

THE OBLIGATIONS OF CONSCIOUSNESS

IT is time, we are told on every hand, to "take charge." The Quakers tell us in a rather good book to take charge of our own lives and begin to live responsibly. The fundamentalist Christians tell us to go back to what they say are the roots of our inherited religion and begin to practice its admonitions, fiercely if necessary, reinforcing them with the power of the state, which must be aggressively armed against the forces of atheism, and be in a position to punish sinister tendencies at home. A great many others, who form a growing minority, declare for voluntary adoption of decentralization of wealth and power, advocating a plan of life which finds its mandate in the instructions of nature and the ecological balances to be observed in natural regions. Those with scientific and ecological background point out that during the past half-century the modern world has come to the historically sudden realization that nations and people can no longer act alone in behalf of what they regard as their own "progress," that the acquisitive drives of the past in the industrialized societies are partly responsible for the hunger in Africa, the malnutrition in Asia, the disorder in the Middle East, and the instability of Latin America. The planet, we are told, is one, and humanity is one, and we must now adopt policies which serve the welfare of all.

At the same time, we have acquired, again somewhat suddenly, an extraordinary extent of information about the condition of the world, and the desperations which have overtaken people who, fifty years ago, we hardly knew existed. Books of facts and figures along with interpretive essays come out every year, providing governments and journalists and a limited public readership with an almost overwhelming mass of information concerning economic, climatic, and socio-political trends, many of which seem the best definitions we have of the road to ruin. We

also have, now and then, accounts of the steps taken by a few governments to improve conditions, some of which seem to be working well, setting an example to the rest of the world.

It is more than coincidence that all this material comes to us at a time when world conditions are beginning to have a decisive effect, mostly economic, on our lives. The effect of there now being a world market for beef, for example, plays hob with the cattle raisers in Colorado. One Coloradan, whom we read about, forecast what he thought would be the market price for beef according to his past experience, planning his production accordingly. But then, in the course of months, a foreign country's cattle raisers threw a large quantity of beef cattle on the market in an effort to survive economic disaster where they lived, with the result that the price of beef fell far below "normal." The Colorado rancher said gloomily, "Every time a calf drops on my range I lose fifty dollars." He and other ranchers were very nearly ruined by this development. The cheap beef produced on lands which were once great rain forests in Central America has a similar effect. What then do our ranchers do? Sell their land for a fraction of what was once its value and go to work at a fast food counter?

Asia, commentators are saying, will be the industrialized region of the future. This came home to us when a Korean car manufacturer built a large building across the street from the MANAS office in a California town. It is a fine-looking building, even though it cut off our view of the mountains, and probably the car is fine-looking too. But this will be small consolation to the tens of thousands of auto-makers in Detroit and elsewhere who are now out of jobs. Did anyone expect things like this to happen in the United States? Of course not. "It is time," a few might say, "for the Koreans to have their chance.

We've had it for a long time, and now the Koreans, who are a splendid people, as one who has read their history knows, will probably make better cars for us to drive." They are incidentally giving the Japanese car companies a case of nerves. And if we can't afford to buy them any more, then maybe the Asians, who, as they make things, will be more comfortably fixed, will become the market.

This, at any rate, is how ordinary people get instruction in what is happening in the world. But meanwhile, what shall we do with all those books—big books—that are coming in for attention? Review them as well as we can? They are, however, written for statesmen and managers, not for the builders of cars on the line. One of them, *The Global Possible*, edited by Robert Repetto, produced by the World Resources Institute, and published by Yale University (more than 500 pages in paperback at \$13.95), has this passage by the editor near the beginning:

Disturbing visions of the human condition early in the next century are not difficult to imagine from the present situation. Population growth at the high end of the projected range, which corresponds to a continuation of current rates of decline of birth and death rates, would exacerbate already serious problems in many developing countries. The number of people in Bangladesh will double with another doubling ahead; but already more than one-third of the rural population is landless, the average size of a farmholding has declined from 3.5 acres in 1960 to 1.3 acres today more than 40 per cent of the rural poor surviving on less than 80 per cent of the FAO's minimum caloric intake requirement, and real wages in agriculture have fallen by 50 per cent over the past twenty years.

Many people could be exposed to the squalor of slums and the deteriorating environmental conditions of Third World cities. According to the paper by Jorge Hardoy and David Satterthwaite, the population of Nairobi, where 40 per cent of the inhabitants now occupy shacks in illegal shantytowns with no piped water, sewers or drains, lighting, or access roads, would grow from one million to more than five million early next century. Uncontrolled air pollution could contribute to elevated levels of tuberculosis pneumonia, bronchitis, and lung cancer in the

industrial cities of the Third World, where respiratory diseases are already the leading overall cause of death.

The loss of agricultural land through erosion, salinization, and waterlogging could undermine the livelihood of millions of cultivators and impede efforts to raise agricultural production. Thirty-five per cent of the world's land area, including significant portions of the productive regions of the Northern Hemisphere, are at risk. In the Sudan, for example, where per capita food production declined 13 per cent during the last decade, the deterioration of range lands is moderate to severe. Rain-fed croplands are increasingly afflicted by declining soil fertility and by soil crusting due to unsuitable cropping practices, leading to lower yields and abandoned farms. Irrigated lands are deteriorating severely because of poor management and siltation from upstream erosion. Deforestation is very severe, especially around the cities, contributing to further erosion and the encroachment of sand dunes from the Libyan desert. These processes at work in the Sudan and other arid and semiarid regions, which destroy the productivity of an estimated 20 million hectares per year, could become more severe as pressures in agricultural land intensify.

Mr. Repetto goes on listing the things that need to be done, pointing out how well they will work. In his foreword, the President of the World Resources Institute, James Speth, explains that the book grew out of a conference held in 1984, attended by experts and leaders from twenty countries. It was called the Global Possible Conference, its purpose being to assemble an assessment of worldwide resources, population, and environmental problems and what needed and could be done to deal with them. The chapters are by the participants. Robert Repetto added:

At a time when bleak predictions are all too familiar the Global Possible Conference was convened to re-examine the relationship between the earth's resources and the human future. The Conference accepted that these predictions could be accurate. But its central and emphatic message is that they need not be—that it is possible to build a world that is more secure, more prosperous, and more sustainable both economically and environmentally.

This global possible will not happen automatically. It will require determined action to

implement new policies. It will require new levels of cooperation among government, science, business, and groups of concerned people. It will require a global partnership between developed and developing countries with sustained improvements in the living standards of the world's poor. And it will require peaceful cooperation to remove the threat of nuclear war—the greatest human and environmental catastrophe of all.

This quiet, almost bland description in general terms of what must be done seems to overlook the real obstacles which stand in the way of achieving the proposed goals. Perhaps the neglect is intentional, by reason of the deliberately "optimistic" orientation of the Conference, yet no reflection is needed by any reader to decide that elimination of the threat of nuclear war is not something that we have any idea how to actually *accomplish*. Then, in another, smaller book by Repetto, *World Enough and Time*, also published by Yale University Press (\$5.95 in paperback), written to summarize the content of *Global Possible*, there is a passage which raises the same question. In his second chapter the author says:

The three bases for sustainable development are scientific realities, consensus on ethical principles, and considerations of long-run self-interest. There is broad consensus that pursuing policies that imperil the welfare of future generations, who are unrepresented in any political or economic forum today, is unfair. Most would agree that an economic system and policies that consign a large share of the world's population to deprivation and poverty are also unfair. But pragmatic self-interest reinforces that belief. Poverty, which denies people the means to act in their own long-run interest, underlies the deterioration of resources and the growing population in much of the world and affects everyone. Further, the threat of destruction from military confrontation in a world of increasing nuclear proliferation is so strong and imminent that there is urgent need to reduce conflict and its sources and to build mechanisms for cooperative, mutually beneficial approaches to world problems. Even if the chances of a nuclear outbreak in any year were only one in a hundred, the odds against our surviving without a nuclear catastrophe would be three to one.

In view of human history, especially that of nations, it seems infantile to hope that "fairness"

will soon become a rule of human behavior, however organized. It goes without question that the ideal of fairness should be discussed, that the young and everyone else should think about its possible role in harmonizing the world, but at least something should be said about the difficulties involved. In colonial and later nineteenth-century times in the United States, was anyone ever deterred by the importance of fairness from doing what was done to practically extinguish the American Indians, and it took a bloody civil war to put an end to human slavery. Fairness might have been a goal for some of our Founding Fathers—men like Tom Paine and Thomas Jefferson, and Herbert Hoover might qualify in this century, as William Appleman Williams has shown—but the emotions of Manifest Destiny governed our foreign policy. Believing in and practicing fairness in one's own life and community is one thing, but when it comes to governments Thoreau was right and told the truth. As for governments themselves, they were organized to pursue and establish *rights*, not duties and responsibilities, as Mazzini pointed out long ago. Expecting governments to practice fairness would be like expecting the lion to lie down and purr fraternally at the lamb.

Yet in other parts of his book, Mr. Repetto points out certain essentials that planners of a cooperative future need to bear in mind. He says:

A powerful means to improve management is involving the people and communities that are directly affected both in the planning and implementation of programs. Overcentralized, bureaucratic processes fail to take advantage of local knowledge of needs, preferences, and opportunities—or of the managerial capabilities of local communities. Often, adversarial relationships emerge between officials and the local communities they are supposed to serve. Partnerships between the public sector and community organizations have succeeded in improving health and family planning programs, the urban environment, soil conservation and watershed protection, community forestry, and other resource programs.

Again, he says in another place:

Leadership will not come from politicians, bureaucrats, and policy analysts, but from the people, as it has in the peace movement, the women's movement, and the environmental movement thus far. One key to action is widespread change in perceptions and values, to which, in most countries, governments respond. Private voluntary associations are in the vanguard of these changes.

Well, this seems to call for an attempt to find people who are already out on the land or who have devoted their efforts to becoming economically self-sufficient. We looked and looked, and found no reference to E. F. Schumacher in either volume, although, in the big book, there is a valuable citation from Gandhi by, incidentally, a woman, the only female contributor to the volume, Kristin Shrader-Frechette, who writes on Environmental Ethics. One would think that by reason and common sense such a book would at least name the individuals who are now active in the way Repetto recommends, working with people on both land and sea, but this, apparently, was of no interest to the writers.

We have in mind individuals who are *both* theorists and practitioners—people like Wes Jackson and Wendell Berry, whose work is by no means unknown, since they both write very good books. People like John and Nancy Jack Todd who are concerned with both food supply and practical means of fishing for small operators, and William McLarney, co-founder with Todd of the New Alchemy Institute, and who now works in Costa Rica where he and his colleagues have an experimental farm in which they develop crop plants, tree crops, and help the farmers of this isolated area to become self-subsistent and independent. They are teaching the Costa Rican peasants "integrated fish/livestock culture" as a source of protein, establishing sanitary drinking water systems and "setting up a community-managed wildlife refuge in what is considered to be the most ecologically significant area remaining unprotected in Costa Rica."

We are thinking of John Jeavons, founder of Ecology Action in Palo Alto, Calif., and now in

Willits, Calif., 170 miles north of San Francisco, where he, his family, and helpers have twenty acres devoted to experimental gardening. He uses the techniques developed by Alan Chadwick—Biodynamic/French Intensive Gardening. A brief account of his recent career:

John Jeavons, a Yale graduate and former systems analyst for A.I.D., Kaiser, Aerospace, Motorola, and Stanford University, noting the increasing concern for bringing food to people, decided to learn and then teach people how they can become causal for their own nutritional requirements. Met with skepticism because of the claim that one could grow more food in an allotted space using less resources than conventional food-growing techniques, for the next ten years his documenting and teaching the method. . . brought visitors from all over the world to the first garden site at the Stanford Industrial Park in Palo Alto. The manual he wrote, *How To Grow More Vegetables than You Ever Thought Possible on Less Land than You Can Imagine*, to assist others who could not come to the gardens to learn, has been purchased by over 120,000 individuals and groups in almost a hundred countries. Ecology Action's address is 5798 Ridgewood Road, Willits, Calif. 95490

Wes Jackson was a farmer boy who grew up in Kansas, got himself an education and a Ph.D. in Plant Genetics and eventually founded the Land Institute, Route 3, Salina, Kans. 67401, where he teaches and carries on a research program devoted to sustainable agriculture. In a recent issue of *Land Report*, issued by the Institute, his wife, Dana Jackson, who edits the paper, tells in brief the story of his life.

Wes Jackson started the Land Institute in the fall of 1976 as an organization devoted to a search for alternatives in agriculture, energy, shelter, and waste management. He wanted to teach a small number of students and have physical work to be a part of the curriculum. Having taught the "ain't it awful" courses for three years in the Environmental Center which he organized at California State University, Sacramento, he was eager to take a more positive approach. He wanted students to work on projects based on less energy and materials—intensive materials, to search for ways to provide for human needs without degrading the environment.

The first building he erected burned down but his seven students said that the program was not dependent on buildings and decided to stay, meeting for classes in the Jackson home. Friends contributed money to start rebuilding. Mrs. Jackson continues:

It took a year to replace the first building; by this time, I was thoroughly involved with Wes in the development of The Land Institute. He and I finished woodwork in the classroom, and Wes laid the carpet just in time for the Smoky Hills Audubon Society to meet there for the postbird count dinner in December, 1977.

Eighty-eight students and eight years later, The Land Institute is still in operation. From a budget of \$10,000 in 1976, and a staff of one, we have grown to a \$200,000 yearly budget and have six staff members. Instead of worrying about finding enough tuition-paying students, we chose ten out of approximately 100 inquiries and thirty good applicants to receive scholarships as agricultural interns each year (\$70,000 of our budget). We publish three *Land Reports* and one *Research Supplement* each year, and have the copyright on a new book called *Meeting the Expectations of the Land*.

The fundamental research project at the Land Institute is the development of a perennial plant to grow on the prairie that will bear grain for nutrition but will not require annual planting, thus preserving the soil from erosion.

The best introduction to the work of Wendell Berry would be the first essays of *Recollected Essays*, reprinted from earlier volumes and issued by North Point Press in 1981. There you learn something about his youth, his life on land along the shore of the Kentucky River where he grew up on a farm, and how his mind worked with his experiences. In one of these essays he wrote:

There appears to be a law that when creatures have reached the level of consciousness, as men have, they must become conscious of the creation, they must learn how they fit into it and what its needs are and what it requires of them, or else pay a terrible penalty: the spirit of creation will go out of them, and they will become destructive; the very earth will depart from them and go where they cannot follow.

All his life Berry has been developing this conviction, noting the forms of the penalty and describing the necessary reparations. Survival may be one issue, but that is not what he cares about so much as human integrity and learning what is right.

REVIEW

THINKING VERSUS CALCULATION

THEODORE ROSZAK'S new book, *The Cult of Information* (Pantheon, 1986, \$17.95), will doubtless gain the reputation of being a full-dress criticism of the modern rage for computers—something which was certainly needed and which he has done very well—but it is also, and more importantly, a lucid account of how human beings think. Writing with unusual clarity about difficult subjects is Roszak's most distinctive talent and the reader cannot help but be grateful for his illuminating discussion of thinking—something we do all the time but give little attention to. In an early chapter, he makes a crucial distinction between *ideas*, which are at the heart of all real thinking and *data*, which are bits of information stored in our memory and in the "memory bank" of the computer. He says:

Our psychological vocabulary does not clearly distinguish these different levels and textures of memory; we have simply the one word for the remembrance of things past. We *remember* a phone number; we *remember* an episode of traumatic suffering that changed our lives. To sweep these different orders of experience under the rubric *information* can only contribute the cheapening of the quality of life.

"The heart has its reasons," Pascal tells us, "which reason cannot know." I would take this to mean that the minds of people are filled with ideas which well up from the deep springs of mixed and muddled experience. Yet these ideas, hazy, ambiguous, contradictory as they may be, can be, for better or worse, the stuff of strong conviction. In a debate that involves such "reasons," information is rarely of much use. Instead, we must test and sample in the light of our own convictions, seeking the experience that underlies the idea. We must do what I dare say you are doing now as you read these words, which are convictions of mine presented for your consideration. You pause, you reflect, probing to discover what my moral and philosophical loyalties might be. As you try to get the *feel* of the ideas I offer, you cast about in your recollections to see if you can find there an echo of the experiences I draw upon. You may loiter more over nuances and shades of meaning than over matters of fact. Here and there

you may detect distant implications or hidden assumptions that you may or may not care to endorse. Possibly you sense that some of your fondest values are challenged and you hasten to defend them.

There is no telling how this critical rumination will turn out, but one thing should be obvious: none of this is "data processing." It is the give and take of dialogue between two minds, each drawing upon its own experience. It is the play of ideas, and all the information in all the data bases in the world will not decide the issues that may stand disputed between us.

What are the critical, if not decisive, ideas in thinking? Roszak calls them the *master ideas*, by which he means "the great moral, religious, and metaphysical teachings which are the foundations of culture." These are ideas which, when held with conviction, shape our lives and preside over all important decisions. They do not result from a distillation of information, or aggregates of information. "They are born," Roszak says, "not from data, but from absolute conviction that catches fire in the mind of one, of a few, then of many as the ideas spread to other lives where enough of the same experience can be found waiting to be ignited." These ideas govern the identification of what we term "facts" or items of information we count as "real" or worth saving and using or dealing with. In short, the master ideas, true or false, select from the infinitude of experience items which fit into the conception we have of the world and ourselves, seeming to fill out and extend the picture. They color all our thinking and determine its direction. As Whitehead put it, there are no mere "facts," there are only idea-facts. Roszak goes on:

Here are some more ideas, some of them master ideas, each of which, though condensed in form, has been the theme of countless variations in the philosophy, religious belief, literature, and jurisprudence of human society:

Jesus died for our sins.

The Tao that can be named is not the true Tao.

Man is a rational animal.

Man is a fallen creature.

Man is the measure of all things.

The mind is a blank sheet of paper.

The mind is governed by unconscious instincts.
 The mind is a collection of inherited archetypes.
 God is love.
 God is dead.
 Life is a pilgrimage.
 Life is a miracle.
 Life is a meaningless absurdity.

At the heart of every culture we find a core of ideas like these, some old, some new, some rising to prominence, some declining into obsolescence. Because those I list here in terse formulations are verbal ideas, they might easily be mistaken for intended statements of fact. They have the same linguistic form as a point of information, like "George Washington was the first president of the United States." But of course they are not facts, any more than a painting by Rembrandt is a fact, or a sonata by Beethoven, or a dance by Martha Graham. For these too are ideas; they are integrating patterns meant to declare the meaning of things as human beings have discovered it by way of revelation, sudden insight, or the slow growth of wisdom over a lifetime. Where do these patterns come from? The imagination creates them from *experience*. Just as ideas order information, they also order the wild flux of experience as it streams through us in the course of life.

The facts or bits of information with which we load the computer are thus preselected by the ideas we hold. They do not represent "objective" truth about the world, but what we have assumed, through the structure of our ideas, is relevant to the meaning of our world. Roszak asks:

What happens, then, when we blur the distinction between ideas and information and teach children that information processing is the basis of thought? Or when we set about building an "information economy" which spends more and more of its resources accumulating and processing facts? For one thing, we bury even deeper the sub-structures of ideas on which information stands, placing them further from critical reflection. For example, we begin to pay more attention to "economic indicators"—which are always convenient, simple-looking numbers—than to the assumptions about work, wealth, and well-being which underlie economic policy. Indeed, our orthodox economic science is awash in a flood of statistical figments that serve mainly to obfuscate basic questions of value, purpose, and justice. What contribution has the

computer made to this situation? It has raised the flood level, pouring out misleading and distracting information from every government agency and corporate board-room. But even more ironically, the hard focus on information which the computer encourages must in time have the effect of crowding out new ideas, which are the intellectual source that generates facts.

In the long run, no ideas, no information.

What does a computer do? It does two things: It stores and manipulates. The manipulation is called processing data. How does it manipulate? According to the laws of mathematics or the logical structure of the mind. There is a sense, then, that nothing that cannot be quantified can go into the computer. This means, as an expert explained to Roszak, that "information" is anything that can be entered into the machine as off/on, yes/no. Roszak remarks that "The genius of computer science lies in its remarkable capacity to elaborate extremely complex programs out of extremely primitive building blocks." The program is really based on binary arithmetic "based upon the *physical stop-go traffic of electrons* through semiconductors."

When the programming rules that govern this interplay are densely packed into long sequences and run at blinding speed what the computer does no longer looks simple at all. Especially when probabilities, priorities, and weightings have been calculated into the program, it may look something like a cunning little intelligence at work, deliberately choosing, deciding. Yet, it is an intelligence that its designers know is operating by strict mathematical rules and physical laws. Understandably, some computer scientists have wondered how much farther such procedures might be extended into the realm of intellect.

The array of facts that have been put into the computer and the infallible procedures of pure mathematics on which calculations are based make up the elements of the pseudo-universe in which one always gets the right answers, according to the nature of *that* universe, which may in countless ways differ from the universe where we live, whatever the impressive finite correspondences. Incommensurable realities,

which cannot be put into the computer, surround us in our lives, and we cope with them in our thinking as best we can. Where these realities play or should play a decisive part in our lives, the computer cannot take cognizance of them. For helping us decide in matters by definition wholly finite, the computer is enormously useful, while it is impotent to deal with moral questions or matters where human decision must enter in at every stage of decision. In his last chapter Roszak says:

In the education of the young, humanists and scientists share a common cause in resisting any theory that cheapens thought. That is what the data processing model does by closing itself to that quality of the mind which so many philosophers, prophets, and artists have dared to regard as godlike: its inexhaustible potentiality. In their search for "effective procedures" that can be universally applied to all aspects of culture, experts in artificial intelligence and cognitive science are forced to insist that there is nothing more to thought than a conventional mechanistic analysis will discover: data points shuffled through a small repertory of algorithms. In contrast, my argument in these pages has been that the mind thinks, not with data, but with ideas whose creation and elaboration cannot be reduced to a set of predictable rules.

The Cult of Information is a book that should become part of the self-knowledge of every literate person of our time.

COMMENTARY

WHAT RESPONSIBILITY TEACHES

IN the *Nonviolent Activist* for September, the magazine of the War Resisters League, Beverly Woodward interviews Howard Moore, the ninety-seven-year-old conscientious objector to World War I whose autobiography, *Plowing My Own Furrow*, was published in 1985 by Norton. Moore was not a "religious" objector but a freethinker who regarded war as "a futile exercise" and who, when asked what sustained him, said: "Just the feeling of responsibility for what you do. That's the only time you know what freedom really is—when you act on your own convictions and take the consequences."

Moore was (and is) obviously a man who makes up his own mind. "My stand against war," he says, "was something within me. I was not a follower at any time." He was influenced by a few books, and several people, but his decisions were all his own. When Beverly Woodward asked him whether the COs of his time anticipated how they would be treated, he said:

There was no way of anticipating what happened. I never expected in America to have men held head down in a pit of feces or to be subjected to the water cure, a disgrace of our Spanish-American War. General Wood, who was in charge of Camp Funston, was notorious for that kind of treatment in the Spanish-American War. . . . When I got to Camp Funston I was asked if I'd gone through Wood's Mill yet. That was the final treatment that was accorded to some of the so-called stubborn and defiant people, absolutists—Henry Monsky, Benjamin Breger, and Julius Eichel. Most of them were Jewish or had German or Russian backgrounds. I arrived at Funston just when they stopped the torture. Two officers were dishonorably discharged as a result of that, after a diary written by a Mennonite had gotten out and been read into the *Congressional Record*.

What does he think about present world conditions?

"I think we're helpless until we make a fundamental change in the acquisitive, competitive system." He wrote in a letter:

The urgent need is for new leadership that will transcend the secular religion of nationalism; for men and women of vision and wisdom who perceive the necessity of doing away with *all* war and the creation of a world community with a sustainable, nonprofit economy designed to save our species from extinction.

CHILDREN ... and Ourselves

HOW TO WRITE

AN article by John Tagg (who used to teach speech and writing at Cal State Northridge, Calif., and is now a freelance writer) in the *Los Angeles Times* for last March 16, deserves some repetition, not because there is great novelty in his material, but because its truth seems largely neglected in the schools. He begins by speaking of Ernest Boyer, president of the Carnegie Foundation for the Advancement of Teaching.

How can you tell, he was asked, whether a given high school is doing a good job? His answer: Have all the seniors write an essay on a subject of their choice and read them. That would tell you more about whether the school was succeeding in its basic mission than any other measure.

Thoughtful observers like Boyer increasingly agree that writing is necessary for genuine learning. This shouldn't surprise us. Think back over your own school or college experience. What do you remember best? Do any of those true-false tests really stand out in your mind? Do you remember anything about your textbooks except the graffiti on the covers?

Tagg draws on his own experience:

I took Psychology just 20 years ago. I recall the appearance of the teacher and the layout of the room. I remember absolutely nothing about the exams (all machine-graded) or the textbook. But I remember the one report I had to do. I recall not just the subject (Jung's theory of archetypes), but several of the examples and the basic conclusions. . . .

John Dewey had it right. We learn what we do. When we write we do several things. We think; we formulate our thoughts into meaningful strings of words, testing them in the process; we record those words graphically; we read them back to test them again.

When we write we not only think, recall, select and verbalize; we visually reinforce the verbal choices which we have physically recorded. Hence writing is unsurpassed as a way of learning to think and a way of thinking to learn. . . . Ernest Boyer, in his fine study of secondary education, *High School*, put it this way: . . . Perhaps more than any other form of

communication, writing holds us responsible for our words and ultimately makes us more thoughtful human beings.

John Holt was a clear and incisive writer. All his books are still read and studied because of their persuasive clarity. In 1980 he set down his thoughts on writing, some of which were reprinted in *Growing Without Schooling* No. 49:

First of all, I have to say that the overwhelming bulk of my writing is in the form of letters. Many of these I type myself, many of them I dictate onto tape, for others to type as I am in this instance. Most of what eventually found its way into my books began life as letters. I think it would be a very conservative guess to say that I have written twenty times as much in letters as have been published in books and the figure might be much higher than that.

Of course, not all the letters people write—many of them gossipy affairs—give the training in writing that Holt's letters provided. His letters were mostly to people interested in or worried about their children. His main concern, therefore was to be understood. There were no egoistic flourishes in what he said, no fancy professional terms, no pulling of rank, and no talking down. His letters practiced a tight economy of words, yet he elaborated with illustrations things people find it hard to imagine by themselves.

He did, in a way, prepare to give this help to others:

Quite often I will get an idea, sometimes no more than a single sentence, and I will scribble it down on a sheet of paper so as not to lose it. These little scraps of paper accumulate in my pockets and on my desk and in other places. Sometimes I will amplify them, expand them in larger notes or put them in a letter. Sometimes they just sit around as scraps for quite a long time. Sometimes I find a use for these scraps, sometimes not—I will come across a batch of them and realize that events have passed them by, that I have written the same thing later in better ways, or am perhaps no longer interested in saying that particular thing.

Certainly there is no week or even day in which I do not write something. But... I have no idea how much. . . .

Yes, I sometimes suffer from writer's block. I usually try to combat it by writing in a different place. . . . Ordinarily I compose at the typewriter, but if and when I am blocked there, I may go back to working in longhand, very often in a stenographer's notebook. If I have been working at home, and get stuck there, I may work more at the office or vice versa.

As for the qualities of good and bad writing, it is easy for me to answer that question. Along the way, I will say that I think that 99% or more of what is called "professional" writing is bad. We have about us many sinners against the English language, but of all these sinners, the greatest by far, in my opinion, are the academics. I am sorry if this has any pejorative ring—it's not accidental. . . . I think that most academic writing is dreadful. Writing should, above all else, be *clear*. I think anyone who wants or claims to be a serious writer has a *moral* duty to be clear, to write as plainly and simply as possible, to make her/his message understandable to as many people as possible. I work very hard on this, and take great pride and pleasure in the fact that many of my books have been read, understood, and enjoyed by children under ten, or people with very little formal schooling. My very strong impression of most academics is that they literally *strive* for obscurity, out of a mistaken, vain and arrogant notion that the harder their ideas are to understand, the more important they must be. Academics, and indeed many other people, literary and music critics, politicians, and other public figures, write mainly for *display*, to show the world, or someone, that they are smarter than someone (or anyone) else.

Since I am talking about plain writing, I may as well give you the Holt Four Rules for plain writing. . . . The rules are: (1) little words instead of big; (2) few words instead of many (note where number one and number two conflict, number one takes precedence); (3) active verbs rather than passive; (4) personal or concrete, rather than abstract, subjects for verbs; that is to say, words like Mary, John, she, he, I, you, it, dogs, cats, people, houses, cars, etc., rather than things like transportation, demographic projections, etc. On the whole I would say that if a writer cannot turn a piece of prose into who did what, or who thought what, that writer doesn't know what s/he is talking about. I assert that, except where technical vocabulary is concerned, there are no ideas, no true or serious or interesting or worthwhile ideas, that cannot be put in that plain form. It is extremely hard work, which is one of the many reasons why most writers don't bother to do it.

The last few sentences have their place in application to what is written, but there are areas of communication, important ones, where they cannot be made to apply. There are levels of abstract meaning which should stay that way. We take the opening paragraphs of Ortega y Gasset's book, *Toward A Philosophy of History*, as an illustration:

Scientific truth is characterized by its exactness and the certainty of its predictions. But these admirable qualities are contrived by science at the cost of remaining on a plane of secondary problems, leaving intact the ultimate and decisive questions. Of this renunciation it makes its essential virtue and for it, if for nought else, it deserves praise. Yet science is but a small part of the human mind and organism. Where it stops, man does not stop. If the physicist detains, at the point where his method ends, the hand with which he delineates the facts, the human being behind each physicist prolongs the line thus begun and carries it on to its termination, as an eye beholding an arch in ruins will of itself complete the missing airy curve. . . . And it is natural that it should be thus. For living means dealing with the world, turning to it, acting in it, being occupied with it. . . . How can we live turning a deaf ear to the last dramatic questions? Where does the world come from, and whither is it going? Which is the supreme power of the cosmos, what the essential meaning of life? We cannot breathe confined to a realm of secondary and intermediate themes. We need a comprehensive perspective, foreground and background, not a maimed scenery, a horizon stripped of infinite distances. Without the aid of the cardinal points we are liable to lose our bearings. The assurance that we have found no means of answering the last questions is no valid excuse for callousness toward them. The more deeply should we feel, down to the roots of our being, their pressure and their sting.

It would be difficult to find better or more moving writing. Somehow, we think Holt would have agreed.

FRONTIERS

Continuing Protest

A SUBJECT we have not given attention to lately is conscientious objection, what it means and what is involved. The Central Committee for Conscientious Objectors, 2208 South St., Philadelphia, Pa. 19146, issues quarterly *CCCO News Notes*, a sixteen-page paper for c.o.'s and interested persons, such as parents of prospective c.o.'s, which keeps its readers posted on developments in the draft law, changes in federal regulations by Selective Service, and "significant new writing and thought on war, conscience, and militarism." It reports on militaristic trends in American society, war resisters around the world, developments within the military, and the peace movement. The articles are informing and well-written, and even the ads will be of interest to readers because they usually tell about other good reading material. For example, an ad in the Winter 1986 issue tells about the *Objector*, published every six weeks from P.O. Box 42249, San Francisco, Calif. 94142—eight issues for \$15.00. This paper helps those who are thinking about conscientious objection to find counselors on the draft who are equipped with the latest information. Another ad announces the availability of a new edition of Aldous Huxley's *Encyclopedia of Pacifism*, a mine of background information, together with additional material by Robert Seeley, editor of *CCCO News Notes*, bringing the contents up to date. This book is titled *Non-Violence* and may be purchased in paperback from the Philadelphia office of CCCO at \$8.95.

A brief news note in the Winter 1986 *News Notes* informs the readers:

The Department of Education has agreed to give the Selective Service System computer tapes with the names of 5 million student aid applicants. Draft officials will then compare the tapes with their records in an effort to find nonregistrants. Those discovered may receive warning letters from Selective Service, or the government may try to cut off their student aid. Under the Solomon I Amendment men

of draft age cannot qualify for federal student aid unless they have registered. The Department of Education computer tapes include not only men of draft age, but women and men who are not required to register. *News Notes* readers who need further information should contact CCCO.

The Winter 86 *News Notes* also provides a good book review of the life story of first world war objector, Howard E. Moore, whose autobiography, *Ploughing My Own Furrow* (Norton), came out last year.

The War Resisters League, 339 Lafayette Street, New York, N.Y. 10012, published earlier this year a four-page folder giving the history of protests against tests of nuclear weapons here and abroad. It begins:

The first testing of nuclear weapons on people conducted by the United States took place on August 6, 1945, on the city of Hiroshima. The second test followed three days later on the city of Nagasaki. Since then the other nuclear weapon states—the Soviet Union, Britain, France, China, and India—have conducted their tests in deserts, oceans and islands around the world. The U.S. peace movement has drawn international attention to the issue of nuclear testing not only by the U.S. but all nuclear countries. . . . The League has made a significant contribution by effectively using nonviolent civil disobedience actions in highlighting the issue on a global scale. Nuclear testing continues today and so does the protesting. . . .

The U.S. government began using the Nevada Test Site area of 1,350 square miles, 65 miles northwest of Las Vegas, in 1951, and in the next seven years conducted 100 atmospheric tests. There, in 1957, the members of Nonviolent Action Against Nuclear Weapons held its first protest and civil disobedience action. On the twelfth anniversary of the destruction of Hiroshima, eleven persons, among them Albert Bigelow, Prentiss Choate, and Jim Peck, crossed onto the property of Camp Mercury, installed by the Atomic Energy Commission, where they were all arrested. An all-night vigil of supporters, led by A. J. Muste, stood at the entrance to the test site. One who was there wrote:

At 5:25 am, as the hour of the explosion approached, a strange quiet settled over the area. Suddenly a blinding flash and slowly the mushroom form appeared from behind the mountains—grey and pink. I have seen this often in pictures, but to see it in reality . . . was a nightmare come true.

In that year, 1957, Linus Pauling, Nobel Prize biochemist, circulated a petition which was signed by 2,200 American scientists, in which they said:

We have in common . . . a deep concern for the welfare of all human beings. As scientists we have the knowledge of the dangers involved and there is a special responsibility to make those dangers known. We deem it imperative that immediate action be taken to effect an international agreement to stop the testing of all nuclear weapons.

Then, in 1958, after the 30-foot *Golden Rule* captained by Albert Bigelow was foiled in its attempt to sail into the waters of Eniwetok, where a test was scheduled—with much attendant publicity—Bigelow and his crew made another attempt, this time reaching Honolulu, where they set out for the testing area, but Bigelow was arrested; the crew, however, set out again, but were commandeered by the Coast Guard and all had to serve sixty days in the city jail. Meanwhile, opposition to the tests grew. The Walk for Peace took place at the same time (from New Haven and Philadelphia to UN headquarters in New York). The demonstration at the end of the Walk "became the largest pacifist action in the U.S. since the 1930's and was organized by the Committee for Non-violent Action."

Meanwhile, in September of 1958, the fifty-foot *Phoenix*, the ketch of Earle and Barbara Reynolds, sailed 65 miles into the Marshall Islands testing area, having been inspired by meeting the crew of the *Golden Rule*. They were there arrested by the Navy, and Reynolds was flown to Honolulu, where he did six months in jail.

In December of 1960 the WRL and other groups protested a bomb testing by the French in the Sahara desert, with large demonstrations in Tunis and Casablanca. Next in the 1960s came the demonstrations against the Polaris submarines

made by the Electric Boat shipyards in New London, Conn. There was also the Transcontinental Peace Walk from San Francisco to Moscow, which did much to spread the word. So, year by year, the protests of various sorts continued around the country, helping to build some of the consciousness that led to opposition to the Vietnam War. The "history" ends by saying:

Since 1945 over 1,574 announced nuclear tests have been conducted by the U.S., U.S.S.R., China, Britain, France and India. As determined as the nuclear nations are in conducting the tests, so are the world's peace movements determined to continue the protest.