfare against their vectors must be counter-productive since it means substituting a precarious, highly simplified, externally-controlled, and very unstable device, for a much more complex set of highly stable, self-

regulating controls. However, such information is not regarded as constituting scientific knowledge because it is not backed by the requisite experimental data. Needless to say, these can only be acquired by trying out these iniquitous devices, thereby providing the agro-chemical business with the green light. If devices of this sort are judged purely empirically, then we shall tend to be seduced by easily obtainable short-term results, and discount long-term consequences.

The appalling confidence trick being carried out on us by the scientific world is also facilitated by the division of science into a host of watertight compartments. Needless to say, the ecosphere is not divided up in this manner. Each part of the ecosphere is closely interrelated with every other. Specialists whose knowledge is confined to a single such compartment can have but a biased and incomplete view of the whole. Their view of occurrences within their own field, which are constantly subjected to the influence of external factors, must also be imperfect. Fortunately, one can discern the beginning of a reaction against this totally misguided "scientific method." It is being increasingly recognised that the only way to understand the behaviour of complex systems is by building an inter-disciplinary model, whose variables are chosen for their relevance rather than because they fall within the confines of a particular discipline. Predictions as to the behaviour of a system are made on the basis of simulation, which is simply another word for deduction. The deductive process is a little more refined than that advocated by the rationalist philosophers of old, in that situations are interpreted in the light of a model—a hierarchical organisation of information, constituted by a set of interrelated principles with different degrees of generality and probability—rather than from one or more unconnected general principles.

This method has recently been used to understand the functioning of industrial society on a global level and to establish the options open to us over the next few decades. The study of the

question undertaken by Professor Meadows *et alia* and sponsored by the Club of Rome has given rise to a popular book called *The Limits to Growth*, which will perhaps be one of the most influential documents of our time. It is clear that everything must be done to ensure that the methodology involved be generalised to replace the "scientific method" of today. Vernon Gifford has the Meadows' model on a computer at Queen Elisabeth College. We plan to set up a team to work on this model, introducing certain new variables, and refining some of the relationships. At the same time, we have set up a number of teams to study different aspects of the *Blueprint for Survival*, such as water management, agriculture, town planning.

The next illusion, closely associated with the previous one, is that Man can control Nature by means of technology and create an environment satisfying his very short-term whim. This is possibly the grossest illusion of all. Unfortunately our society is entirely geared to the replacement of the mechanisms of Nature by technological devices designed, produced, and controlled by Man—to use the terminology of Max Nicholson, the replacement of the biosphere by the technosphere. Unfortunately, this is a very costly substitution. The former is made up of complex, self-regulating and extremely subtle mechanisms, all contributing towards the maintenance of overall stability, which is but another word for survival. The latter is made up of very simplified, externally-regulated, and relatively crude devices, geared to the satisfaction of short-term anthropocentric ends. Such substitution is only tolerable on a small scale. When carried out on a very large scale and globalised, it must become intolerable. Unfortunately, our society is geared to effecting this substitution as rapidly as the resources required for so ambitious an operation can be extracted from the biosphere and the lithosphere.

"Scientific" justification is easily produced for effecting this substitution in different parts of the

biosphere. In general, it is assumed that the substitution will overcome what are taken to be Man's material problems. Poverty, for instance, can, it is maintained, be totally eliminated by this means. But, in spite of the development of affluent urbanised societies, poverty is still with us. In America, the richest country in the world, 25,000,000 people are said to be desperately poor and suffering from malnutrition. Some of these have colour television sets in their rooms. However, they have become too demoralised, too mixed-up, living as they do in a totally alien environment, to be capable of behaving adaptively, even to the extent of not being capable of feeding themselves. Poverty is more than deprivation of material things. Bert Todd once described it as a state of mind. This may sound callous, but it is not that far off the mark! In any case, there is simply no empirical evidence to show that by means of technology, i.e., by increasing the GNP and hence the standard of living, one is contributing in any way towards eliminating poverty. If anything, the opposite is true. There is no poverty in a tribal society. Poverty is something that occurs when the population expands to a level that can no longer be supported by the land. It grows as people drift into the shanty towns in search of work; it grows still further with the demoralisation, alienation, and general social breakdown that characterises the urban wilderness that modern industry must give rise to. The only way to combat poverty is to de-centralise society—to create smaller, more viable, social units, to give people once more a feeling of belonging somewhere, to give them new loyalties and a new goal in life. In addition, poverty can be combated by restoring the fertility in the land and by reducing the population that it must support.

These are not problems that can be solved by political gimickry. What is required is a complex change in the values of our society. This is what we tried to say in the *Blueprint*. It is this that we must somehow succeed in bringing about.

Now I think that there is already considerable disillusionment with our industrial life. Especially among our youth. Attitudes are changing fast, but will they change fast enough?

A crash program of change is required if we are to avoid the worst disasters. This means that we must act on every front. Unfortunately, the most effective change is likely to be the slowest. Children must be brought up by their parents to see things in a very different way. Also, education in Primary and Secondary schools must be modified and this is already beginning to happen. Of course environmental education is also required in universities, but here we are dealing with people whose basic attitudes have already been formed. About thirty universities and polytechnics already offer courses in different aspects of environmental science, and interest in the generalist and general systems approach is also increasing.

At a meeting in Cambridge, Professor Waddington talked of the deficiencies of the modern scientific method, which is principally concerned with looking at details and which consequently loses sight of the whole. He talked of plans to set up a generalist course at Edinburgh to be called the School of the Man-made Future. There was tremendous enthusiasm for this suggestion and a petition that such a course be introduced at Cambridge was circulated and signed by a large number of people present.

The Conservation Society is also doing invaluable work as a pressure group, and Friends of the Earth, perhaps more than any other organisation, has attracted attention to some of the more striking anomalies of our industrial society.

What is required, however, is some means of coordinating these activities, and also of taking the battle to the political arena. The vast changes required can only be brought about by Government action. The Club of Rome is already acting at this level. It is clear, however, that politicians are, above all, interested in winning

votes, and it would be unrealistic to suppose they are sufficiently interested in the future of the country they govern to be willing to forfeit votes to further its long-term interests. This, I think, is the main justification for a *Movement for Survival*.

EDWARD GOLDSMITH

REVIEW

PEACE-MAKERS

ONE reason for a careful reading of *Peace Movements in America* (Schocken Books, 1973, paper, \$3.95), edited by Charles Chatfield—or for turning to Chatfield's earlier work, *For Peace and Justice: Pacifism in America, 1914-1941* (1971)—would be to study the various ways people are working to establish peace, in order to decide what to do, oneself. Actually, a substantial literature now exists on peacemaking, war resistance, and non-violent methods of conflict resolution. But after reading at length in these sources it begins to be evident that various levels of motivation are involved. There is, one could say, the simplistic but wholly admirable stance of the man who says that war is a filthy thing, immoral and useless, and that he will have nothing to do with it. Obviously, if enough men took this position, there could be no more wars. This, it can certainly be argued, is the core, the foundation, of peace-making activities. For pretentious "peace-making" which accepts war and violence as a means can be seen as a contradiction in terms.

Yet there is a logic which has long supported the view that a firm "police action" which uses violence as a tool is socially beneficial, since it can control the "bully" nations and make them behave, establishing conditions of peace for good people who want no more than their rightful share of whatever is at issue. The analogy is persuasive, but misleading, since war involves all-embracing processes which are by nature disintegrating to the fabric of social life, and there is considerable evidence that making war tends to turn good people into bad people—without their knowing it, you could say. Moreover, the restraint of a bully need not involve *killing him*, whereas in war, which invariably arouses the moral emotions on both sides, not only bullies are likely to be killed, but countless comparatively innocent people whose only fault is their loyalty to national leaders.

Not killing in war is an unambiguous position to take. An individual can embrace this view and act on it. But "making peace" is an idea filled with

ambiguity. In the first place, would-be peacemakers are seldom in positions of political power. So, as the next best thing, they try to influence those who are. Now the ambiguity enters with a vengeance, for what is the most constructive influence to bring to bear on policy-makers who are willing—and sometimes eager—to use war to serve their conception of the national welfare? Do you lobby in Washington as a moralist? Do you try to become knowledgeable in *realpolitik*, in order to seem intelligent when you expound on practical alternatives to war? Do you make alliance with the socialists, who maintain that only capitalists cause wars? Do you study history as a means of finding scholarly consensus regarding the futility of war? Do you affirm the need for world government or federation, as the only way to resolve international stresses peaceably? Or do you argue that nations can never make peace, but only people? And how do you increase the number of workers for peace? By protests? Civil disobedience? Dramatic deeds of self-sacrifice?

The history of the peace movement might be thought of as a survey of the various answers returned by earnest men and women to these and related questions. How can one be really persuasive and at the same time propose a solution which would require the relinquishment of beliefs or "rights" so many Americans hold dear? Give up national sovereignty? Only a few years ago, the political internationalists—men of considerable prominence in the United States—were firmly convinced that a proper internationalism really meant the extension of American sovereignty around the world.

It may be that peace will not become possible without thorough-going social regeneration, but if this is the case, then the question of peace is turned over to the social planners, reformers, and revolutionists, among whom there is little agreement as to what ought to be done first. Social change is filled with mysterious unpredictables; we have no idea what will be the problems of a society in transition.

So, from the stubborn stance of the conscientious objector to the over-all redesign of society for peace is a long and unmapped journey,

and the way stations in between are by no means identified. Yet people try. They work together. They infect others with enthusiasm. They form groups, and national and international associations committed to seeking peace and working for the right to resist war. The sketches in *Peace Movements in America* of the people who have given their lives to this cause make excellent and stimulating reading. On one side are all the puzzles and dilemmas we have listed, but on the other is a splendid portrayal of the human spirit, heroic at times, and endlessly hard-working.

There are seventeen contributors to this book besides the editor, who writes a chapter on the peace-making groups of the 1930s. One essay is about Ernest Crosby, a nineteenth-century Tolstoyan hardly anyone has heard of, in whom the great Russian writer found an inspired disciple. In his early thirties (about 1890) Crosby came across Tolstoy's book, *Life*, and it changed the course of his career:

For some reason it took hold of me with a strange power. . . . The simple teaching that it is man's higher nature to love—that if he would only let himself love and renounce his selfish aims, he would enter a wider sphere, find his immortal soul, and in fact be born again—all this struck me as a great new discovery. I leaned back in my study chair; I tried to love, and—could I believe my own sensations?—I did actually feel that I had risen to a loftier plane, and that there was something immortal within me. . . . Nor was the change merely temporary, for since that day the world has never looked to me quite as it used to.

Ever after, as B. O. Flower said of him, Gosby was "a lover of all his fellow men." He spent the rest of his life opposing war as an anti-militarist and anti-imperialist, advocating Tolstoyan non-resistance. There was nothing namby-pamby about him. In *Swords and Ploughshares*, a collection of his verse published in 1902, he wrote:

Who are you in Washington who presume to declare me
the enemy of anybody or to declare any nation my enemy?
However great you may be, I altogether deny your authority
to sow enmity and hatred in my soul. . . .
When I want enemies, I reserve the right to manufacture
them for myself.

If I am ever scoundrel enough to wish to kill, I will do my
own killing on my own account and not hide myself
behind your license.

Before God your commissions and warrants and enlistment
rolls, relieving men of conscience and independence and
manhood, are not worth the paper they are written on.

Away with all your superstitions of a statecraft worse than
priestcraft!

Hypnotize fools and cowards if you will, but for my part, I
choose to be a man.

There is a review of the peace movement between 1898 and 1914, one of wartime (1914-18) anti-militarism in England and the United States, and an account of American peace "strategies" during the 1920s. One writer contributes an essay on the life and thought of A. J. Muste, and there is a chapter on the United World Federalists. Student movements for peace from 1900 to 1960 make another topic. The strong pacifist content of Kenneth Boulding's thought is examined, along with the pacifist research carried on at the University of Michigan, resulting in publication of the *Journal of Conflict Resolution*. The problem of peace education is another subject, and a contributor writes on the folly of the cold war, pointing to the revisionist challenge to "consensus history." Finally, as a conclusion, Sondra Herman repeats briefly the distinction she made in *Eleven Against War* between the power-conscious "internationalists" of fifty and more years ago, and those whom she terms the communitarian internationalists such as Jane Addams, Josiah Royce, and Thorstein Veblen. (A pertinent addition and support to this comparison would be the one made, years ago, in *G.K.'s Weekly* [April 18, 1925] between Gandhi and Henry Ford, as peacemakers.) Five scholars comment on Prof. Herman's distinction, generally agreeing that "peace" was for the political internationalists a synonym of the order to be established and maintained by the power of the United States, whose motives were above reproach and whose wars were always virtuous.

COMMENTARY **AGE OF ESCAPISM?**

IN theory, strip mining (see *Frontiers*) is pursued in order to keep America well supplied with both the necessities and the comforts that coal makes possible. If we have to deface the landscape and ruin the soil to get the coal, that's too bad, since we must have fuel. Anyhow, the land can be fixed up afterward.

But fixing up the land is a major project, and far from successful. Harry M. Caudill says in his *Atlantic* article:

Great Britain requires the most thorough and comprehensive efforts to restore stripped lands to their original quality. The National Coal Board requires the land to be carefully surveyed, photographed, and topographically mapped. Buildings and forests are cleared away; then the topsoil is scraped off and preserved in grass-grown heaps. One by one the strata are lifted out and segregated. All nutrient-rich rocks are identified and set aside to be crushed and applied to the surface. After the coal has been hauled away, the layers go back into the pit in their natural order. Each is compacted with heavy rollers. The surface is sculptured to an approximation of its original shape; then the topsoil is scraped over it. Grass is sowed and trees are brought from national forests and planted where others grew. Then walls, roads, and houses are rebuilt. Restoration extends over five years and costs about \$5,000 an acre, but even these stringent measures leave the land sunken and maimed and the groundwater charged with enormous quantities of minerals.

Evidently, fixing up the land doesn't work very well. However, since only a few people live near the strip-mine locations, the ugliness will be isolated and opposed by only a handful of farmers and "eagle freaks."

But this habitual solution of hiding, ignoring, or isolating the effects of what we do never works well. In a book on the historical forces that have shaped American residential and commercial construction (*American Building*, Schocken, 1973), James Marston Fitch observes: "The most disturbing aspect of life in the United States today

is the widening discrepancy between the privatized luxury and public amenity." An example of this is the flight from the city's ugliness to the suburbs by white collar workers and their families. As a result, the cities lose every characteristic of communities where people both work and live—they die at night, throughout large areas—while the suburbs become citified—crowded with high rise "dormitory" apartments to supply workers for the multiplying urban skyscrapers.

In short, the adaptations which the escape from ugliness requires of us become a spreading infection which we are unable to leave behind.

CHILDREN

. . . and Ourselves

PROBLEM CHILDREN AND SOCIETIES

THERE isn't a great difference between books which have to do with children and books about adults and adult behavior. Reading, recently, in a book by Virginia Axline about play as therapy, we stopped in the middle of it, struck by the resemblance between certain of her "problem children" and a tribe of South American Indians who briefly appear in a current novel, *A Soldier of the Revolution*, by Ward Just (Knopf and Avon). Both these writers seem extremely perceptive in dealing with what human beings do and why they do it. In *Play Therapy* (Houghton Mifflin and Ballantine), Miss Axline provides case history after case history of children whose development has gone awry—children who upset their parents and teachers—who are, as we say, "anti-social," yet sometimes prove the most talented and intelligent in their group.

Ward Just's book is different in that it is about adults—people in whom the tendencies and attitudes we are able to recognize, with Miss Axline's guidance, in children, have hardened into rigid structures—and people who, moreover, almost nobody really tries to understand.

Readers who remember Miss Axline's *Dibs* will know that anything she writes is likely to be of great value. In this book she shows that play is a way for children to expose their feelings and sense of oppression—get these things out where it becomes possible to understand them. Nearly every case Miss Axline describes brings some sort of confirmation of her basic conviction that every child has hidden away somewhere the innate capacity to find balance, the "ability to solve his own problems if given an opportunity to do so." The work of the therapist, she maintains, is not to "change" the child, but to try to increase his opportunities to make his own choices, at his own rate, and in consequence of his own insight. "The child leads the way; the therapist follows." The

fundamental postulate of her work is given in these words:

There seems to be a powerful force within each individual which strives continuously for complete self-realization. This force may be characterized as a drive toward maturity, independence, and self-direction. It goes on relentlessly to achieve consummation, but it needs good "growing ground" to develop a well-balanced structure. Just as a plant needs sun and rain and good rich earth in order to attain its maximum growth, so the individual needs the permissiveness to be himself, the complete acceptance of himself—by himself, as well as by others—and the right to be an individual entitled to the dignity that is the birthright of every human being in order to achieve a direct satisfaction of this growth impulse.

The circumstances of the world, the incomplete awareness of the young, and the egocentricities of other human beings often create serious obstacles to the growth processes in children. Miss Axline says:

When an individual reaches a barrier which makes it more difficult for him to achieve the complete realization of the self, there is set up an area of resistance and friction and tension. The drive toward self-realization continues, and the individual's behavior demonstrates that he is satisfying this inner drive by outwardly fighting to establish his self-concept in the world of reality, or that he is satisfying it vicariously by confining it to his inner world where he can build it up with less struggle. The more it is turned inward, the more dangerous it becomes; and the further he departs from the world of reality, the more difficult it is to help him.

The case of Joann, a six-year-old, was referred to Miss Axline because the child seemed "nervous, tense, withdrawn." This girl came into the playroom and began playing with clay, making the figure of a man carrying a cane. She did this each time she came, and each time, after making the man, she did awful things to the figure—punched it full of holes, beat it with a stick, ran a toy truck over it, and, finally, stuffed the little man's remains back into the bottom of the clay jar. Then she would play normally with dolls, treating them quite tenderly.

The little girl's father had been dead for three years, and she lived with her mother and an older sister. Miss Axline says:

At the time of her play, identity of the man seemed unimportant. Joann never named him. The therapist did not pry into his identity, as it seemed important to Joann that she hide him behind anonymity. . . . Later, after the therapy contacts had been terminated, the therapist met the mother, who told her that she was contemplating getting married again. "The only drawback," said the mother, "is the fact that he is a cripple and carries a cane. Joann acts as if she is afraid of him."

Parental obliviousness is behind many such difficulties. Two boys, Timmy and Bobby, were in a foster home because their parents were separating. The younger child, Timmy, who was eight, nibbled his nails, couldn't hold what he ate on his stomach, was tense and nervous and didn't want to come home for a visit with his mother. Both boys were present when the parents argued about the terms of the separation. Brought to a doctor for his condition, Timmy exclaimed in a shrill voice, "My father doesn't love my mother and my mother doesn't love my father and maybe he's going to be married again and we won't hardly ever see him, mother said. . . "

"All this was discussed before Timmy, I suppose?" the doctor asked.

"Well," the mother said defensively, "he'll have to know about it sooner or later. He might as well know it now." . . .

"Can't you give me a prescription—or something?" Timmy's mother said. "He doesn't sleep well at night. He vomits almost everything he eats. The woman he stays with says he is nervous and acts so wild."

"I'll give you a prescription," the doctor replied, "but this boy doesn't need *medicine*."

In disgust, the physician wrote a prescription. He added caustically, as he handed it to the mother, "He needs a home and congenial parents more than he needs a nerve sedative." . . .

Timmy and Bobby are problem children.

Cases like these called to mind the Indians of the unnamed South American country in Ward

Just's novel. High in the mountains far from their village lived a small tribe of cannibal Indians who kill their victims to extract grease from their bodies. These cannibals are called *pishtacos* and to some of the Indians represent "the purest form of evil." This story is told by an Indian revolutionist to an American who represents a foundation.

It happened that some scientists came to study the lives of the Indians of a certain village where the people had almost no contact with the outside world. They were for this reason interesting to the scientists, who conscientiously learned the dialect of the people, and were polite and considerate of them. But the day after the scientists arrived an old man of the village was missed. He had wandered off before, and always came back, but this time the people decided that there was a connection between the coming of scientists, those strange people with little listening machines, and the disappearance of the old man. It was rumored in the village that the scientists were really *pishtacos*, and that they were there to abduct certain Indians and carry them off to the mountains. This, they believed, had been done by the *pishtacos* thirty years before, and now it was starting again. The scientists, of course, knew nothing of this suspicion, but went around with their tape-recorders and their pads and pencils, asking questions. On the fourth day of their visit, the villagers surrounded the house where the scientists lived, for they had grown convinced that they were *pishtacos* who had already found one victim. Isolated from any communication, with no one to appeal to, the scientists were doomed. The rage of the villagers grew with their opportunity to punish the *pishtacos*, and they broke into the house and hung the scientists head downward from the rafters. Then they burned the building. "The next day," Mr. Just relates, "everything was normal in the town." The revolutionist said:

I am sure you are familiar with the attitude; it is not peculiar to Indians. Where everyone is guilty, no one is guilty. And besides, we are not talking of guilt but of exorcism. The people went back to their

business. A week after that, the old man, crazy from the wind and lightning at night, returned. Oh, they said, the old man is back. The old one has returned at last. They connected the reappearance of the old man with the death of the North Americans, the *pishtacos* who arranged for his abduction in the first place. . . . The death of the scientists proved the perception of the people: if the scientists had been innocent, they would not have died and the old man would not have returned. . . .

The revolutionist draws his moral:

To the villagers then, there was not the slightest doubt that their visitors were devils—and more than that, had come to represent civilization. . . .

We are fighting the *pishtacos*, those who kill the living, squeezing the grease from the bodies of the people. . . . The civilized devil. Bring an Indian to God, and forget for a moment the manner in which he must live, and the forces with which he must contend. Or bring an Indian to the irrigation, and never mind the state of his soul. I have it both ways, señor, because the only answer is one which neither the church nor the government can accept. It is to give the plain, all of it, back to the Indians to do with it as they please. And the rest of you get out. No church, no government; no scientists or economists, no padres. You are playing toy soldiers, here señor. . . . None of it matters to you. What are you doing on this plain?

The revolutionist, who makes the bland foundation do-gooder see, as sometimes a fond but egotistical parent is made to see, where things went wrong, pursues an impossible guerilla war. His remedy will not work; therapy for indigenous peoples remains an unknown art. Yet surely he is right in blaming the rich foreigners.

Why is he right? Because the "know-how" of civilization has confronted the Indians with overwhelming problems, and when they act in desperation to save themselves, they become, as we say, "anti-social." They become "problems" instead of mute sufferers. Then, in the world of adults, the approved method of dealing with people who are "antisocial" is applied. For this we have sophisticated weaponry, a grasp of the methods of counter-insurgency, and all those tough-minded solutions known to the intellectual

elite who work on the side of a righteous politics. The therapists who devote themselves to understanding the differences among cultures, who try to see the reasoning behind the diverse drives which social self-realization uses, are even scarcer than the few who, like Miss Axline, devote themselves to understanding how the psyches of misunderstood and suffering children work.

FRONTIERS

III Fares the Land

IT is difficult, apparently, to keep up with the bad news about man's relationships with the land. We had thought that enough had been said, for a while, on the exhaustion of the soil and the ruthless gutting of fertile country, but, judging from two articles in the September *Atlantic*, such abuses as strip mining have barely begun. We were under the illusion that this wholesale desolation for profit took place mainly in Kentucky, probably from reading Wendell Berry's essay on what is happening there. He calls it "The Landscaping of Hell." But the *Atlantic* articles show that rich farmlands in Iowa, Illinois, and Montana will soon succumb to strip-mining devastation if energy continues to be consumed at its present rate.

What is "strip mining"? In an account of the new "boom towns" in Montana where strip mining is going strong (and northern Wyoming and the western Dakotas have similar expectations), James Conaway says:

Strip-mining is a simple process, and particularly easy in this part of the West. There are no real mountains to contend with, and the overburden—a pejorative describing all that lies between the miner and his coal—is shallow, sometimes no more than a few feet. The topsoil is scraped away, then the miners "shoot" the overburden by drilling holes every twenty-four square feet, filling them with monium nitrate soaked in diesel fuel, and touching the charges off simultaneously. This disrupts acres at a time, and the overburden can be scraped away by the dragline and piled next to the cut. When the seam is exposed, it too is shot, and the coal is scooped up by a shovel and transported by truck to the railroad siding.

The dragline, Mr. Conaway explains, is a crane which hauls up a large scoop loaded with the unwanted surface material. Some dragline scoops in use in the East will lift 150 cubic yards, but the ones in Montana are still small, moving only 500,000 tons a month. Strip mining is the cheapest way to get at surface coal, since a mine

"that produces millions of tons a year can be operated by two dozen men." The employment it brings to an area is negligible, since experts trained elsewhere are required. There is talk about restoration of the land after these operations, and some laws exist to enforce conservation practices, but actually, Conaway says, "no one knows if the land can be reclaimed." Strip mining not only tears away the top soil, but it disrupts the ground water, and often mineralizes the water with strong chemicals that render it useless to agriculture.

A more general article about strip mining by Harry M. Caudill points out that while mining interests, when on the defensive, claim they can make the land fruitful again after it has been strip-mined, in most cases restoration is too costly or simply impossible.

According to a Department of Interior report, up to 1965 more than three million acres had been turned to wasteland by strip mining. This means an area about the size of Connecticut. In the eight years since, the skinned and gouged area has doubled, and strip mining now consumes 4650 acres a week.

Meanwhile, those who count up the resources of energy-producing fuels maintain that we *must* mine coal. There are these appalling figures, put together in a Japanese study: In the period from 1890, when the internal combustion engine was being perfected, to 1960, one cubic mile of petroleum was taken out of the earth. This includes, of course, the oiling of two world wars. But another cubic mile of petroleum was consumed in the seven years between 1960 and 1967, and then *another* one from 1968 through 1970, or in only three years. No wonder there is talk of an "energy crisis." Even so, according to the *Atlantic* editors the shortage of oil is not literal, but due to import quotas and laggard refining capacity. However, a cautious MIT economist, M. A. Adelman, is quoted as saying:

Limits to growth must exist, and we may for all I know be close to them. . . . If one really believed

that mineral resources were becoming increasingly scarce, there would be grounds for austere optimism. Pollution would of itself become increasingly difficult and expensive. Providence would have put-a brake on the ability of mankind to poison itself. But here is no sign that we are being let off that easily.

Meanwhile, steel production has vastly increased in many parts of the world, and steel needs coal. Italian steel production is up to 17 million tons, from three million in Mussolini's time. Hitler's Germany produced 27 million tons in a peak year, but today West Germany alone turns out 65 million tons. The Soviets have gone from 21 million in 1941 to over a hundred million tons, and Japan, which once challenged the military might of the U.S. and England with a capacity of seven million tons, can now produce twelve times as much. Even China, with production of only 100,000 tons under Chiang Kai-shek, has reached a capacity of 16 million under Mao.

The United States has 40 per cent of the world's coal resources, and much of it lies near the surface, waiting for strip miners to take it away. Half of Iowa and 40 per cent of Illinois are underlain by strippable coal, Mr. Caudill says, adding that these two regions are "the nation's breadbasket, without which there would be little beef and pork for ourselves and no grain surpluses for sale to an underfed world." Eleven other states, some of them agricultural, are on the waiting list for the strip miners. Notably, the best lands for food production go first, because rich soil is in the lowlands, the easiest and most economical to strip.

This extremely clear and forceful material in the *Atlantic* is wholly without attempt at optimistic suggestion of alternatives. There is no blurring or fudging of issues, and nothing, really, to argue about. Living as we are accustomed to live will work for only a little longer.

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