

THE WAY CHANGES COME ABOUT

RANDOLPH BOURNE, the best essayist of the early years of the century, was born in Bloomfield, New Jersey in 1886. His aristocratic family lost its money and he worked his way through Columbia, starting in 1909, going to school to men like John Dewey, James Harvey Robinson, and Franz Boas. He learned a great deal from Charles Beard, who got Bourne a job on the editorial staff of the *New Republic*, where he wrote about 300 pieces for it and other journals. He died a victim of the flu epidemic of 1918. As Carl Resek, editor of Bourne's *War and the Intellectuals*, put it, "Almost the whole of his reputation thus rests on a career that coincided with the years of World War I," to which he was uncompromisingly opposed. In his childhood he suffered from a disease which gave him a double curvature of the spine. This, with a birth injury that disfigured one side of his face, gave him a startling appearance, but he paid little attention to it. As Resek says, "He engaged in a variety of sports, especially such as gave his healthy legs exercise. He skated, climbed, played tennis and above all hiked. With his fiancée he once walked from New York to Provincetown."

His most famous essay, "The State," was unrevised at his death. In it he said:

War is the health of the State. It automatically sets in motion throughout society those irresistible forces for uniformity, for passionate cooperation with the Government in coercing into obedience the minority groups and individuals which lack the larger herd sense. The machinery of government sets and enforces the drastic penalties, the minorities are either intimidated into silence, or brought slowly around by a subtle process of persuasion which may seem to them really to be converting them. Of course the ideal of perfect loyalty, perfect uniformity is never really attained. The classes upon whom the amateur work of coercion falls are unwearied in their zeal, but often their agitation, instead of converting, merely serves to stiffen their resistance. Minorities are

rendered sullen, and some intellectual opinion bitter and satirical. But in general, the nation in war-time attains a uniformity of feeling, a hierarchy of values culminating at the undisputed apex of the State ideal, which could not possibly be produced through any other agency than war. Other values such as artistic creation, knowledge, reason, beauty, the enhancement of life, are instantly and almost unanimously sacrificed, and the significant classes who have constituted themselves the amateur agents of the State are engaged not only in sacrificing these values for themselves but in coercing all other persons into sacrificing them.

This is a long essay, filled with insight and acute distinctions. Bourne says, for example:

Country is a concept of peace, of tolerance, of living and let live. But State is essentially a concept of power, of competition; it signifies a group in its aggressive aspects. And we have the misfortune of being born not only into a country but into a State, and as we grow up we learn to mingle the two feelings into a hopeless confusion.

The State is the country acting as a political unit, it is the group acting as a repository of force, a determiner of law arbiter of justice. International politics is a "power politics" because it is a relation of States and that is what States infallibly and calamitously are, huge aggregations of human and industrial force that may be hurled against each other in war. When a country acts as a whole in relation to another country, or in imposing laws on its own inhabitants, or in coercing or punishing individuals or minorities, it is acting as a State. . . .

A public opinion which, almost without protest, accepts as just, adequate, beautiful, deserved and in fitting harmony with ideals of liberty and freedom of speech, a sentence of twenty years in prison for mere utterances, no matter what they may be, shows itself to be suffering from a kind of social derangement of values, a sort of social neurosis, that deserves analysis and comprehension.

On our entrance into the war, there were many persons who predicted exactly this derangement of values, who feared lest democracy suffer more at home from an America at war than could be gained

for democracy abroad. That fear has been amply justified. The question whether the American nation would act like an enlightened democracy going to war for the sake of high ideals, or like a State-obsessed herd, has been decisively answered. The record is written and cannot be erased. History will decide whether the terrorization of opinion, and the regimentation of life was justified under the most idealistic of democratic administrations. It will see that when the American nation had ostensibly a chance to conduct a gallant war, with scrupulous regard to the safety of democratic values at home, it chose rather to adopt all the most obnoxious and coercive techniques of the enemy and of the other countries at war, and to rival in intimidation and ferocity of punishment the worst governmental systems of the age.

While in the seventy years since Bourne turned in this report the punishments have become much milder, his analysis was on the whole correct in his time, and his general observations about the State are indeed accurate. Yet we can also say that the number of intellectuals who support war—*any* war—is greatly diminished. By comparison with 1918, the peace movement has made great strides, mainly, perhaps, because nuclear weapons have made modern war into a *reductio ad absurdum*. But we could certainly use citizen critics of the stature of Randolph Bourne today. In 1918 he was ahead of his time, as would be his thinking today, if he were among us.

What would he have to say today? Any attempt at an answer is risky, yet it seems obvious that he would be a common sense spokesman for bioregionalism and decentralization generally. His common sense would make him an advocate of ecological intelligence with all that this implies.

We have only to look at what the more articulate of the bioregionalists have been saying in recent years to persuade ourselves of this. For example, Peter Berg, of the Planet Drum in San Francisco, wrote in the *CoEvolution Quarterly* for the winter of 1981:

There's been a spectacular assortment of unthinkable outcomes in the last few years, just when, ironically, our awareness of the implications of

environmental tampering has been at its greatest. Community poisoning at Love Canal, the near meltdown at Three Mile Island, genetic damage still unfolding from Agent Orange, the recent conclusion that increased carbon dioxide in the atmosphere from burning fossil fuels will eventually warm temperatures to alter climate planetwide: "What will happen next?" In 25 years all the remaining tropical forests will have been destroyed, the chemical composition of both the air and the oceans will have been drastically altered, naturally pure water will have practically ceased to exist and a good part of the arable soil will have blown or eroded away.

We have to cross over from economics to ecologies and we have to do it soon.

What must we do?

The shape of a transformed society isn't so difficult to imagine: responsive to the biosphere through use of alternative energy, appropriate technology, and sustainable agriculture; small political units defined by natural borders rather than straight lines; filling in the qualities of mutual aid, direct democracy, and opportunities for personal creativity that are nearly absent now. The problem is recognizing how and where this is currently happening on a level that includes all the varied segments of a whole society from construction workers to scientists, and believing it can happen wherever you are.

The long-term objective is to establish a society which has customs which are on the side of life. As people start thinking in terms of the rhythms of the bioregion where they live, what become customs for them will be examples to others. The goal might be to achieve patterns of living which make talk of "bioregions" unnecessary because people are natural guardians of the life processes involved.

In a pamphlet issued by the Planet Drum Foundation, *Figures of Regulation* (which means patterns of direction and restraint), Berg says:

There has to be a transition from Late Industrial Society toward shared values, goals and understandings that fit with rather than contend against the regenerative processes of the biosphere. We need to begin building a dwelling in life instead of on top of it.

The rough shape of a post-industrial society is already somewhat visible in the activities and movements that have sprung up within the last few decades to slow down or undo some of the negative effects of the late industrial period. Development of renewable energy, using sustainable methods to grow nutritious food, preserving and restoring endangered species and ecosystems, cooperating in networks to distribute locally food and goods, opposing further encroachment on natural areas by strip-mining or water-diversion projects and regaining local control over development and land use decisions are hopeful signs that human needs are being considered in terms of the requirements of other life, on the planet. Even though these activities relate to a wide range of society's functions, they aren't all going on in the same place. They provide only a vague outline, as vague as the term "post-industrial" itself. Despite the urgent need to reformulate what society as a whole and individuals in it should reasonably aim to attain, and the methods through which those things should be sought, proposals for a sustainable society are still treated as though they belong in a fantasizing world of utopian science fiction. . . .

One of the major reasons for this dilemma is the money-dominated sense of reality that prevails in Late Industrial Society, the Productivism that relentlessly favors short-term economic gain over long-term sustainability. Natural resources are chiefly seen in their ability to make money, and there are few limits on using them as rapidly as possible for that purpose. The ultimate test of worth for an activity is whether it "pays the bill." So thoroughly is this accepted as an ethical standard that utility companies can successfully campaign for building nuclear power facilities on the basis that they will save consumers two or three dollars a month on utility bills, regardless of the health or safety risks.

By now they should have learned better, since they have picked up the tab on the excessive construction costs of nuclear power, but they may not have recovered from their vulnerability to the "save money" claim. Peter Berg goes on:

The transition toward a society that fits in with natural processes of the biosphere requires a practical counter-ethic to immediate economic gain. The goal of *reinhabitation*, becoming full members of the life-community where we live, gives substance to the otherwise amorphous shape of the post-industrial society. The restoration and maintenance of bioregions, naturally defined locations of natural and

human communities, can be the basis of an effective counter-ethic. We can overcome the barriers to making this transition if we establish frameworks of understanding for evaluating methods and activities in terms of their ability to restore and maintain bioregions.

The question is, what do we do, and how do we begin? One way to get at the answer to such questions is to look at what those who have already begun are doing. In his most recent book, *Altars of Unhewn Stone*, Wes Jackson of the Land Institute in Kansas muses about his practice of learning what to do from what nature does. He says in one of his essays:

Long ago, Charles Lindbergh said, "The Future of the human race will depend on combining the cleverness of science with the wisdom of nature." But through domestication we have removed our major crops so far from their original context that most farmers (and I suspect, most agricultural researchers) regard both crops and livestock as more the property of humans than relatives of wild things. Yet all of these creatures evolved in ecosystems that had little to do with humans. None of these ecosystems was of our design. . . .

While translating our thinking and research on our particular concerns into priorities for more reading, thinking, and experimental design, we could not ignore the immediate crisis on the farm because of the industrialization of agriculture. Many of our neighbors were going broke. Thousands of people across the land were going broke, losing land that had been in their families three and four generations and more. We have been unable to help the farmers in the here and now. They need solutions to their problems fast. But observing their difficulties, we could not help but think about the farmers who have managed to remain financially solvent and about the combination of factors that has made them so, including the ecology of their farms and their relation to what is left of the surrounding rural community. In other words, natural ecology, the ecology of modern farms—from worst to best—and the ecology of a future agriculture, have all been rolled into one continuous thought process.

Wendell Berry has said that when we have destroyed the forests and the prairies to replace them with agriculture we have never known what we were doing because we have never known what we were *undoing*. By studying the natural ecology we have a

chance to see what we have undone. We can compare our modern farms, from worst to best, with what remains of our natural ecosystems. By making these close-at-hand comparisons of what we have done during our period of *undoing*, we can think more clearly about the ecology of a future agriculture.

Speaking more broadly, Jackson says:

To build a sustainable society will require nothing less than speaking our minds in wholesome, creative, and responsible ways, moving power from Washington and Topeka back closer to the land, to communities. I think it requires an explicit declaration, at least to ourselves, that we have joined the fight and that our lives' work is laid out before us in a fundamentally different way than if we had not joined the fight. That does not mean that we become, necessarily, full-time specialists in environmental and peace activities. We can be farmers, doctors, lawyers, or teachers. But rather than be known by our careers, we would arrange our lives in such a way that we would work to make the transit an to a solar-oriented and peaceful future possible. The role of citizenship needs to be given greater emphasis than individual careers or professions.

We all need to spend less time watching television and more time looking at the geography of natural resources, asking questions about who owns them and how much of each there is and how fast they are being used. We have to become better students of the arms race, of federal spending of what is happening to the poor here and elsewhere. We should find out for ourselves what is going on in Nicaragua and ask how we would feel if the Nicaraguans mined New York harbor because they did not like our foreign policies.

We hope that our daily work at the Land Institute contributes to this end. We hope that our plant breeding and ecological experiments contribute. We believe that to develop perennial grain crops so that soil won't have to be disturbed every year and subjected to the forces of wind and rain is a patriotic act. So is our work with plants that produce natural herbicides and that fix their own nitrogen—plants that require less fossil fuel input. Our wind machines and solar collectors represent our commitment to develop renewable sources of energy. . . .

We recognize that our progress as a species does not have to be defined in terms of wealth or material and physical growth any more than our progress as individuals has to be defined in terms of physical growth. Physical growth of the body reaches a limit,

but the character and soul of the individual continues to grow, or at least has a chance to continue, often to our last breath. It is simple minded to define our well-being in material terms, when that well-being has an aesthetic dimension, an intellectual dimension, a moral dimension.

We have long felt that the best way to get young people started in the direction of becoming natural philosophers is to let them begin by becoming, first gardeners and then craftsmen. This, for humans, is having natural relations with the earth. In this way they develop natural ways of thinking about the earth and its materials. They grow up in harmony with the natural rhythms of life, with minds and feelings adapted to the processes of nature. Then, in adolescence, their bodies grow into the creative powers of nature while their minds begin to reach beyond nature to an understanding of natural processes, bringing them the peculiar and unique responsibility of adult human beings.

Today, with the current of habits in human society moving in the opposite direction, only the strong and independent souls gain this beneficent perspective, while the majority merely drift with the crowd into customs based upon the partisan claims of self-interest. But as centers of natural behavior grow up in bioregions and become strong, the advantages of a natural life, its pleasures as well as its responsibilities, becoming more manifest, these centers will grow into the forms of tomorrow's civilization. The difference between the life fostered by these centers and the habits and customs of the mass society will become so evident that more and more people will choose to live on the side of life, on the side of nature, adopting the ways of adjustment to natural law and the ways of cooperation and harmony.

It is by such means that all great changes in human attitudes come about.

REVIEW

WATER, WATER, EVERYWHERE

IN *Way of the Sea*, the author, Richard Gwynn, begins by telling how much water there is:

According to a United States Geological Survey report published in the early 1960s, there are 330 million cubic miles of water, spread over 140 million square miles of the planet's surface, i.e., around 70% of the planet's surface area. . . . As yet we know very little about what goes on in the ocean depths or what life can be supported down there. This lack of knowledge combined with our false assumptions makes it the height of folly to use the oceans as a garbage dump or to drop chemical and nuclear wastes into such an unknown environment.

. . .

To date some 2,000 fish species and about the same number of invertebrates, in many strange and grotesque forms, have been found in the near-freezing, lightless deep. They live in great pressures that would crush any land-based animal. We have not yet begun to conceive of the complexity of the ocean basement life structure and, until we do it is dangerous and foolish to pollute the deep seas.

This, for a start, is enough to show what the writer is interested in doing. He is an Englishman who lives in North Devon. He has formed the Bideford Shipping Company which will use only sailing vessels and he plans to send food aid to Africa by this means. The publisher of his book is Green Books, Ford House, Hartland, Bideford, Devon, UK, and the price is £6.50, paperbound. We should add that a fine introduction is contributed by John Seymour.

We learn in his second chapter:

The honor of being the first known culture to use boats to cross open stretches of water goes to the Australian aborigines. They were at one stage, anthropologists believe some 50 to 70,000 years ago, the most technically advanced group in the world and crossed from southeast Asia in some form of boat over long stretches of deep water in order to arrive at the Australian continent. The aborigines produce no inorganic wastes, they do not pollute their rivers nor are they guilty of over-fishing, species destruction, major wars or empire building. Leastways, that was their condition when Europeans first settled in Australia some 200 years ago. Australia is blessed with plentiful fish and seafood along the coasts and the rivers hold a wide variety of freshwater life.

In Egypt the Nile was "the most holy living thing to the Egyptians and was held in a similar awe and reverence as that in which the Ganges is held by Hindus today."

Strangely enough, and unique among river dwellers so far as can be ascertained, fishing from the Nile was forbidden and fish eating was officially proscribed. The logic behind this came from the belief that if the river was sacred so were all the river's inhabitants such as fish and crocodiles. Needless to say, prohibitions from above, from the rich and powerful and "divine" authorities, held little sway upon the pragmatic fellahin, the Egyptian peasantry.

The chapter on ship-building takes off from the use of wood to that of iron, with the interesting note that "iron ships weigh a good deal less than their wooden equivalents," since iron is so strong that there can be much less bracing and support by this material.

The first major sea battle that is known was the Battle of Salamis in 480 B.C. when the Greeks defeated the Persian fleet. The Greek playwright Aeschylus was a soldier aboard one of the Greek triremes and he gave these lines to the messenger who brought the news of the Persian defeat to the Emperor's mother (in *The Persae*):

The first rammer was a Greek which sheared away a great Sidonian's crest; then close, one upon the other, charged the rest.

At first the long-drawn Persian line was strong and held but in those narrows such a throng was crowded, ship to ship could bring no aid.

Nay, with their own bronze-fanged beaks they made destruction, a whole length of oars one beak would shatter and with purposed art the Greek ringed us outside, and pressed, and struck; and we—our earless hulls went over, till the sea could scarce be seen, with wrecks and corpses spread.

There is a particularly interesting passage about the Vikings, whose ships were pointed at both ends, increasing their manoeuvrability.

The first recorded Viking raid was in A.D. 793 on the monastery of Lindisfarne in Northumbria. These Vikings were from Norway and had already been colonizing the North Sea islands of Orkney and Shetland. It is probable that they had traveled as far as Iceland and Greenland by this time. Other Norsemen also came from Norway as well as what now constitutes Sweden and

Denmark, Britain, the Low Countries, Germany, France and later the Mediterranean countries were troubled principally by the Norwegians and Danes. The Swedes went east and established Russia. Indeed the term "Russia" comes from a word which has been interpreted as being "Rurik's kingdom." Rurik was a Viking chief who was the reputed founder of the Russian Empire. . . . The Vikings used rivers for transport even more than they used the open sea and within a hundred years or so after breaking out of the north they controlled practically all of Europe's river trade. The most feared thing about the Norsemen was that they did not simply raid and then run away, they stayed and they colonized. They carved themselves out kingdoms and annihilated any weak ruler in their way. But while the Vikings were ferocious in battle, they were just in peace and this certainly helped them to hold the territory that they conquered. In an age when the slaughter of an entire conquered people, tribe or race was common practice, the Viking attitude was not understood but one suspects that the ordinary tiller of the soil was happier under Viking masters and, as such, resistance was a matter for the local lord who could not rely on a wholesale uprising against the Norsemen. Bear in mind that the Vikings, with a couple of notable and later exceptions, were not professional soldiers. They were farmers and fishermen who because of the severity of their home environment, looked south for a better life for them and their families.

One section of the book is devoted to the three hundred years following 1500:

Trade from the sixteenth century to the nineteenth century could be summed up under three headings: gold and silver, spices and exotics, and slaves. Of the three slaves were the most persistent "commodity" and, even today unfortunately, slaves still exist and the slave traffic has not been completely wiped out. It is estimated that fifteen million Negro slaves were taken from Africa across the Atlantic to work in the newly discovered Americas. A further nine million died on the way. There is some truth in the expression that America's wealth was built "on the back of blacks." Slavery is an abuse of the waters—one cannot really separate ships from the cargoes they carry and unwilling human cargo must be one of the worst of all abuses.

The sixteenth century was a time of exploration.

In 1521 Ferdinand Magellan completed the first recognized circumnavigation of the world. Actually, Magellan, a Portuguese captain, was killed in a fight with natives on Mactan Island in the Philippines but his second-in-command Captain Juan Sebastian de Elcano, took over and in the ship *Victoria*, brought the remains of the expedition back to Spain. Five

ships and 280 men set out but only one ship and thirty-five men made it back.

In 1815 Fulton created the first steam-driven warship, transforming all sea-going vessels.

Tankers are now the world's largest ships and they also have the potential to be the most damaging to the aqua-sphere. . . . The world's largest ships at the time of writing (August, 1986) are the sister tankers, *Batillus* and *Bellamy*. These ships are about a half mile long (414 metres) and they weigh 630,000 tons when loaded. One shudders to think of the environmental consequences if and when one of these massive ships should ever come to grief and their load of oil be dumped into the sea. . . .

Unfortunately, the seas are dying and because of this, firstly, the seas will no longer be able to be a food source; secondly they will become poisonous and as such will have a life-destroying effect on the entire planet and, if this happens, all of humanity's much vaunted progress will have been, as Solomon put it, "vanity."

The last chapter of this book is given over to the poisoning of the waters of the earth.

The poison begins in atmospheric water in the form of acid rain. Acid rain is primarily a problem caused in the "developed" world. The factories in industrial countries spew out the pollution in the form of soluble gases. These gases, particularly sulphur and nitrogen oxides, combine with atmospheric water and rain comes down as a corrosive solvent and as nitric and sulphuric acid. . . .

The industrial revolution and the massive burning of fossil fuels, oil and coal, began to cause acid rain in the early part of the nineteenth century. The industrial revolution started in Britain and today Britain is still one of the major producers of the pollution and acid rain. Norway and Sweden suffer terribly from British produced acid rain. According to the *Gaia Atlas of Plant Management*, Britain "contributes more acid rain to Norway than Norway itself, and it is the biggest external source of Swedish air pollution." The chemical cocktail of acid rain is exceedingly complex and there are factors with which we have not yet come to grips, in any way. . . . Rain is no longer a lifegiver, but a diabolical agent of widespread death! What we do know is that there are 18,000 and more Swedish lakes which are dead or dying as a direct result of acid rain and that Germany's forests are being killed off at a rate that is beyond recovery.

Such warnings, alas, seem to have little effect. Perhaps widespread hunger is needed to arouse people to action.

COMMENTARY

THE STATELESS SOCIETY

THE obvious moral of Randolph Bourne's essay, "The State," is that modern man needs to learn to live with confidence in a stateless society. This means, first of all, learning to imagine what such a life would be like. Plainly, it would involve living without an external authority that decides for us whether or not we should go to war. Bourne's conclusion that war is the health of the state seems evident enough and the rejection of war by minority groups and individuals is simple common sense, but waiting until war is imminent is apparently not the way to put an end to war. We need to devise means of living which make it impossible, or almost impossible, for the threat of war to come about. Bourne also makes this clear enough.

The only people who have been working along these lines are the bioregionalists, who have abandoned loyalty to the state, and taken instead as guides to human decision what they see to be the laws of nature. This means setting up as goals for human and social development roles for human beings which do not and cannot lead to war. As Peter Berg puts it in his *Co-Evolution Quarterly* article quoted on page 2:

The shape of a transformed society isn't so difficult to imagine: responsive to the biosphere through use of alternative energy, appropriate technology, and sustainable agriculture; small political units, defined by natural borders rather than straight lines; filling in the qualities of mutual aid, direct democracy, and opportunities for personal creativity that are nearly absent now.

If these are the means of achieving a stateless society, the responsibility of taking the first step lies with parents. It means that parents will begin by bringing up their children to know where their water comes from, and to know, as they grow up, how pure—that is, drinkable—water is attained and assured. It means bringing up children to grasp naturally the importance of planting trees, not only trees, but the right kind of trees, and coming to live in recognition of the absolute necessity of an ecologically sound environment. What children

should hear around the house is parental discussions of matters of this sort instead of discussions of politics. In ninety-nine cases out of a hundred political arguments are a waste of time for the reason that politicians seek votes with much more ardor than they work for the maturity of the people whom they are supposed to represent.

Someone is sure to say that far-reaching political changes must come first, but these changes can only come about gradually and the bioregionalists have found many things to do that help to get people thinking along right lines. The publications of the Planet Drum Foundation in San Francisco (P.O. Box 31251, San Francisco, Calif. 94131) are filled with information about what people are doing along these lines. As Peter Berg puts it in the passage quoted on page 2:

The goal of *reinhabitation*, becoming full members of the life-community where we live, gives substance to the otherwise amorphous shape of the post-industrial society. The restoration and maintenance of bioregions, naturally defined locations of natural and human communities, can be the basis of an effective counter-ethic. We can overcome the barriers to making this transition if we establish frameworks of understanding for evaluating methods and activities in terms of their ability to restore and maintain bioregions.

The other writers quoted in this week's lead article fill out the picture. The passages taken from Wes Jackson's book, *Altars of Unhewn Stone*, should help the reader to see that the relation of human beings to the land is not a matter for farmers alone, but involves, or should involve, all the citizens of the country. As Jackson says:

We can be farmers, doctors, lawyers, or teachers. But rather than be known by our careers, we would arrange our lives in such a way that we would work to make the transition to a solar-oriented and peaceful future possible. The role of citizenship needs to be given greater emphasis than individual careers or professions.

* * *

With the completion of this issue we begin our summer interlude and will resume publication in the fall, with the Sept. 7 issue, No. 27-36.

CHILDREN ... and Ourselves ACCEPT NO EXCUSES

IN the Spring issue of *Teachers College Record*, in the book review section, John Clarke (University of Vermont) gives attention to William Glasser's latest book, *Control Theory in the Classroom* (Harper & Row). Dr. Glasser, a psychiatrist, is author of *Reality Therapy*, *Schools without Failure*, and *The Identity Society*, all of which have been reviewed in MANAS. Clarke's review seems especially good. He says:

For Glasser, the problem is not that social systems of control are corrupt or inherently evil, but that they are inherently self-defeating. Individual responsibility is essential to personal health and social progress. To the extent that schools and social service agencies deprive the individual of informed choice in matters of behavior, they also deprive themselves of the effects they seek, whether in reduced drug dependency or increased learning. Perhaps recognizing the strength and direction of the current reform movement in education, Glasser has launched *Control Theory in the Classroom* as a second attempt, following *Schools without Failure*, to make space for self-determination in the public school curriculum. . . .

In this most recent book, Glasser argues that students do not learn much in school for the same reason they do not obey the rules. They do not find that the work of learning brings satisfaction. The work of school learning does not satisfy their basic needs: to survive and reproduce, to belong and love, to gain power, to be free or to have fun. Since people always choose to do what is most satisfying at the moment and since the schools offer few opportunities for satisfying activity, students spend their days developing access to survival, love, power, freedom, and fun through means that ensure failure. They disrupt classes. They drop out. They take drugs. They decide not to achieve. They develop no mental picture of themselves working skillfully to solve problems. For Glasser students will continue to fail at unacceptably high rates as long as public school classes require passive subjugation to external control as the price of learning.

Glasser's goal is freedom in the classroom.

To find satisfaction in school learning, students need to control the process of discovery. If they cannot control their own learning, they will exert control in lesser realms, making endless trips to the pencil sharpener, tormenting their weaker fellows, or simply depressing themselves to a point of furious boredom. Glasser's earlier work found fellowship in the needs-based psychology of Maslow, the therapy of Carl Rogers, and the brief experiment with open classrooms. . . . Glasser sees hope in the small-group format or learning team for increased student satisfaction and improved productivity. As in America's best-run corporations, progress occurs when students set about working together in small groups to solve real problems, or even artificial ones, with the teacher acting as modern manager. . . .

Within conventional content areas, small groups of students undertake real or imaginatively conceived problems, using the skills and knowledge of the disciplines to extend their own learning and sense of mastery. The small group ensures student access to fun and love or belongingness. Specific role determination for each student ensures student access to power and recognition. Learning teams teach both interdependence and individual responsibility as students pursue novel solutions to the problems they face. . . . His is a psychology of health. This philosophy puts the individual in charge of personal destiny. Glasser would like to prevent the psychological fallout that will follow the dropping of a massively conceived national reform movement.

What is "Reality Therapy"? In *The Identity Society* he provides a summary to this question:

1. INVOLVEMENT. Basic to man is the need for involvement. For Reality Therapy to work, the therapist or helper must become involved with the person he is trying to help; the therapist, therefore, must be warm, personal, and friendly. No one can break the intense self-involvement of failure by being aloof, impersonal, or emotionally distant. Warmth and understanding are needed for the two people to become initially involved, if they are professional therapist and patient, or reinvented, if they are a husband and wife or a parent and child. Whatever time it takes, someone must break through the loneliness and the self-involvement where little or none existed before. . . . A suggestion I make to many parents having difficulty with a child is to devote an hour a week—the hour a week I would give to the child if he saw me—just to the child, doing what he wants to do. Although following this suggestion usually helps the child greatly, it is disheartening how

many parents refuse to make this seemingly simple effort. . . .

2. **CURRENT BEHAVIOR.** No one can work to gain a successful identity or to increase his success without being aware of his current behavior. If a person denies his behavior or claims to be unaware of it, he will be unable to gain or to maintain a successful identity. . . . Examining current behavior is usually done matter-of-factly, although, sometimes the therapist must work slowly and subtly. Because a patient may run from therapy when he becomes aware of what he is doing, the therapist must judge the strength of the involvement as he helps the patient become aware of his irresponsibility. . . . A man may say, "I know what I am doing, but that is not important; what is important is how I feel." The therapist must respond by telling him that he accepts his feelings and that he believes that the patient is suffering. The therapist must not focus on feelings, however, because he knows it is almost impossible for a person to change his feelings significantly without first changing his behavior. . . .

A person often comes to my office complaining of how bad she feels. She is depressed, upset, worried, and miserable. Believing she should tell me about these feelings in great detail (in fact, she wants to), she is surprised when I, a psychiatrist, a person supposed to be keenly attuned to misery, cut her rather short and say, "I believe you. You have convinced me that you are depressed and I appreciate that you are upset. But what are you doing?"

Although I am not always this blunt, I make a statement to this effect as soon as I can. In therapy I neither deny her feelings nor say they are wrong or unimportant. I accept them, but I let her know that they are less important than her behavior. . . .

3. **EVALUATING YOUR BEHAVIOR.** The patient must now look at his behavior critically and judge it on the basis of whether or not it is his best choice. The Reality Therapist must ask him to judge his behavior on the basis of whether he believes it is good for him and good for the people he cares about or would like to care about. . . . In Reality Therapy, when we lead a person to evaluate his behavior, at first he may say, "Well, what I'm doing now is all I am able to do. I know it's not the best, but I just don't think I can change." As our involvement increases, however, and as we ask him to re-evaluate what he is doing, he usually sees that better choices are available. . . .

What about nonconformity?

In my experience, most individuals who feel failure gain strength more readily by conforming to the ongoing morality and laws of society; later, when they are stronger and more successful they may wish to defy them. The job of the Reality Therapist, when discussing morality and the law and the patient's role in society, is to bring out everything that he can about them relevant to the decision the patient must make. Then, if the patient chooses an action to protest the war that leads to jail, he has made a rational, not an emotional, decision. . . .

Never make a plan that attempts too much, because it will usually fail and reinforce the already present failure. A failing person needs success, and he needs small individually successful steps to gain it. A student who has never studied should not plan to study one hour a night; at the start, fifteen minutes once or twice a week is more realistic and is still a big change from his present failing behavior. . . .

6. **ACCEPT NO EXCUSES.** . . . Because no excuses are accepted in Reality Therapy, we rarely ask "Why?" Hard as it is to refrain, we do not ask, "Why did you do it?" because we believe everyone involved knows the answer. . . .

7. **NO PUNISHMENT.** Not to punish is as important as not to take excuses. Eliminating punishment is very difficult for most people who are successful to accept, because they believe that part of their success stems from their fear that punishment will follow failure. We believe punishment breaks the involvement necessary for the patient to succeed.

Dr. Glasser is a man of rare insight and knowledge of human nature.

FRONTIERS

Plants that Eat Pollution

A THOUGHTFUL reader has provided us with an article by Noel Niemeier on the value of houseplants for purifying the air in homes and offices. The article appeared in *National Wildlife* for August-September, 1985. The writer says:

According to the National Academy of Sciences, thousands of people may be dying every year—and millions more may be suffering from illness—as a result of the toxic substances that are building up in homes and offices.

In less than an hour, for example, a gas stove can fill a small kitchen with more carbon monoxide and nitrogen dioxide than the national air quality standards allow in city air. What's a homeowner to do?

Bill Wolverton, an environmental scientist for NASA may have one solution that is not only cheap but attractive he proposes to help fight indoor air pollution with houseplants.

Wolverton's experiments show that a spider plant "may scrub the air more effectively than many high tech machines." Such a cleansing agent is needed. After the first Arab oil embargo, Americans began sealing up their houses and office buildings to conserve energy. In consequence, air might linger for five hours or more in a room, allowing pollutants to accumulate to an unhealthy level. One expert said: "We may be transforming our homes and buildings into virtual gas chambers."

Scientists have known for a long time about the potential problems caused by cigarette smoke indoors. But they are just beginning to understand how pollutants from other sources can harm humans: heating devices produce carbon monoxide; foam insulation, rugs and draperies and other furnishings leak formaldehyde; and plastic insulation gives off traces of the volatile substances that keep them pliable. In the kitchen, gas appliances produce carbon monoxide and oxides of nitrogen, and self-cleaning ovens break down greases into carbon monoxide and other organic compounds.

In humans, such pollutants can cause everything from allergies and bronchitis to irritation of the

respiratory tract. . . . Wolverton . . . at the National Space Technology Laboratory . . . cultivated the water hyacinth, one of the world's most productive weeds, and found that it purified water by absorbing large amounts of undesirable nutrients and many toxic compounds. . . . Because of his hyacinth experience, Wolverton thought about plants when NASA identified more than 100 chemicals in the air inside Skylab leaking out of the plastics, metals, upholstery and other furnishings inside the giant spacecraft. The scientist figured that some species might absorb airborne pollution the way the water hyacinth absorbs waterborne ones. He concentrated on foliage plants because they are the least likely to produce pollutants, notably pollen, themselves. After putting the plants in a plexiglass chamber about the size of a dishwasher, Wolverton turned on the lights and pumped in pollutant gases through a port. By measuring the amount absorbed and the time it required, he was able to rank different species in the order of their pollution-fighting qualities.

Within six hours one or two eight-inch pots of soil alone could absorb a third of the formaldehyde, carbon monoxide and other volatile chemicals. (Soil microbes metabolized them, rendering them harmless.) All of the pollutants disappeared within 24 hours using spider plants.

Spider plants have proven the best at gobbling up pollution, says Wolverton. "For some unknown reason they have the ability to assimilate those gases at a phenomenal rate," he notes. "Perhaps it is because they produce 'baby' plants that feed out of the air."

* * *

Several useful articles have appeared in a recent issue of *Kidma*, a quarterly journal issued by the Israel chapter of the Society for International Development (3 Moshe Wallach St., P.O. Box 13130, Jerusalem 91131, Israel, subscription by seemail, \$12). One of these articles is a report by Lynne S. Jasik, on her visit to the tiny Himalayan village of Attiya in Nepal. The point of this visit was that the writer is a trainer of teachers for such villagers, and she went there to experience first hand the environment where the teachers she was training would work. She was invited to make this journey in order to visit five day-care centers being run by the village women "who were not only not trained, but not

able to read or write." She readily accepted the invitation, explaining:

Here was a country, I reasoned, which is predominantly rural, one with 96% of the people living in villages with an average population of 350. This was a rare opportunity to reach the people we educators and community workers *talk* about reaching. Also, these are the people who are the potential clients for the local trainers. What a good opportunity for them to meet each other! . . .

Let me take you with me. It is breathtakingly beautiful country. Alongside the path are single houses and villages scattered at intervals. The local people, always with a smile, put their palms together as they voiced the traditional greeting "Namaste" or "Namaskar." The children were always waving their hands as long as we were in sight. The smiles and greetings really eased the pain of the unfamiliar, exhausting uphill climb. When we finally reached Attiya 3½ hours later, we found it difficult to believe that the bearers who had carried our sleeping bags and supplies, walking barefoot on this rocky path, *had arrived 2½ hours before we did!* . . .

Never mind the many books I have read, stories I have heard, and movies I have seen. Being here, the first hand experience of it, is overwhelming. . . . The chickens hobble about, the cow dung is in the paths, supper fires are smoking, total absence of electricity. Lucky for us, there is a full moon. There is a continuous procession of people, coming and going, a sense of complete security, no dangers lurking. There is a world out there somewhere, but here, for me, it is like being on another planet. . . .

We are skipping around—there is so much to tell about—and our space is rapidly running out. Lynne Jasik says:

I visit Donna's health clinic, which is important to this village. In Nepal, with its high infant mortality and malnutrition rates, a health center is the first step toward changing the quality of life for villagers. A safe water supply and sanitation have had their impact here, as had the guidance on family planning.

The next stop is at the day-care center, a thatched hut mud floors, some few holes cut into the thick stone walls to allow a minimum of light, and shutters in case of rain. Gyana, the teacher, and my former student welcomes me with smiles and greetings. The walls are covered with children's paintings, drawings, letters, labelled pictures of

animals. . . . Outside on the lawn are the children aged one to five, mostly barefoot, the babies with bare bottoms. And they are specially cared for by their caregivers—their three- and four-year-old brothers and sisters who watch them, tend to them lovingly.

This report goes on and on, all of it intensely interesting. For such material, a subscription to *Kidma* is in order, for this article and the other material on development.