

THE THEORY OF THE MONADS

ALL works of the mind require either an open or a covert audacity. It is the calling of the mind to say things that matter about the forms of human experience—to pass some sort of judgment. As both protagonist and critic of action, the mind requires standards of value, which is to say that it must take a position on cosmology, psychology, and ethics. Since these are areas concerning which there is no final certainty, to say anything at all involves assumption, if not presumption. The audacity of this may be admitted, but the offense is diminished by taking note of the fact that we can hardly do anything else. Our lives are made up of one decision after another, and if we believe, as we very nearly must, that decisions informed by knowledge turn out better than the ones left to chance or impulse, then by our behavior we show that we think knowledge is at least possible. We do the best we know, which involves taking a position on cosmology, psychology, and ethics.

Cosmology is concerned with the kind of world we live in, psychology with thinking about living—how it is done and who or what does it—and ethics gives the reasons for doing some things and not others. At any moment of history there is a general consensus of opinion in these areas. When you repeat an idea or judgment that is part of the consensus, you don't have to justify or explain it. You use it to explain other things. Ortega (in *Man and People*) called attention to this all-pervasive influence on our lives, naming it "binding observance." He gave its "two most marked characteristics" as—

(1) that the binding social observance, whatever be its origin, does not present itself to us as something that depends upon our individual adherence but, on the contrary, is indifferent to our adherence, it is *there*, we are obliged to *reckon with it* and hence it exercises its coercion on us, since the simple fact that we have to reckon with it whether we want to or not is already coercion; (2) contrariwise, at any moment

we can resort to it as to an authority, a power to which we can look for support.

The verity of this statement is at once apparent. Leaders, politicians, publicists, and educators found their careers on binding observance—on, that is, largely unexamined opinions. You don't need to prove, examine, or criticize what is already known. The system of binding observances changes all the time, but if the change is gradual, as is usually the case, we hardly notice it. Sudden change is difficult to accommodate, since the common basis for accommodation is itself becoming shaky. And then, as we are thrown back on ourselves, we begin to recognize the audacity of having any opinion at all. We feel oppressed, put upon, by the necessity to develop some binding observances of our own. We need them to give our lives stability, but we are hardly ready to make such momentous choices. How can we be sure! Abdication of the intellect is one way out—not from our problems but from having to think about them.

That is where we find ourselves in the present. The old scientific world-view is in a state of collapse, and already Whirl is king. The Academy, so long reproached for its stand-pat positivism, gives multiple signs of its mushy intellectual condition. In an article, "On the Contemporary Hunger for Wonders," in the Summer 1980 *Michigan Quarterly Review*, Theodore Roszak lists some of his own experiences:

A prominent psychotherapist remarks to me over lunch that people sleep and die only because they have been mistakenly "programmed" to believe they have to . . . and goes on to suggest how this erroneous programming might be therapeutically undone. A neurophysicist tells me of her research in liberating latent mental controls over pain, infection, and aging. A psychologist shows me photographs of himself

being operated on by Philippine psychic surgeons whom he has seen penetrate his body with their bare hands to remove cartilage and tissue. I attend another lecture where another psychologist tells of his promising experimentation with out-of-the-body phenomena. I come upon a physicist writing in *Physics Today* about "imaginary energy" and the supposedly proven possibilities of telepathic communication and precognition. I find myself in a discussion with a group of academics who are deeply involved in Edgar Cayce's trance explorations of past and future, which they accept as indisputably valid. A historian tells me of his belief that we can, by altering consciousness, plug into the power points of the Earth's etheric field and by so doing move matter and control evolution. An engineer I meet at a party explains how we might influence the Earth's geomantic centers and telluric currents by mental manipulations, which he believes to be the technology that built Stonehenge and the pyramids.

Commenting, Roszak says:

Popular science in this vein is not much to my taste. I sometimes enjoy its freewheeling and fanciful brainstorming, but I back off rapidly as it approaches a scientized mysticism. By my lights at least, that is a fruitless confusion of categories. Still, it is hardly within my province to censor these rhapsodic variations on scientific, or quasi-scientific themes. The positivists among us, however, would seem to have a tricky new problem on their hands; *scientific superstitions*, the loose use of scientific ideas to appease an essentially religious appetite.

This seems a just account of the human situation at present. There are these profound religious hungers, and established scientific authority can do nothing to feed them, and does not know how to try. And since, for many people, the hungers are stronger than a now discredited authority which is held responsible for so much damage to the planet, new cults, promising to be at once scientific and "spiritual," are taking over.

The existing cults will no doubt die away, to be replaced by other innovators with other wonders to dispense—a course likely to go on until disenchantment with all this cheap-jack magic is complete. But meanwhile there are casualties—who can count them or measure the

harm? A nineteenth-century sage remarked that in the twentieth century the psychologists would have some extra work to do—and the prophecy is already fulfilled.

Is it possible to assuage transcendent longings without inviting disaster? If the guardianship of orthodox science rejects the challenge, holding fast to the "single vision" of positivist dogma, if the state is wholly unfit and unable to offer help, and if the church is for the most part either collaborator with or ignorer of all this psychic extravagance, where can guidance be sought?

Roszak has a practical suggestion. He reminds us of "Socrates in the marketplace, among the populace, practising his vocation as an act of citizenship." How would Socrates protect us against excess? The answer, Roszak says, is by "critical clarity."

It is this element of intellectual rigor that distinguishes Socrates from prophet, messiah, mystagogue. There is the willingness to put the uncomfortable question—to oneself and others—which separates philosophy from faith. But why was the populace willing to come to Socrates? Why were ordinary citizens willing to face his hard critical edge? I suggest it was because this gadfly was also something of a guru: both at once at the expense of neither. Socrates placed personal experience at the center of philosophy; he used deep introspection as his primary tool of inquiry. . . . More than this, Socrates himself embodied the promise of transcendence at the end of the dialogue. . . . He had escaped from the cave of shadows; he had seen the Good. Something of the old Orphic mysteries clung to this philosopher and saved his critical powers from skeptical sterility. I suspect it was because he offered this affirmative spiritual dimension that Socrates found affectionate and attentive company in the agora—though, of course, martyrdom as well.

We could hardly have better advice. But where shall we look for Socratic guidance today? We can of course read Plato, and some writers are doing it, with benefit to their readers, but there are others—a few—who, during the heyday of scientific authority, refused to accept the binding observance of that time and built their own foundations of philosophic conviction, strong in

their independence and rich in inspiration. They used the intellectual materials available to them, as Socrates did, but drew their own conclusions, also as he did. An inspection of their work may give reason, not to adopt their conclusions—a thing too easily done these days—but to follow their example of independent thinking. What other way is there to move toward a generation of Socrateses to do the philosophic task that is needed in the present?

An example is the work of W. Macneile Dixon, whose Gifford Lectures for 1935-37, published as *The Human Situation* (Galaxy paperback), made a classic for our time. Here was a man who asked the important questions, and who understood the gravity of attempting answers. He drew upon all the cultural sources of Western civilization, and was not ignorant of the riches of the East.

What shall we make of the world, in all its variety, and of our various selves, he asks in one of his chapters—indeed, implicitly in them all. He writes as an uncommon common man, a Socrates for our time:

Logic tells you that all is one, but we common men are not, like the great system builders, so much in love with logic as to wipe ourselves off the slate for the sake of its bright eyes. We have our aches and pains as unpleasantly conclusive evidence of a vivid existence all our own. We are not, like you, on visiting terms with the Absolute. "A philosopher," wrote Hamann, "who admonishes me to look upon the whole sets before me a task as difficult as does he who bids me look into his heart. The Whole is as much concealed from me as is his heart. Does he think I am a god?"

If the One, while everywhere present, is inaccessible, then let us look at the teeming world. How can we make order of all this? Dixon chooses a guide:

If now we go to school with the advocates or supporters of the Many, we find among them at least one philosopher of the first rank, Leibniz, the chief protagonist of their way of thinking, "the greatest intellectual genius," it has been said, "since Aristotle." All knowledge was, like Aristotle's, his

province, and though born in 1646, nearly three centuries ago, the scientific acumen and prescience of Leibniz enabled him to foresee, and even in a measure to anticipate, many conclusions arrived at by the most recent science. . . .

In his view, in the view of this most suggestive and remarkable thinker, just as a nation is composed of persons, so the universe may best be understood as consisting of an infinite variety of living and active beings, monads, as he called them, each a separate and distinct center of energy, monads of many grades and levels, the whole forming a *scala naturae*, a staircase of living creatures. "The world," said Leibniz "is not a machine. Everything in it is force, life, thought, desire." The monads reflect the universe, each from its own angle, each in its own degree. Each has its own energy and appetite, and each seeks, as men and animals seek, the fulfillment of its own peculiar needs. This great community extends both upwards and downwards from man through the whole creation. The world, in brief—a noble thought, and at least worthy of belief—is a living society.

This is today becoming the concerted cry of the ecological fraternity, amounting to the foundation of a natural philosophical religion. With Leibniz, Dixon would include all in Life:

Suppose further—a crucial step—the division we habitually make between the animate and inanimate a needless dichotomy, and the minutes" of existing things, the very constituents of the atoms themselves, charged with vital energy each living and spiritual in its essential nature. . . . Does science forbid the suggestion? On the contrary, it now inclines to support it. The wheel has come full circle. Whereas until yesterday physics dictated its concepts to biology, biological concepts are now invading the realm of chemistry and physics. . . . Let us be bold, and say where there is life there is intelligence, which all living things in some elementary form display. All are architects or builders on their own account, and all life in its individual centers is marked by movement and spontaneity, which, indeed, are its distinguishing features. And what appears to us inanimate matter is too, in perpetual activity, and may be correctly described as motion become visible.

What about the intelligence everywhere in evidence?

"Mind," as Professor Stout wrote, "is not produced at all, but is in some way involved as a

primary factor in the creation of the universe." Look round over the landscape of nature and observe its continuity, the almost insensible series of its gradations, and you know not where to insert your dividing knife or draw your line. . . . If we regard the universe as a congregation of living beings, a spiritual assembly, the external world is the manifestation of their cooperation. . . . Life and intelligence, then, are present throughout the entire universe, and shared by all the monads in their respective modes, and the world we see is the result of their collective activities. Governed they are, as Empedocles asserted, by sympathies and antipathies, as are the individuals in human society, and may be looked upon as members of one another, as sharers in a common existence—however undeveloped and primitive on its lower levels—in the same confederacy. Nature, we may say, has not given birth to life. She is life. The Universe is not the home of life only because it is itself alive. And the mind, although it has its centres in individuals, develops only in the cooperations and frictions of society. . . . We are deceived if we fancy that the mind, which has had a long history, has no more to say, or that the universe, whose history is as long, has wound up its affairs. There is much to come. . . .

When we have a choice a spacious view is to be preferred, as best in keeping with a Cosmos we know to be spacious. I put to you a question. Are our thoughts too noble, too magnificent for the reality to compass? Are our cheques too large for the bank of the universe to honour? Can the mind even in imagination, outrun or outrange the whole from which it sprang? For my part, I think not.

Here are basic assumptions for a cosmology of which our native intelligence forms a participating part, with kin on every level of the ladder of being. Leibniz, who is followed by Dixon, destroyed "the contrast of *animate and inanimate* matter," as John Theodore Merz observed in his *Leibnitz* (an unfortunately rare book). It became evident to the philosopher, Merz says, that "external or material things presented the property of extension to our senses only, not to our thinking faculties." He continues:

The mathematician, in order to calculate geometrical figures, had been obliged to divide them into an infinite number of infinitely small parts, and the physicist saw no limit to the divisibility of matter into atoms. . . . Leibniz followed these arguments to

some extent, but he could not rest content in assuming that matter was composed of a finite number of very small parts. His mathematical mind forced him to carry out the argument *in infinitum*. And what became of the atoms then? They lost their extension and they retained only their property of resistance; they were centres of force. . . . but if their extension in space was nothing, *so much fuller was their inner life*. Assuming that inner existence, such as that of the human mind, is a new dimension, not a geometrical but a metaphysical dimension . . . having reduced the geometrical extension of the atoms to nothing, Leibniz endowed them with an infinite extension in the direction of their metaphysical dimension. After having lost sight of them in the world of space, the mind has, as it were, to dive into a metaphysical world to find and grasp the real essence of what appears in space merely as a mathematical point. . . . As a cone stands on its point, or a perpendicular straight line cuts a horizontal plane only in one mathematical point, but may extend infinitely in height and depth, so the essences of *things real* have only a punctual existence in this physical world of space; but have an infinite depth of inner life in the metaphysical world of thought.

We owe to Leibniz the term "apperception," by which he meant the capacity of the human mind to think about itself, to observe its own mental operations. It is by apperception that we recognize the existence of one another. We learn about others by analogy with ourselves. Our ideas are our own—they do not come from the senses, which give only provocation. Animals do not have "ideas," do not use symbols, do not form concepts. These are functions of the apperceptive mind. In *The Monadology of Leibniz* (University of Southern California, 1930), a translation with commentary, Herbert Wildon Carr summarizes the attractions of the Leibnizian view:

Is then the external world of common-sense [presented by the senses] an illusion and are we called upon to disown it and abandon it? It is an illusion in the same sense in which we now believe the stationary earth and moving firmament are illusions. The monadic theory in giving us insight does not change our nature. We may reckon the common sense world as part of our humanity and we need not do violence to our common sense view. . . . On the other hand, science has everything to gain by a consistent metaphysical theory. The materialism of

Epicurus and Lucretius, the Scholasticism of St. Thomas, the scientific realism of Newton and Locke were well enough when science meant little more than astronomy and mechanics. Materialism fails completely in biology and psychology, and we are coming to see that the reason of its failure is that the sciences of life and mind introduce us to a realm of reality profounder and more elemental than that which we study in physics. . . .

The theory of monads is a realism in the true meaning of the term. The monads are reals in the same meaning in which the atoms of Democritus were reals. The monads are not ideal in the sense that their existence is mind-dependent. They are things-in-themselves. At the same time, monadology is the antithesis of materialism. The universe of monadology is a living thing and its constituent elements are living things. There is nothing dead, no substratum of lifeless, mindless stuff. The monads though self-contained enter into compounds. The Cartesians conceived the world as a vast machine which had been set in motion, its large wheels interlinked with and receiving movement from its small wheels, the whole being self-contained. Leibniz conceived the world as a living individual every part of which was also an individual, living its own life and subserving by its activity the organic life of the whole.

The theory of the monads may find confirmation from a serious attempt to combine our experience and relations in the world with the "deep introspection" of Socrates. As Prof. Carr says, "Monadology is a rational doctrine from beginning to end just because it works. . . . It shows us that all our ideas, not only the ideas of self and of God and mathematical relations, but all the imagery of sense and all the concepts of the understanding are within us, our own inalienable possession. It shows how in self-consciousness we are given the clue to the interpretation of the nature of reality." In any event, it is the *sort* of rigorously disciplined philosophy we need.

REVIEW

NIGHTMARES AND A REMEDY

IN these days of anxious concern about "the future," when bibliographies of books and articles on alternative "scenarios" are themselves weighty volumes, there may be point in looking at what the managers of present-day societies are thinking and doing in behalf of the years to come. A useful if depressing book to read for this purpose is *Nuclear Nightmares—An Investigation into Possible Wars* (Viking, 1979, \$10.95) by Nigel Calder. This writer is a civilized Englishman, a former editor of *New Scientist* and author of numerous books on scientific subjects. If one needs to have nuclear nightmares now and then, his book would be the one to read.

To what end? The only sensible reason for reading Mr. Calder is that the plans, preparations, and projects of the nuclear powers, under his analysis, point directly to the conclusion that the modern world is guided by madmen. After the reader has become persuaded of this, there remains only the simple question: What should one do?

Mr. Calder's concluding paragraphs are hardly encouraging:

The avoidance of nuclear war in the 1980s, when proliferation in the Middle East coincides with a peak in counterforce opportunities for the superpowers, will depend on the rate at which the planet generates deadly quarrels. If a grave crisis comes in the next few years, we shall just have to hope that the Soviet Union is indeed deterred from attempting a nuclear "counterbattery" strike by unassailable American missile-carrying submarines, and that the United States will show moral restraint. Do not undervalue moral attitudes: few national leaders want to commit the worst atrocity of all time, and that thought, rather than deterrence, may be what has saved us so far. And the simple touchstone of morality about nuclear warfare is that it remains unthinkable.

Yet it only takes one madman, one politician or soldier growing weary or impatient with peace, or one fool who misunderstands a crisis, to bring Northern

civilization to an abrupt end. The post-1945 generation is now taking over the reins of power—individuals who did not experience the shock of Hiroshima and regard nuclear weapons as normal gadgets. Some scientists say that whatever test-ban treaties and disarmament measures may be devised, a multimegaton weapon should be exploded in the atmosphere every few years in front of the assembled leaders of the world's nations, so that they will stand in awe of its incomprehensible heat and force. Even at a safe distance of thirty miles or more, they will feel it like the opening of an oven door, or the gates of hell.

Mr. Calder may be right. Perhaps, instead of celebrating Armistice Day or Veterans' Day, each year, we should observe Ragnarok Day, with nuclear fireworks to symbolize the end of the world. Why not set a competition among Hollywood's most skillful producers to see who is able to scare more people more than anyone else? That, at any rate, seems the main objective of some of the opponents of preparations of nuclear war, who apparently believe that you have to fight the animus of fear by generating a stronger terror. Are *they* right?

We raise the question, not to answer it, but to suggest what horrified people are likely to insist. Would refusing to fear nuclear war be the same as not caring about "human survival"? Not worrying about prospective sudden or agonized death for millions?

One hesitates to make any but an individual decision on such questions. But then, individual decisions may be all that matter. Should we try to persuade one another of this?

Discussing the effectiveness of deterrence, Mr. Calder says:

There may come a moment when, without any malice in your heart, you have frightened your opponent so badly you must hit him before he hits you. Nuclear deterrence becomes nuclear impulsion.

The reasoning goes as follows: "I am a good guy who would not dream of starting a nuclear war, but I cannot afford to let that bad guy get his blow in first. I know that he knows that I know that, and I just hope he appreciates what a good guy I am, otherwise he

might think that I must be getting ready to hit him. But on second thought I see that if he knows that I know that he may suspect me of preparing to hit him, he knows that I must expect him to hit me first, and so he sees I have a very good reason to hit him first, even if he thinks I'm a good guy. To forestall that—hell, he's going to hit me tomorrow. You know what? I have to hit him today!"

Such is the logic of nuclear impulsion, or "strategic instability." No political leader or military chief is, I trust, going to start a war through abstract reasoning of that kind, however remorselessly it progresses. Yet the symmetry of the reasoning has deep implications. It does not depend upon which side is actually stronger, nor does either side need to have any real confidence in the efficacy of its first strike. All that is necessary is that one leader should think that the other imagines that a little "damage limitation" is better than none. And in a real international confrontation, nuclear impulsion promises to corrupt the game of Chicken—in which, remember, the superpowers rush at each other like audacious young men in fast cars.

This is what you find in Mr. Calder's book—common sense, plus an effective account of the horrors, which we have left without attention.

A question occurs. Why don't we choose for leaders men who refuse to think in this way—who reject the claim that mutually assured destruction (MAD) is the only possible deterrent to nuclear war? The question takes us back to individual decision. A modest book published in 1978, *The One-Straw Revolution* (Rodale Press, \$7.95), by Masanobu Fukuoka, an erstwhile scientist who became a farmer, gives at the end one man's decision in relation to war—any kind of war. He says:

To build a fortress is wrong from the start. Even though he gives the excuse that it is for the city's defense, the castle is the outcome of the ruling lord's personality, and exerts a coercive force on the surrounding area. Saying that he is afraid of attack and that fortification is for the town's protection, the bully stocks up weapons and puts the key in the door.

The act of defense is already an attack. Weapons for self-defense always give a pretext to those who instigate wars. The calamity of war comes

from the strengthening and magnifying of empty distinctions of self/other, strong/weak, attack/defense.

There is no other road to peace than for all people to depart from the castle gate of relative perception, go down into the meadow, and return to the heart of non-active nature. That is, sharpening the sickle instead of the sword.

The farmers of long ago were a peaceful people, but now they are arguing with Australia about meat, quarreling with Russia over fish, and dependent on America for wheat and soy beans.

I feel as if we in Japan are living in the shadow of a big tree, and there is no place more dangerous to be during a thunderstorm than under a big tree. And there could be nothing more foolish than taking a shelter under a "nuclear umbrella" which will be the first target in the next war. Now we are tilling the earth beneath that dark umbrella. I feel as though a crisis is approaching from both inside and out.

Get rid of the aspects of inside and outside. Farmers everywhere in the world are at root the same farmers. Let us say that the key to peace lies close to the earth.

In his Preface to this book Wendell Berry remarks that Mr. Fukuoka is like Sir Albert Howard: They both began as scientists and then became organic gardeners. Fukuoka was working as a microbiologist as a young man when, after a serious illness, he had a psychological experience which became the beginning of his real life. The drama of such awakenings takes many forms. The unpretentious beauty of what happened to this young man—telling him what to do, but not how—needs reading in the original. In the forty years since, he has been working as a farmer, and his success in growing rice and mandarin oranges—he has a small farm of about fourteen acres—has attracted agriculturalists from all over the world. They see his crops but they don't really understand how he does it. He tells them—his language is simple enough—but they don't seem to hear. His agricultural insight is as remote from their ways as his conception of how to assure peace.

Briefly, he hasn't plowed his land in twenty-five years. He uses no chemicals. He is a scientist

who understands the relation between man and nature. No matter how rich his crops, his soil gets better and better. His secret, which is no secret, is the use of straw mulch. He doesn't flood his rice field as other farmers do. His method makes the soil hold its water and need less. He harvests between 18 and 22 bushels of rice per quarter acre—a winter crop. In this way marginal land could be returned to use. His solution for the problem of pests is almost romantic.

He teaches students how to farm, and would like to teach trained agricultural specialists, but they are inhibited by their scientific education. He says:

Self-styled experts often comment, "The basic idea of the method is all right, but wouldn't it be more convenient to harvest by machine?" or, "Wouldn't the yield be greater if you used fertilizer or pesticide in certain cases or at certain times?" There are always those who try to mix natural and scientific farming. But this way of thinking completely misses the point. The farmer who moves toward compromise can no longer criticize science at the fundamental level.

Natural farming is gentle and easy and indicates a return to the source of farming. A single step away from the source can only lead one astray.

The book is simple, but never simplistic. Fukuoka's students translated it and an American farmer living in Japan, Larry Korn, contributed the introduction. *The One-Straw Revolution* is a book non-farmers can read with pleasure, and as a cure for nightmares of all sorts.

COMMENTARY
"WE MUST TRY"

of our time. As things stand, the great likelihood is that we shall fail to meet it. But we must try.

IN an address in Colorado last year, W. H. Ferry, formerly Vice President of the Center for the Study of Democratic Institutions, gave current definition of the crossroads described by Arthur Ponsonby in 1925 (see *Frontiers*). In his talk, titled "Manifest Destiny Is Obsolete" (reprinted in *The Churchman* for June-July, 1980), Mr. Ferry said:

We Americans are good people. Yet we are preparing to commit the most hideous crime in the annals of mankind. . . . We are getting ready for thermonuclear war and every day we are feverishly getting more ready. Let no one suppose that we are incapable of it: we are the only nation that has ever unleashed atomic bombs against an adversary. . . .

A substantial minority disagrees with these policies but does nothing. A tiny minority protests passionately but is not heard. We are told that these criminal proceedings are "reality." Our leaders would not threaten to strike first with nuclear weapons unless Americans wanted them to. . . .

Some wise men think we have already passed the invisible line and are being remorselessly crowded by technology and wornout ideas of power and leadership into war. . . . Optimists think that talking about impending doom is disloyal and hopeless. It is not disloyal to try to save the nation from fatal error. My hope is that some argument or some event short of nuclear war will bring Americans to their senses, and that a radical redirection of national policy will result. The rules of the game must be drastically revised. Yet, as Einstein said, everything has changed except the way we think. . . .

So we must renounce thermonuclear weapons and all their collateral weapons, by agreement if possible, unilaterally if not. The unexplored technology is that of nonviolence. This subject has seldom been considered by our leaders except in the most perfunctory way, and has been left to do-gooders and pacifists. But now there is no choice except to discover the technology of nonviolence and put it to work. It is frighteningly evident that no major industrial nation can any longer further its aims by violence. . . .

Devising a nonviolent structure to replace the machines of archcriminality is the supreme challenge

CHILDREN

. . . and Ourselves

JEFFERSON AND SOME JEFFERSONIANS

WHAT were America's first statesmen and politicians like as human beings? The question seems a good one for any teacher to raise, in view of the abnormal excitements of the presidential election year, now past. The contrast between the leaders of the late eighteenth century and those of the late twentieth century soon becomes apparent from dipping into a book that ought to be in every school library. Saul Padover's *The Complete Jefferson* (Tudor, 1943) provides everything Jefferson wrote except his letters (and there are a few of those). One thing that is immediately noticeable is that Jefferson acquired his knowledge and information at first hand, not from briefs prepared by subordinates. He spent the years from 1784 to 1789 in France, first as assistant to Benjamin Franklin and John Adams, then as Minister to France after Franklin returned home in 1785.

What did he do in France? He worked on negotiation of trade treaties with the countries of western Europe. Such activities are of small interest now, but what remains fascinating is Jefferson's account of his European travels. His notes on the agriculture, animal husbandry, topography, and architecture in the countries he visited are impressively complete. After a stay in Amsterdam, he tells how house-builders placed their joists and diagrams methods of construction. Finding in Mannheim, on the Rhine, an economical bedstead, he gives complete directions on *how* to build it.

In 1787, in France, he met Buffon, the famous naturalist. Jefferson relates:

I was introduced to him as Mr. Jefferson who, in some notes on Virginia, had combated some of his opinions. Instead of entering into an argument, he took down his last work, presented it to me, and said, "When Mr. Jefferson shall have read this, he will be perfectly satisfied that I am right."

Being about to embark from Philadelphia for France, I observed an uncommonly large panther skin at the door of a hatter's shop. I bought it for half a Jo (sixteen dollars) on the spot, determining to carry it to

France to convince Monsieur Buffon of his mistake in relation to this animal, which he had confounded with the cougar. He acknowledged his mistake, and said he would correct it in his next volume.

Buffon, it may be noted, while he was the first to assemble a vast amount of facts of natural history—producing in volume after volume a virtual encyclopedia of the sciences—was often guilty of hasty generalizations. Jefferson resolved to lend a correcting hand.

I attempted also to convince him of his error in relation to the common deer and the moose of America; he having confounded our deer with the red deer of Europe, and our moose with the reindeer. I told him that our deer had horns two feet long; he replied with warmth, that if I could produce a single specimen, with horns one foot long, he would give up the question. Upon this I wrote to Virginia for the horns of one of our deer, and obtained a very good specimen, four feet long. I told him also that the reindeer could walk under the belly of our moose; but he entirely scouted the idea. Whereupon I wrote to General Sullivan of New Hampshire. I desired him to send me the bones, skin, and antlers of our moose, supposing they could easily be procured by him. Six months afterwards my agent in England advised me that General Sullivan had drawn upon him for forty guineas. I had forgotten my request, and wondered why such a draft had been made, but I paid it at once. A little later a letter came from General Sullivan, setting forth the manner in which he had complied with my request. He had been obliged to raise a company of nearly twenty men, had made an excursion towards the White Hills, camping out many nights, and had at last after many difficulties caught my moose, boiled his bones in the desert, stuffed his skin and remitted him to me. This accounted for my debt and convinced Mr. Buffon. He promised in his next volume to set these things right also, but he died directly afterwards.

In 1787 Jefferson wrote to a friend that as long as agriculture is our principal object, we in America would "remain virtuous," adding: "When we get piled upon one another in large cities, as in Europe, we shall become corrupt as in Europe, and go to eating one another as they do there." If he were among us today, he would certainly approve the booklet, *Growing your own Food*, issued by the Save the Children Federation, which has a varied program that had a simple beginning in 1932—hot

lunches for residents of Appalachia. Its present work grows out of the conviction that "the needs of children are best met by fulfilling the needs of their families and communities." With this in mind, Save the Children sponsors projects promoting self-help.

The garden project at Save the Children's headquarters in Westport, Conn., described in *Growing your own Food*, was undertaken to demonstrate to field workers "that health and nutrition are closely related and that individual home gardens can make the difference between an inadequate diet and a well-balanced one." The goal is to have such demonstration gardens developed throughout the world. The method is a modified version of biodynamic/French intensive gardening. The report begins:

The only possible site for our garden was the asphalt parking lot surrounding the headquarters building. A jack hammer was required to open the pavement and a hole was excavated with a backhoe. Soil had to be trucked in from a nearby farm and several tons of leaf mold from a neighboring town's composting operation were brought to the site by van. From that point on, everything connected with the garden was done by hand.

Two years later the garden was flourishing, with impressive production records. *Growing your own Food* is a basic how-to guide written by Marny Smith, who, with volunteer help, made the beds occupying a 250-square-foot area, and after the second growing season harvested 420 pounds of produce—enough to feed two adults for eight months.

The first item in the bibliography of *Growing your own Food* is *How To Grow More Vegetables* by John Jeavons, which recalls the Plowboy interview with him in *Mother Earth News* for March-April 1980. From time to time, MANAS gets letters from young people wondering what to do with their lives. Usually, all things being equal, we say, Go into the food business, since good food will soon be desperately needed all over the world. Realizing this gave John Jeavons his reason for quitting a systems analysis job to become a biodynamic/French intensive method agriculturalist.

Anyone thinking about a lifework would do well to read that Plowboy interview. Jeavons graduated from Yale in 1966 and began working for Kaiser in Stanford, Calif., where, after a while, he met Alan Chadwick and learned from him the gardening methods which now occupy his life. In the fall of 1969 he began working for the Stanford Library, which left him time for small-scale experiment. He also read about food supply:

. . . I came upon the assertion that the problem of world hunger couldn't be solved, because—given the capability of available agricultural techniques—there wouldn't be enough arable land in the world to grow food for everyone!

The thought haunted me until I looked up the current UN estimates on just how much arable land *did* exist in different parts of the world, and divided the figures by the amount of space needed to grow one individual's yearly supply of food in various lands.

I discovered that the United States had about 4.2 times the amount of cropland needed to feed our populace, given our usual diets and agricultural practices, while—worldwide—there was only 1.9 times the required acreage available. The study served to focus my attention more precisely upon the possibility of producing significant amounts of food in very small amounts of gardening space.

Out of this grew the resolve that is now flowering in things like his book, *How To Grow More Vegetables* (\$6.86 postpaid from Ecology Action, 2225 El Camino Real, Palo Alto, Calif. 94306), and the Ecology Action demonstration garden on land made available by the Syntex Corporation in Palo Alto. Particularly valuable is the Ecology Action booklet, *Food from your Backyard Homestead* (\$1.75) by Jeavons and Robin Leler, which focuses on the increasingly practical need to grow one's own food. Jeavons and his associates are teaching their methods to others, but *only* to those who want to be teachers themselves. The idea is to spread the word around.

FRONTIERS

"A Whole Life of Self-Education"

IN the War Resisters' International *Newsletter* for last July, Hein van Wijk discusses the obstacles to unilateral disarmament. He begins by citing a report on Holland's military budget for 1979-80:

The army has 75,000 men, of whom 43,250 are conscripts. Disarmament means sending them home. Those of the 43,250 who have jobs or study to do or are studying something will be glad. Those who have no jobs or study to do, and especially those whose fathers are unemployed, will ask for jobs. The government has already announced that ex-military people will be given priority as regards work. In a country with some 220,000 unemployed, this is easier said than done. The 31,750 professionals, many of them with families, will certainly object to being turned into people without employment. The navy has 16,850 men, of whom 2,200 are conscripts. The other 14,650 are professionals, if they lose their military functions, what is to happen to them?

Then there is the air force with 19,000 men, 4,000 of them conscripts. How will the 15,000 professionals be given employment? It is highly improbable, van Wijk suggests, that the government will encourage a civil enterprise in competition with KLM—the well known Dutch airline. He comments:

I think that almost all these professionals do their jobs without having a conscientious objection to the work. Their jobs have been honorable and honored and institutionalized for centuries, perhaps since the dawn of humanity. Pacifists cannot force them, or want to force them, to resign their functions. They must be *convinced* that their functions are wrong. Has any of us ever tried to convince them? All officers have had a lot of training and instruction in specialized institutes. Many of them come from families of officers, sometimes going back for generations. How do we convince them that they and their forebears were all mistaken? What evidence can we produce? . . .

All the people who are working in the defense departments have to be convinced; they too have to change their beliefs and habits, and forego their privileges. Existing national and international conventions have to be changed radically—and there are hundreds of them.

To dramatize the project and task of the pacifists Hein van Wijk recalls a parable by Arthur Ponsonby, offered in 1925:

Imagine two men standing at a crossroads with a throng approaching. The one boldly and confidently points to the wrong road, telling the people of the beauties and attractions, and of the glory of the prospect, and instructing every individual as to what he can do at every stage of the journey. The other, pointing to the right road, can tell people nothing, except that it is the right road. It looks perilous and unattractive, and he cannot tell them what to do if they travel along it. It is dark and full of dangers. Obviously, the throng will follow the advice of the former. The latter will be lucky if he persuades a single individual. But a few, perhaps, who have studied the map beforehand, will know that he is right. I want people to study the map beforehand.

More than half a century has passed, and today a lot of people are studying the map, which is now more clearly defined. The way ahead has hundreds of articulate interpreters, but they are not numerous enough, or influential enough, to have much effect on national policy.

Yet there are a few good signs. People are less and less inclined to believe the men who are pointing to the wrong road. The problem is that they don't see anywhere else to go. Meanwhile, constructive things are happening in other areas of life. In *Rain* for last November, Karl Hess discusses changing human attitudes in the United States. "I think," he says, "it's significant that people are falling out of the political system, not voting."

It's a very impressive sign. It's not a movement, but it's a symptom. Maybe the most important symptom today is the decline of television viewing, but I have yet to figure out how to get hold of any information on that except from very personal observation. Around the community where I live people are watching less. . . .

The thing that gets to people is one too many bureaucrats. We'll never be as effective in our wildest dreams as the bureaucrats are. Every interaction with one results in the expulsion of somebody from faith in the system. Then there's the whole underground economy, that's an astonishingly substantial thing! Barter and all unreported transactions. If I were

sitting in the White House and looked out, I wouldn't be worried about mobs in the street because my mobs could handle their mobs. What would really worry me would be the direct competition, the voluntary social organization at a nongovernmental level.

Hess is wary of political organizations which seem to be on the "right side." His comment is searching:

The intentions of people involved in such institutions sooner or later become blunted by the demands of the institution itself. There's so much evidence about that, it's reckless to ignore it. As to whether we can get from here to there without it is, again, merely optimistic, but it occurs to me that we are doing it, that the things which endure *have* done it. There are co-ops, there are worker-managed businesses, and there are schools and other things that have endured without becoming institutionalized.

The problem is, not everyone can get from here to there at the same time, and I think we are so beguiled by the liberal notion of equality across the board that it is offensive to think that anybody gets there before anybody else, and it is troubling to think that middle class people will probably get there first. So, some people, whose concerns are for the very poor people, will naturally be troubled by that. I understand the offense that can be taken but I think the reality of the situation is that poor people generally have a very low capacity for organizing. Most social change in the world has been change either by disaffected aristocrats or by the middle class.

...

All my politics are very personalistic. You're damn right they are. In fact, I think I would now mistrust any politics that could not be described by a person on personal terms. If they could not tell me precisely what they intended to get out of it and how they were going to live in the changed society, I wouldn't be interested in their notions of change. . . . I learned a long time ago that I don't have the wit for universal solutions, and I'm more and more convinced of that as time goes on. My business is not the business of finding solutions, but the business of living in a community.

This seems to fit rather well with something said by Hein van Wijk in his WRI article:

To persuade the participants of a nonviolent action that they should remain nonviolent in the face of provocation and violence requires convinced and convincing prophets and a whole life of self-

education. Disarmament needs the same, but in this case for a whole people and a whole society in all its aspects.