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PROBLEM AND PRECEDENT

WHAT is the purview of man's ethical outlook? How far does his moral responsibility extend, and on what is it based? These are questions considered by Hans Jonas in "Technology and Responsibility," in the Spring 1974 issue of *Social Research.* It is Dr. Jonas' contention, thoughtfully developed, that "the quantitatively novel nature of certain of our actions"—essentially "those of modern technology"—"has opened up a whole new dimension of ethical relevance for which there is no precedent in the standards and canons of traditional ethics."

In the past, he argues, while human activity might cause irritation and a few scabs on the face of the planet, Nature could be trusted to heal herself. Man's interference with natural processes was slight enough to be lost in the vast shuffling of planetary metabolism. Nature had her own immunizing and restorative measures, and for this reason man's moral controls were restricted to human relations:

> . . . in this citadel of his own making, clearly set off from the rest of things and entrusted to him, was the whole and sole domain of man's responsible action. Nature was not an object of human responsibility—she taking care of herself and, with some coaxing and worrying, also of man: not ethics, only cleverness applied to her. But in the city where men deal with men, cleverness must be wedded with morality, for this is the soul of its being. In this intra-human frame dwells all traditional ethics and matches the nature of action delimited by this frame.

Dr. Jonas seems quite sure of what he says about the limits of ethical systems inherited from the past. Because of the planetary disaster threatened by technology, we are now confronted, he maintains, with a conception of duties and rights "for which previous ethics and metaphysics provide not even the principles, let alone a ready doctrine." Conscientious care of the biosphere, he goes on, "would mean to seek not only the human good, but also the good of things extra-human, that is, to extend the recognition of 'ends in themselves' beyond the sphere of man and make the human good include the care for them." Again, he says, "For such a role of stewardship no previous ethics has prepared us—and the dominant, scientific view of *Nature* even less."

Well, he seems right in regard to such ethical mandates as Kant's categorical imperative; and right, too, in respect to the Christian view of Nature, as Lynn White showed in his now famous *Science* article; and certainly right again concerning the total inadequacy of science as the source of any restraint beyond prudential caution.

But is it correct to say that *no* previous ethics has dealt with the concept of man's moral obligations to nature' or *in* nature, with man conceived to be a part of and responsible to the natural world? Perhaps the ethical systems we are recalling are not quite systems; or not enough part of the Western cultural heritage to be named "traditional"; or too symbolic in their terms of reference to be accounted relevant by modern man. Yet there surely have been holistically integrated world-views in which man and nature are parts of one another, and which were far more than "theories," countless generations of humans having lived under their rule, with impressive responsiveness to their moral imperatives.

For testimony in support of this contention, we quote from Robert Redfield's *The Primitive World and its Transformations* (Cornell University Press, 1953):

> Primitive man is, as I have said, at once in nature and yet acting on it, getting his living, taking from it food and shelter. But as that nature is part of the same moral system in which man and the affairs between men also find themselves, man's actions with regard to nature are limited by notions of inherent, not expediential, rightness. Even the practical, little

> animistic Eskimo obey many exacting food taboos; religious restrictions on practical activity, rituals of propitiation or personal adjustments to field or forest, abound in ethnological literature. "All economic activities, such as hunting, gathering fuel, cultivating the land, storing food, assume a relatedness to the encompassing universe." And the relatedness is moral or religious.

Now what is the great difference between this outlook toward—feeling for, might be more accurate nature, and the conception of nature held by modern man? Those whom Redfield calls "primitive man," it seems clear, sensed the flow of interchangeable life, and of destiny or welfare, between themselves and the inhabitants of the natural world. Nature was not *other,* but an aspect of themselves, an extension of man's being, in those days. This community of being was the ground of natural magic, the basis of invocation, the living continuum in which every class or species of intelligence—from sand to star—had its interrelated part to play. The modern world feels these partial identities and relationships hardly at all, or only fragmentarily, and as a result has forgotten that they once formed the foundation of the ethical or moral life. Perhaps this is the reason why Dr. Jonas says they do not form a part of any previous ethical system. "In brief, action on non-human beings did not constitute a sphere of authentic ethical significance." "All traditional ethics is *anthropocentric."*

Redfield describes the difference between the old and the modern outlooks, telling how the modern took the place of the old:

> The difference between the world view of primitive peoples, in which the universe is seen as morally significant, and that of civilized peoples, in which that significance is doubted or not conceived at all, is well brought out in some investigations that have been made as to the concept of immanent justice in the cases of American Indians. . . .
>
> If we compare the primary world view (of primitive peoples) with that which comes to prevail in modern times especially in the West, where science has been so influential, we may recognize one of the great transformations of the human mind. It is that transformation by which the primitive world view has been overturned. . . . Man comes out from the unity of the universe within which he is orientated now as something separate from nature and comes to confront nature as something with physical qualities only, upon which he may work his will. As this happens, the universe loses its moral character and becomes to him indifferent a system uncaring of man. The existence today of ethical systems and of religions only qualifies this statement; ethics and religion struggle in one way or another to take account of a physical universe indifferent to man.

It seems fair to say that Dr. Jonas' paper records an important encounter in that struggle. He is asking in effect: Even if the universe we inhabit is indifferent to man, can we afford any longer to be indifferent to it? He is declaring that we must see our way to entering into a wider moral compact—one which includes man's obligations to the natural world, and is no longer limited to the human situation. And, at the conclusion of his paper, he wonders what can persuade us to agree. What "force of ideas not allied to self-interest" can be invoked in behalf of care of the natural world?

Here, says Dr. Jonas, "is where I get stuck, and where we all get stuck." He means by this that our modern theories have sterilized the sources of a moral inspiration that would include all nature in its purview, and that it is difficult to imagine how such ancient obligations can now be revived. As he says:

> First, Nature has been "neutralized" with respect to value, then man himself. Now we shiver in the nakedness of a nihilism in which near-omnipotence is paired with near-emptiness, greatest capacity with knowing least what for. With the apocalyptic pregnancy of our actions, that very knowledge which we lack has become more urgently needed than at any other stage in the adventure of mankind. Alas, urgency is no promise of success. On the contrary, it must be avowed that to seek for wisdom today requires a good measure of unwisdom. The very nature of the age which cries out for an ethical theory makes it suspiciously like a fool's errand. Yet we have no choice in the matter but to try.

In the end, Dr. Jonas turns for help quite openly to an ancient emotion—the feeling which

Eastern as well as "primitive" systems had at their root:

> It is a question whether without restoring the category of the sacred, the category most thoroughly destroyed by the scientific enlightenment, we can have an ethics able to cope with the extreme powers which we possess today and constantly increase and are compelled to use. Regarding those consequences imminent enough still to hit ourselves, fear can do the job—so often the best substitute for genuine virtue or wisdom. But this means fails us toward more distant prospects, which here matter the most, especially as the beginnings seem mostly innocent in their smallness. Only awe of the sacred with its unqualified veto is independent of the computations of mundane fear and the solace of uncertainty about distant consequences. But religion as a soul-determining force is no longer there to be summoned to the aid of ethics. The latter must stand on its worldly feet—that is, on reason and its fitness for philosophy. And while of faith it can be said that it either is there or is not, of ethics it holds that it must be there.

As a psychological analysis of our present resources—and our present needs—this seems as accurate as need be Fear is certainly not a motive worth talking about in our present dilemma. You have to *love* the land, as Aldo Leopold said, not just worry about future economic deprivation. Love is far better than veto-power, when linked with intelligence. Then there is the incidental question of *why* religion "as a soul-determining force" is no longer available. If we need it, why can't we have it?

Well, we can't have it in any familiar form for the good and sufficient reasons given by the eighteenth-century *philosophes,* and by Tom Paine and even Bob Ingersoll. The religion we know is much too guilty by lingering association. Its crimes continued as long as its power lasted. And its power continued until its authority was bludgeoned out of existence by agencies of varying moral quality from Napoleon to Thomas Huxley, and by numerous other champions of the pragmatic, the practical, the scientific, and the "objective." If religion is ever to come back and be the use to us that Dr .Jonas hopes for—give us authentic awe, and a reason for rejoining the cosmos as responsible fellows in the fellowship of life then it will have to return to *individuals,* not to organizations or "denominations" of creedal belief.

What if a time should come—what if that time is now easing into our age, and is already partly here—when we shall not need preachers and hot-gospelers to tell us that we must learn to reverence the natural world, recognize the holy in every living presence around us? What if already there are more and more of those who, like Melville, like Thoreau, like Bellamy, like some now writing, have their sense of the holy at first hand, and are not too shy to tell it to the wind? In one of his exquisite books, *Exotics and Retrospectives,* Lafcadio Hearn recalled:

> I remember when a boy lying on my back in the grass, gazing into the summer blue above me, and wishing I could melt into it,—become a part of it. For these fancies I believe that a religious tutor was innocently responsible: he had tried to explain to me, because of certain dreamy questions, what he termed "the folly and the wickedness of pantheism,"—with the result that I immediately became a pantheist, at the tender age of fifteen. And my imaginings presently led me not only to want the sky for a playground, but also to become the sky!
>
> Now I think that in those days I was really close to a great truth,—touching it, in fact, without the faintest suspicion of its existence. I mean the truth that the wish *to become* is reasonable in direct ratio to its largeness,—or, in other words, that the more you wish to be, the wiser you are; while the wish *to have* is apt to be foolish in proportion to its largeness. Cosmic law permits us very few of the countless things that we wish to have, but will help us to become all that we can possibly wish to be.

Well, to speak of cosmic law in this way is to use the language of *science*—and can there be a science of such things? Would not a sense of the holy be implicit in such a science?

Hearn, so far as we can see, might be taken as an incomparable theologian of natural religion, one who could sketch out the rules of such a science, combining rigorous metaphysical logic

with the ethical principles we are so manifestly in need of, and as a result of adopting we should need only very low-key vetoes, since we would be much wiser and more intelligent in our decisions. Hearn went on:

> Finite, and in so much feeble, is the wish to have: but infinite in puissance is the wish to become, and every mortal wish to become must eventually find satisfaction. By wanting to be, the monad makes itself the elephant, the eagle, or the man. By wanting to be, the man should become a god. Perhaps on this tiny globe, lighted by only a tenth-rate yellow sun, he will not have time to become a god; but who dare assert that his wish cannot project itself to mightier systems illuminated by vaster suns, and there reshape and invest him with the forms and powers of divinity? Who dare even say that his wish may not expand him beyond the Limits of Form, and make him one with Omnipotence? And Omnipotence, without asking, can have much brighter and bigger playthings than the Moon.

Astronaut and NASA journals please copy.

Hearn seems to anticipate Dr. Jonas' somewhat anguished appeal for help:

> Once men endowed with spirit all forms and motions and utterances of Nature: stone and metal, herb and tree, cloud and wind,—the lights of heaven, the murmuring of leaves and waters, the echoes of the hills, the tumultuous speech of the sea. Then becoming wiser in their own conceit, they likewise became of little faith; and they talked about "the Inanimate" and "the Inert,"—which are non-existent,—and discourse of Force as distinct from Matter, and of Mind as distinct from both. Yet now we discover that primitive fancies were, after all, closer to probable truth.

Wandering in a Buddhist cemetery in Japan, Hearn came across an inscription bearing the Buddhist doctrine: *"Grass, trees, countries, the earth itself,—all these shall enter wholly into Buddhahood."* He rendered this, "All that we term matter will be transmuted therefore into Mind," and then quoted a commentary: "flesh, plants, and trees appear to be gross matter. But to the eye of the Buddha they are composed of minute spiritual entities." It follows, Hearn added, that "every human act or thought registers itself through enormous time by some knitting or loosening of forces working for good and evil."

So, for Hearn, the universe is a vast web of life, a brotherhood of evolving intelligences:

> Grass, trees, earth and all things seem to us what they are not, simply because the eye of flesh is blind. Life itself is a curtain hiding reality,—somewhat as the vast veil of day conceals from our sight the countless orbs of space.

The Buddhist teachings which Hearn here repeats, making them his own, are a portion of ancient high religion, and surely a source of traditional ethical conviction on which the modern world might draw—involved as it already is in certain doctrines peripheral to the original Buddhist conceptions.

Redfield spoke of the beliefs of the American Indians. In *The Hopi Way* Laura Thompson confirms in generous measure all that he implied:

> In the Hopi system of mutual dependency, which gives basic form to the universe, each individual, human or non-human, has its proper place in relation to all other phenomena, with a definite role in the cosmic scheme. But, whereas the non-human orders fulfill their obligations more or less automatically under the law, man has definite responsibilities which have to be learned and carried out according to a fixed set of rules. These rules form an ethical code known as the Hopi Way. As we shall see presently, a large part of the training of the child is devoted to learning this code. . . . the Hopi use the same word for "to will" and "to pray." Praying is willing. The Hopi believe not only that man can control nature to a limited extent, but that if he does not do so, the universe may cease to function. That is, the movements of the sun, the coming of rain, the growth of crops, the reproduction of animals and human beings depend (to a certain extent at least) on man's correct, complete and active carrying out of the rules. . . .
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> The Hopi conception of man, as differentiated in the universal system of mutual dependency, through his role as an active rather than a passive agent in the fulfillment of the law, compels the active participation of the individual in the ceremonial at not only the physical but also the ideational and emotional level and imposes on him a high degree of

personal responsibility for the success of the whole and not just for one small part of it.

It seems evident that we do have, and in rather complete form, ethical systems which include man's relationships with nature—systems which functioned for ages as practical guides to conduct, in which the sense of the holy had a natural part, and providing conceptions of fulfillment which were majestic in their scope and ennobling in their demands.

Are we, then, by reason of our unhappy religious history and present tough-mindedness, shut out from all this grand moral infrastructure? Can we, like Hearn, penetrate the veil of appearances and restore to ourselves, as Blake and a few others restored to themselves, a faith to live by which includes these wide perspectives, recovering ancient feelings about great nature and all life? Dr. Jonas has set the problem well. He has listed the compulsions of the hour and the necessities of years to come. He makes it plain that we cannot be driven cringing into a future of reluctant conservation by the warnings of ecological Jeremiahs. The statistics of exhaustion cannot do for us what the practice of regeneration might, for we shall respond, in runs short or long, only to those stirrings which belong to the highest part of our being.

REVIEW
TOMORROW'S SCIENCE?

BACK in 1944, when Lancelot Law Whyte's *The Next Development in Man* was first published, there was a groundswell of appreciation of this man's thinking. Thoughtful readers felt that he had hold of something important, but found it difficult to say exactly what. The idea of "unitary man" was really too big, too all-embracing to handle. You felt that it might be true, but to say how it was true was far from easy. Meanwhile, Whyte's book was so rich in insights and in perceptive comment that it had a wide if undefinable influence on many readers.

Then, in later years, his other books showed a remarkable breadth of interest and capacity for synthesis. Gradually it became evident that he was a more than ordinary "philosopher of science," since, while dealing critically with the leading scientific concepts of the time, he also took into account the ranges of subjective experience. His book, *The Unconscious Before Freud* (1960), illustrates the value of his contributions in this area. *Internal Factors in Evolution* showed his grasp of biology and physiology, and won the attention of certain leaders in the life sciences. More recently (1969) *Hierarchical Structures* (Elsevier), which Whyte edited with Albert and Donna Wilson, indicated the pioneering thrust of his thinking in an area presently recognized as of central importance in both cosmology and the various branches of science.

Now, two years after his death in 1972, Harper & Row has published his last book, *The Universe of Experience* (Torchbook, $3.45), completed during the summer before he died, in which he reveals the character of the inspiration which pervaded his life. A brief explanation given by Eve Whyte, his widow, in her Foreword is helpful:

> He has recorded how in 1929 there flashed upon him the most general concept, what he called the "Unitary Principle, by which *asymmetry decreases and gives place to symmetry."* His books and articles are, in essence, variations on this theme; they are applications and developments of the basic idea he conceived between 1925 and 1929. "My aim, he says in his account of himself, "was to seek to bring into closer relation the scientific conception of the forms of experience.
>
> Among his contemporaries Whyte was unusual because he knew, in the full professional sense, what modern physics and biology were about, but at the same time had the æsthetic approach to experience of an artist or poet.

This is indeed the synthesis after which Whyte reaches, and the modern lack of it is the foundation of his criticism of the scientific world-view. He is a distinguished member of a small vanguard of thinkers suggested by such names as Michael Polanyi, Abraham Maslow, and Theodore Roszak. He is like Polanyi in his sure grasp of scientific conceptions, and like Roszak in his recognition of the necessity of "poetic" insight as symbolic of what is needed to make science "whole."

Basic to all Whyte's work is his formulation of what he terms the "morphic principle." Nature, he shows, eternally runs to form; the making of form is the most evident reality of our experience of the outside world, and of the inside world of human thought as well. He is exacting in his numerous studies of how forms are shaped, and of the optimum conditions for their emergence. He believes that the preoccupation of physicists with atomistic or mechanistic causation led to their virtual obsession by the second law of thermodynamics, to the extreme neglect of the anti-entropic tendency or forces which are in continual expression all about. He says in one place:

> By the way in which it was expressed the entropic tendency toward disorder hypnotized physicists for a century into thinking it was fundamental or primary when it is not! A hundred years of physics has to be corrected. Entropy applies only to closed systems, which are rare, and not even to all of those! Such mistakes can happen, and they can be corrected only by looking at the immediate

facts with eyes undistorted by the lenses of those theories that happen to be in fashion.

> We have reached the unavoidable and significant conclusion that in the cosmos by and large the long-neglected morphic tendency has predominated over the entropic tendency, and this has certainly been true on this earth since the solar system was formed. There are of course regions where, owing to special conditions such as a high temperature, there has been a tendency toward disorder at a certain level of analysis. But the ordering tendency must have prevailed on the whole, or there would exist no well-formed systems, and no hierarchies of systems. I emphasize: *From a human, philosophical, and scientific point of view the ordering tendency in nature is more important than the disordering tendency.* It is for the physics of the future to discover the precise conditions—I have called them the "morphic conditions"—that determine which tendency dominates over the other in any situation.

Both conscious longing and the yearnings of the "unconscious" move toward unification in man. This, Whyte suggests, is the morphic tendency in the consciousness or subjective side of reality. Its working is best recognized in those who have great powers of imagination. Whyte takes the term "unconscious" from Goethe, who used it before Freud, and with richer implications. As the "demi-urge" behind all making of form, Whyte prefers the unconscious to any sort of God, who would in his view be a manipulator instead of a participating, creative energy present in man as in all nature. Of its operation in man, he says:

> It is the accumulator of imaginative novelties at their origin before they are delivered to the critical light of reason. But we must remember that the unconscious is part of a wider perconscious [Whyte's name for the hierarchy of mental processes when at least two levels are active].
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> As we have seen, the imagination or faculty for forming new unities is the expression at the human mental level of the coordinating tendencies of the organism, itself one case of the more general morphic tendency. The significant fact, superb for all who care, is that this unconscious tradition of necessity works in the same direction as the human aspiration toward the unification of experience, for it expresses the unifying principle of which these conscious aspirations are the most advanced visible expression.

Here we can do no more than give certain highlights of Mr. Whyte's view of the universe of experience. The closely argued connections between his propositions are needed to feel the strength of his contentions, and to see how they are supported. The book is of course deeply intuitive throughout. What is wanted is the recognition that all prophetic statements must have this quality—that always, in every reach beyond the presently known, the intuition plays a decisive part. What has to be examined, then, by those who have not felt the same certainty, is the consistency of the consequences and their working relation to human experience, and also the light they throw on questions we have been unable to answer as well as questions we believe have been solved. As those who study critically the ground of present-day ideas are now saying, even the conventional knowledge of our time is based on intuitions vouchsafed to yesterday's pioneers, which we are now "used to" and therefore take for granted. The test, then, is consistency and the larger coherence that may result. Neither novelty nor familiarity has much to do with the possible truth-content of an intuition; these qualities are only part of the tendentious psychological environment in which the testing is pursued.

L. L. Whyte looks to a philosophical unification of all the sciences, based upon recognition of the universal presence of the morphic tendency. By this means there should develop a natural family resemblance between physics, biology, and psychology, based on "the concept of morphic or ordering processes." A new conceptual language of science would naturally result:

> In such a family of unified theories of developing forms the mechanical concepts of the actions, and "interaction" of one localized material entity or another, and of their "relative motions," are replaced by one master concept: the relaxation of extended spatial forms toward symmetry, the last

traces both of mechanism and of redundant abstractions being discarded.

No more severe test can be applied to an emerging philosophical and scientific theory than to require of it such achievements within decades. If the world view is valid and timely we are on the eve of a torrent of theoretical discoveries facilitated by this heuristic principle: the universe of experience is to be regarded as a hierarchy of levels of morphic processes.

How can anyone make such far-reaching predictions? These predictions are at once the strength and the weakness of Mr. Whyte's last book. If he is right they are a strength, if wrong, a weakness. To say this is no criticism, since we sorely *need* such books. This sort of consideration of the future is far more valuable than extrapolations from the mess in which we now find ourselves. We take Mr. Whyte's own statement on the future of science for our conclusion:

It is usually thought that it lies beyond human power to anticipate the future of science. At certain moments this restriction vanishes, and an authentic vista brings the future within sight of the present. The Greek atomists saw far ahead. Moreover, for a century or more the guiding rule of the exact sciences has been: *Search for the invariants!* From now on, I suggest, the supreme heuristic rule for scientific theory will be: Identify the morphic processes at each and every level, everywhere, outside and inside man. In this specific sense I am foreseeing the future of the sciences. This transformation of the dominant aim of inquiry marks the present decade as a turning point in the history of the intellect, for many other minds are working in the same direction. We are all part of one tradition, now in rapid transformation.

COMMENTARY
FOR RESETTING OUR HEADS

THE question raised at the end of this week's Frontiers—"Is there a primal force shared by every living creature" which "creates a spiritual, and therefore a moral bond"?—is virtually the same as the problem set by Hans Jonas (see lead article): What force of ideas not allied to self-interest can be invoked as the foundation of an ethics pointing to human obligation to the natural world?

This same question—without special intent—appears elsewhere in this issue. In Review, for example, a parallel conception is found in L. L. Whyte's identification of the "morphic tendency" as a unifying principle in both organisms and in the mental life of human beings. Then there is the "primitive" idea of all nature as "part of the same moral system in which man and the affairs between men also find themselves."

Hearn, musing on the teachings of the Buddha, declares that "every human act or thought registers itself through enormous time by some knitting or loosening of forces working for good and evil." And the world and nature are, for the Hopis, a vast system of interdependencies with the movements of the sun, the coming of the rain, the growth of crops, the fertility of animals and man all in some measure dependent upon the behavior of human beings. Hearn, again, provides a climax for this sort of thinking when he says:

> By wanting to be, the monad makes itself the elephant the eagle, or the man. By wanting to be, the man should become a god. Perhaps on this tiny globe, lighted by only a tenth-rate yellow sun, he will not have time to become a god; but who dare assert that his wish cannot project itself to mightier systems illuminated by vaster suns, and there reshape and invest him with the forms and powers of divinity?

In "Children," Forest Davis says that education must take its meaning from the philosophy of human nature. Evidently, we cannot afford to neglect what man thinks of man. Since the casual scimitar of William James beheaded the old philosophies, our society has been "running about for some seventy years now with its metaphysical conceptions in a decapitated condition."

To restore our heads to our shoulders, Hans Jonas thinks we must begin by renewing the idea of the holy. The ideas which fell into place in this issue suggest that we are not without resources for the task.

CHILDREN
. . . and Ourselves
THE VACUUM AND THE FILLING

IN her article, "The Yinning of America," in the September/October *Humanist,* Ethel Romm describes a poster she saw last February stapled outside the Harvard Co-op. It invited students (for a $1.50 "donation") to attend a session of "Chaotic Meditation," which involved—an interested bystander told her—"ten minutes of chaotic breathing," then ten minutes of "catharsis" ("release and liberation through crying, screaming, and writhing"), then ten minutes of chanting a mantram, and finishing up with ten minutes of "silent meditation." Adding to her catalog of religious novelties, Miss Romm says that in a large university auditorium one may hear a lecture on diagnosing disease with the "aura," and another on how to make an "Orgone Blanket."

A former Jesuit at a Catholic university, she relates, has become a believing and practicing witch, explaining, "It was all guilt, guilt, guilt, before," and now that he has gone back to the "Old Religion" he is developing his "natural powers." (He might also have been reading Michelet.) Miss Romm goes on:

> More students will probably be dabbling in astrology than in astronomy. They are "investigating" ESP, the ultimate power trip. A few students everywhere seem able to read my palm with great skill and to interpret my Tarot cards spread with fearful conviction. At least one full professor at MIT will interpret my *I Ching* hexagons respectfully. I have had my future read since 1967 by every known divination method except in the entrails of chickens, and in ivied towers, not tea shoppes.

Since with a little field-work of his own any reader can discover that Miss Romm hardly exaggerates, it is reasonable to ask: What has become of our "secular" society? These goings-on, it is true, are a phenomenon or affliction of higher education, but it probably will not be long before such tendencies appear in the high schools and junior highs, and in some watered-down form in the primary grades. Another question presents itself: What then will happen to the controversy made by the Fundamentalist contention that Genesis should have "equal time" and equal authority with the biologists' advocacy of Darwinian evolution? While the struggle between these two camps has lately raged in California and some other states, and may come to the fore again—since the contents of large press runs of textbooks are at issue—the "new" religions Miss Romm finds flourishing in so many places bypass completely the old "evolution" argument.

Still other questions arise: What do you *do* about the issues of meaning in a secular society in which the government runs the schools? In which science claims to have charge of "knowledge," but refuses to take cognizance of the "why" questions at the heart of human life? And in which organized religions still behave politically, indoctrinating and using power-struggle tactics which make it necessary to bar them from the public schools?

This general problem is set in other terms by Forest K. Davis in *Return from Enlightenment* (Adamant Press, Adamant, Vermont, 1971). Contending that both education and religion are rooted in metaphysics, and are reduced to conflict, emptiness, and confusion when metaphysics is ignored, Mr. Davis writes:

> American society has been running about for some seventy years now with its metaphysical conceptions in a decapitated condition, ever since the casual scimitar of William James whistled through gentle airs at Harvard and set the heads of generalities tumbling in all directions. James was interested in particulars; he wanted to pick them up one or two at a time, turn them around and around and keep them separated from their heads. Since James' time because of the unexpected availability of very large numbers of particulars it has become fashionable to occupy oneself with data immediately underfoot. Gradually the Western world has moved over into a veritable universe of particulars. General ideas have tended to reduce to verbal connections between separate facts, the effect being to limit sharply the interpretive significance of human life.

> Reflective meaning has become the casualty of preoccupation with small detail.

This brief analysis may not be sufficient to account for the riot of new religions on the campuses, in the communities, and on the streets of today, but it certainly helps. There has been a vacuum in the moral and emotional lives of the people, and now they are filling it with whatever happens to be handy in the way of answers to the "why" questions.

Mr. Davis continues his analysis of the educational confusion of a secular society:

> A philosophy of education has as one of its major components a philosophy of human nature. Its educational bent will follow the bent of its reflective psychology. Is man a classic spirit inheriting the breaths of former times? Then the schools of today will be formed accordingly, to teach what former times have known. Is he rather a spirit above the limits of time, bespeaking with his lesser instruments the universe of heart and mind? Then the schools will be formed accordingly, making the necessary assertions on the realities and ways of knowing. Is man an animal, inheritor of a biological past, whose ideals are deceptive accidents in the flowing of his hormones? Then schools will be formed accordingly, perhaps with special attention to psychological chemistry. Or is man a walking echo of other men, bouncing off his fellow humans, picking up spots and slivers of reality, creating an amalgam of the pseudo-real from a wide array of nasal noise? Then the schools will be formed accordingly, their stock-in-trade the skills of communication.
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> Educational theories and practices are concerned with assertions of the real; they constitute the end-continua of metaphysical positions. If the beginning is made with educational theory the corresponding metaphysic is implied. If the beginning is made with a metaphysics the corresponding educational theory is implied. The envelope for all of this is the world-view, a complex of assertion and expression which is at once the common ground of religion and education.
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> Has American national policy then compounded a historic sport in excising religion from the public schools? It appears so. Education is of the nature of religion, but religion has been excluded from the nation's schools. What could be more ridiculous? Inevitably one is reminded of Washington Irving's headless horseman who rode forthrightly off with his head in the crook of his elbow.

Well, suppose we allow Mr. Davis to persuade us: What then shall we do? But before we take steps to restore religion to the schools we need to review a little history. The same author is helpful in this. He goes back to the formative period of thought in the seventeenth century, when we had *nothing but* religious education:

> Forms of Puritan faith have been modified, but Puritan characteristics still shape American culture. Puritanism described the ruling power of earth as the absolute sovereignty of God. Every event was an act of God on his will depended the smallest as well as the largest affairs. The reflective Puritan felt it his duty to ascertain the will of God and to live in accordance with it. In everyday terms this meant that the Puritan must work conscientiously at the obligations of this world. Although the Lord's will was inscrutable, if man s efforts fell approximately near to it the divine comment would appear in success at material affairs. The religious man was a prosperous man. How else would the will of God be conveyed to men? Private mysticism, a special way to the ultimate, was held to be dangerous, threatening to the church and the established order of man's relationship to God. There had to be a degree of common agreement in the realm of religious knowledge.

So, the sovereignty of the Puritan God—which meant the practical authority of Puritan belief—was enforced on the social order. Multiply such regimes with differing interpretations of the "will of God" and you have the practical reason for the secular arrangements of the United States. Endless political squabbling among a dozen or so rival interpreters of the will of God was more than our forefathers were willing to put up with. And so, in convenient accord with the rise of science, "fact" became the dictator of truth and of what should be taught in the schools.

But now we know, as even James B. Conant has admitted, that science is a conceptual affair—there are no isolated, "objective" facts but only idea-facts, as Whitehead long ago maintained. Facts are not a collection of little items of "reality"

on which we can depend for non-metaphysical information about the world. Facts are what we make them, and we make them according to either examined or unexamined assumptions. Assumptions really rule. So there is no escape from metaphysics, which is the critical evaluation of assumptions.

And this is why, for those who try to think about the matter, the confidence in science as the solution of our problems, and as the foundation of education, is breaking down. There are other reasons of course—frightening things like nuclear weapons, which are regarded as "scientific," and things like pollution, which result from applied science in technology, and things like the exhaustion of natural resources, which science has made a possibility—all developments which play a part in causing people to wonder about other sources of knowledge.

But, unfortunately, we are out of practice in thinking for ourselves about the larger questions. We've been serviced by experts for so long that our first efforts toward independence exhibit the gyrations of an adolescent frenzy. Teachers like Mr. Davis, who began to think about these questions some time ago, can be of help both in understanding the present scene and in pointing to what needs reflective attention before we "do" anything else.

FRONTIERS

Goals and Responsibilities

NOT MAN APART, the twice-a-month publication of Friends of the Earth, is handy for keeping abreast of the issues, events, and continually emerging "emergencies" of the environmental movement. For non-members, subscription is $5.00 a year (529 Commercial Street, San Francisco, Calif. 94111). MANAS readers may recall the quotation from John Stuart Mill counselling the advantages of a steady-state or stationary economy, in Frontiers for Oct. 2. The September *Not Man Apart* provides a long extract from Mill's *Principles of Political Economy* (1848), giving more of Mill's thinking on this question. "Mill," the *NMA* editor remarks, "was not merely ahead of his time; he was ahead of ours." He believed that "non-growth is not an evil to be postponed as long as possible, not merely a tolerable state to be endured as best we can, but a condition superior to any other that is within our reach."

Mill wrote in his famous book:

> I know not why it should be a matter of congratulation that persons who are already richer than anyone needs to be, should have doubled their means of consuming things which give little or no pleasure except as representative of wealth or why numbers of individuals should pass over, every year, from the middle classes into a richer class, or from the class of the occupied rich to that of the unoccupied. It is only in the backward countries of the world that increased production is an important object; in those most advanced what is economically needed is a better distribution. . . .

Mill, who died 101 years ago, proposed the encouragement of frugality by legislation favoring equality of fortune and limiting inheritance, so that there would be a society characterized by—

> a well-paid and affluent body of laborers; no enormous fortunes, except what were earned and accumulated during a single lifetime; but a much larger body of persons than at present, not only exempt from the coarser toils, but with sufficient leisure, both physical and mental, from mechanical details, to cultivate freely the graces of life, and afford examples of them to the classes less favorably circumstanced for their growth. This state of things, which seems, economically considered, to be the most desirable condition of society, is not only perfectly compatible with the stationary state, but, it would seem, more naturally allied with that state than any other.

The book reviews in *Not Man Apart* are especially useful, posting the reader on nearly every aspect of ecological and environmental concern. Thorough treatment is given to the issues of nuclear energy as well as to other phases of the energy problem. The only fault we can find with *Not Man Apart*—if it is a fault—is a somewhat tract-for-the-timesish bias or emotion. For example, the reviewer of *Environmental Spectrum* (*NMA*, Mid-August), a new book edited by Ronald Clark and Peter List, finds the contribution by René Dubos the "biggest disappointment." Why? Because Dr. Dubos argues that human beings sometimes actually improve on "natural conditions," and hopes for the day when they will "manipulate the raw stuff of nature to shape it into environments which are ecologically sound, economically profitable, esthetically rewarding, and favorable to the growth of the human spirit." Dr. Dubos' ardor in behalf of the *potential* dignity of man is read, apparently, as dulling or diminishing the polemic against man as predator and destroyer of nature.

It seems evident enough that humans, although children of nature, are among all natural beings the only mixed-up, confused, and morally ambivalent form of life. What might this signify? Having creative powers—self-consciousness and imagination—we alone are able to rise to heroic heights, perform Christ-like sacrifices, and, by reason of these possibilities, we alone are vulnerable to the weaknesses and excesses which are now so common. So we might say that man, whatever he is, and whatever his crimes and potentialities, is quite plainly something *unfinished;* man has still a great distance to go in his development, and ought not to be finally

judged. What if he is now, evolutionarily speaking, only in the ugly duckling stage?

Noel Smith said at the Conservation Foundation Conference held in Washington earlier this year that "much environmental thinking is distrustful of the essential nature of man," inclining to the view that only threats of dire punishment can deter him from defiling his own habitat. The anxieties of the environmentalists are understandable, yet they might also remember that punishment has not been much of a remedy for other sorts of offenses, while government, which would be in charge of the penalties, is itself often the worst offender.

So a case could be made for declaring that if we cannot, in the long run, trust the nature of man, there is no hope at all. This is very likely the view of René Dubos, who writes for the *American Scholar* a column entitled "The Despairing Optimist." It might be well for *NMA* reviewers to regard with a little more understanding writers as thoughtful as Dr. Dubos. It *is* possible for tracts for the times to get out of balance; we should all have learned this by now.

Another review in the August issue examines the contention of John Passmore in *Man's Responsibility for Nature* that we are responsible only to our own long-term interests:

> At the root of his arguments concerning preservation, especially of species, is the idea, currently being hotly disputed, that non-human beings or objects have no rights. "In the only sense in which belonging to a community generates ethical obligation, they (men, plants, and animals) do not belong to the same community. To suggest, then, as Fraser Darling does, that animals, plants, landscapes have a 'right to exist,' is to create confusion. The idea of 'rights' is simply not applicable to what is non-human."

Mr. Passmore is found to be deeply suspicious of the "mystical" idea that "a primal force shared by every living creature creates a spiritual, and therefore a moral bond." The idea of the sacred, the reviewer says, seems to bother him, as though it were a conception that everyone should have outgrown in this enlightened age. It is true enough that such feelings about the unities between man and nature cannot be demonstrated in material or "scientific" terms. That we ignore them for this reason may be precisely what is wrong with the modern world.