VOLUME XXX, NO. 21
MAY 25, 1977

SCIENCE FOR TOMORROW

FOR long generations scientists have been making their discoveries and reporting on their investigations without any attention to philosophical assumptions, even in occasional asides. This is now changing. A sense of the need for reference-points of meaning is making itself felt. In the past, since Galileo and Newton, the decisive reality, the foundation of all certainty and definition, has been matter and its motions. The question to be answered was: What are these *things* and how do they behave? Today, a different sort of question is being asked. Philosophic inquiry is gradually gaining importance in the scientific undertaking.

Not remarkably, it was a poet, writing more than a hundred and fifty years ago, who anticipated this great change or awakening. In *Biographia Literaria*, Coleridge described the levels of the human endowment:

> In short, all the organs of sense are framed for a corresponding world of sense; and we have it. All the organs of spirit are framed for a corresponding world of spirit: though the latter organs are not developed in all alike. But they exist in all, and their first appearance discloses itself in the moral being.

Coleridge's account of where the activity of these higher "organs" would first appear seems quite accurate. Fred Hapgood, writing in the March *Atlantic* on "The New Reformation in Science," speaks of the moral attitudes which may eventually become a controlling factor in research. He gives as an example the primatologist who, referring to the *yeti*, or "abominable snowman," declares his hope that the *yeti* will forever remain out of reach.

> He meant by that out of science's reach: that the yeti would never be studied, classified, have its stomach contents analyzed, its dominance hierarchies and breeding systems charted, and the like. What the primatologist was expressing was the intuition that science tames and domesticates nature, that a wild and free quality goes out of those parts of the world that fall under its procedures. He was expressing the sense of doom we feel at the prospect of a world in which "everything is explained."

A "whole new set of sciences"—pursuing ecological and environmental research—is developing, Mr. Hapgood says. That these sciences have their origin in moral feeling seems obvious enough. The "moral" area, for the great majority of Americans (all practically incurable pragmatists), is defined by the charged word "relevance." Devoting oneself to what is *relevant* to the human condition, here and now, is the American approach to moral behavior. In *The New Professionals* (Gross and Osterman), Garrett de Bell characterizes the emerging stance:

> The new scientist must practice his calling with full concern for its relevance to the problems and needs of our time. Scientists, like most other professionals, will have to adopt radically new ways of training, research, and even lifestyles to make their work relevant in this way. The New Scientist will bear little resemblance to the pursuer of pure fact, unrelated to other aspects of life, that we have grown accustomed to in the past.

Translation of this moral intent into professional activity at once shows the necessity for reform in the education of scientists. A note on his personal history by de Bell reveals what has happened in many institutions:

> Truly interdisciplinary study and teaching are keynotes of the new scientist. Students must be free to ask questions about any ecological issue that concerns them, even such "nonacademic" questions as whether automating agriculture is really a good thing or not.
>
> My own training, at Stanford, was in biology. Fortunately, it allowed me enough latitude to spend a lot of time on ecology, environmental problems and social sciences.
>
> My graduate experience at Berkeley, though, was largely a frustrating attempt to deal with a

> mindless university. I did learn a few things in applied courses like forestry and wildlife management, and enjoyed natural history courses. But it was clear that any meaningful thesis I might have wanted to do was out of the question.
>
> I finally settled on a thesis on the population dynamics and bioenergetics of a species of wolf spider. At the time I started on my project I really liked the spiders I was working on; but as I became increasingly aware of what man was doing to the world's ecosystems and the irrelevance of my going through the motions of getting a Ph.D., I figured I would wind up hating the spiders by the time I got my doctorate. One day I just walked off the campus and never came back as a: student. For a few months after that I taught ecology at the Berkeley Ecology Center, which seemed a lot more important than academic games.

The same sort of turn-around is described by John Todd (in *What Do We Use for Lifeboats* by "my"), founder of the New Alchemy Institute on Cape Cod. Also a biologist, Todd was teaching some graduate students out in the field near the Mexican border. All of them—teacher and students—were "tired of doomwatching," and their studies didn't seem to amount to much. Todd relates:

> It occurred to me that here I'd been in university since 1957, thirteen or fourteen years in academia—and many of these students had been in almost as long as I had—and we simply weren't trained in sensitive stewardship. We didn't know anything. Science hadn't trained us to be able to answer the most fundamental questions: How do you make that piece of earth sing, and how do you make it support those that live there? Degrees in agriculture, disease ethology, ecology . . . nothing!
>
> So I decided we had to figure a way.

What are these young men, along with an increasing number of others, now doing? They are restoring science to the humanities, making it over into the practical ways and means of moral philosophy. They are refusing to allow scientific inquiry to go off in its own, humanly irrelevant direction.

Ortega, another prophet and anticipator, described as long ago as 1930 the condition which makes this reform necessary:

> Life cannot wait until the sciences have explained the universe scientifically. We cannot put off living until we are ready. The most salient characteristic of life is its coerciveness: it is always urgent, "here and now" without any possible postponement. . . .
>
> Science is not something by which we can live. If the physicist had to live by the ideas of his science, you may rest assured that he would not be so finicky as to wait for some other investigator to complete his research a century or two later. . . .
>
> The internal conduct of science is not a *vital* concern, that of culture is. Science is indifferent to the exigencies of our life, and follows its own necessities. Accordingly, science grows constantly more diversified and specialized without limit, and is never completed. But culture is subservient to our life here and now, and is required to be, at every instant, a complete, unified, coherent system—a plan of life, the path leading through the forest of existence. (*Mission of the University*.)

The New Scientists, in short, are converting science into the practical tool of culture and its investigative arm. They are returning it to the service of Man.

What about the human sciences? Here the philosophic foundations are more clearly in evidence (although in the writings of John Todd, a marine biologist, philosophic asides seem as natural to him as breathing). In *The Death and Rebirth of Psychology* (1956) Ira Progoff places psychological inquiry within the matrix of a deeper purpose than the pioneers of psychology knew:

> Psychology began as an unconscious search for meaning in a civilization whose traditional meanings had been destroyed; but it itself was a victim of the nihilism it was called upon to heal. It was self-consciously rational, placing its faith in the principle of analysis. Increasingly, however, that has changed. Doors that seemed closed have opened from within. *Freud's conception of the unconscious has led beyond itself,* first on a psychological level in the later works both of Freud himself and of Jung; and then in the later writings of Adler, Jung, and especially Rank on

> a level beyond psychology where the new psychology begins. In its new version, psychology is engaged affirmatively in a search for meaning, not merely as a substitute for old beliefs, but as a creative encounter with reality in the knowledge that only an experience of the meaningful life can make man whole. . . .

Even these few soundings in the thinking of the present are enough to suggest the watershed character of the changes now going on. Sages and philosophers have always known that these changes are required of us, and there are numerous excellent treatises on the subject, but in antiquity such transformations of attitude and direction were always regarded as part of the awakening process of disciples who are withdrawn from the world, something rare ant individual. Today these changes are cultural, one might say almost global. This becomes clear from the way Fred Hapgood sums up his discussion:

> Finally, there are signs of a new kind of science writing, one that will stress what is, after all, one of the basic qualities of science: the contemplative, quasi-meditative relation of man to the universe which accepts the judgment attained from natural evidence as the supreme authority. . . . The emphasis is on illuminating new dramas, new phenomena and less on flattening them into networks of cause-and-effect reactions. There is a very high tolerance of uncertainty, even a reveling in it. . . .
>
> The theory I favor is that we sense that the world has changed enough to make a search for new ways of addressing the realities necessary, and what we are seeing now is both the signs of the search and the emerging answers. . . .
>
> Perhaps that was the evolutionary origin of religion. If this is true, then perhaps what we are doing now is listening: pulling away from those sense organs that seem to be likely to block nature off, developing others that are more sensitive and open, trying to learn, as we no doubt have thousands of times before, what it is, this time, that the world wants us to become.

Here, with admirable simplicity, is embodied the temper of the new spirit in science in effect a confirmation of Coleridge's idea. Its protagonists see their work, not as anything "unique," but as the start of another chapter in the unfolding of human potentiality, in which they are doing at another—virtually a social—level what has been done, as Hapgood says, "thousands of times before." How do they differ from past generations of scientists? The answer is simple enough. Nature, for them, has come to include the totality of the field of human awareness, including subtle experiences of states of mind and feeling as well as measurable encounters with the external natural world. The deliveries of human experience are recognized to include moral insight, religious longing, metaphysical insight, and mystical yearning. These, too, are a part of man's life.

A current volume, *The Reflexive Universe,* by Arthur M. Young (Delacorte, 1976), provides a splendid illustration of the attitude of mind of the new scientists, who perhaps should once again be called "natural philosophers," as such men were known before the term "scientist" came into use. It may be objected that Arthur Young is not a scientist—in fact, he says so himself—but this by no means interferes with the value of his book, which helps the reader to anticipate what many scientists may eventually *become,* in contrast to what they now are. This author reads the book of nature in terms of purpose. As he puts it:

> While I have always been intrigued by science, I do not consider myself a scientist. The scientist has a certain *attitude* toward nature. He is preoccupied with the discovery of law—and having discovered it he holds it sacred. The inventor too must discover law—but this is not his goal. He has his mind set on something he wants to achieve, to fly [Mr. Young is the inventor of the Bell helicopter], for example, or to communicate with wires. So he must both learn the law and then apply it, which involves a turnabout, a change of direction.

The inclusive temper of the new spirit is unmistakable:

> Science as usually interpreted does not provide for consciousness. Accordingly, there has arisen a conflict between science and religious thought, a conflict which is frequently dismissed because, it is said, science is not concerned with final issues. Such an interpretation of science has invaded other areas. This is particularly true of the social and human

sciences, such as psychology. Here it is difficult to understand how we can have a valid science of man, if that science does not recognize final causes, since for man final causes are of the greatest significance. They are, in fact, the touchstone of his behavior. They inspire his works, his goals, his responsibilities to his fellows.

We have a situation in which science, modestly disclaiming any knowledge of ultimate issues and sticking to its requirement of particles operated on by forces, has become the model. This model has in turn become the ideal of psychologists who, dismissing all subtlety of the psyche as "metaphysical," create their image of man as a biological machine which can have no mind that is not brain, and no psyche that is not explicable as chemical activity, simply because, in their view, the laws of physics do not recognize any other fundamental ingredients on which to draw.

Mr. Young's book was published at about the time when Werner Heisenberg declared that physics must no longer pursue the "ultimate building blocks" of the universe as the ground of natural reality, but should seek for principles of order in Platonic symmetries. In harmony with this view, Young says:

The older concept of a universe made up of physical particles interacting according to fixed laws is no longer tenable. It is implicit in present findings that *action* rather than matter is basic, action being understood as something essentially undefinable and nonobjective, analogous, I would add, to human decision. This is good news, for it is no longer appropriate to think of the universe as a gradually subsiding agitation of billiard balls. The universe, far from being a desert of inert particles, is a theatre of increasingly complex organization, a stage of development in which man has a definite place, and without any upper limit to his evolution.

In this drama man is at a critical point. He is more than the beasts in that he is in a different kingdom but in this kingdom he is still not very far along. He is, in fact, at its midpoint, at a stage corresponding to that of the clam in the animal kingdom. Like the clam, he is buried in the sand with only a dim consciousness of the worlds beyond. Yet potentially he can evolve far beyond his present state; his destiny is unlimited.

There is a great deal of physics in this book, and some mathematics, or mathematical thinking, but an equal content, or perhaps more, of metaphysical ideas with material drawn from ancient philosophers and myths. The author has no hesitancy in using these sources, since he seeks synthesis, not reductive analysis, and his intention is to display evolution as the track of purpose finding fulfillment in cosmos and nature. The human mind, as he makes evident, works naturally and effectively with both sorts of material—with subjective as well as objective perceptions.

In one place Arthur Young adopts the Leibnizian monad as the ultimate unit underlying all existence. The quality of his metaphysical thinking is illustrated by the following:

The monad . . . is immortal, but in so describing it we are guilty of an inversion, because the monad is not in time. Here language fails us. I trust, however, that the reader, having come this far, realizes the predicament of describing this essence, which is analogous to the eye that can see everything but cannot see itself, so I will not attempt the impossible. It is necessary, however, to point out that this principle (spirit) is often confused with soul partly because regardless of words, it is not realized that there are not one, but two, "nonobjective" principles. And let us not be confused by the fact that the words *soul* and *spirit* have reversed roles over the years. There were times when spirit has had the connotation which we would assign to soul (i.e., "earthbound spirit" or "thy father's spirit" used by Hamlet in the sense of ghost). In any case, what we assign to first level is prior to soul; it is the Hindu *atman,* the *nous* of Aristotle, etc. Soul is the precipitation of spirit into time, the first stage of its "descent" into matter.

Mr. Young justifies his use of myth in these terms:

Science, in fact, has become so fragmented into separate disciplines that it has lost sight of the unifying principle that the word "universe" implies.

Such a unifying principle was not lost on the ancients, for their speculations were motivated by a powerful urge, if not to explain, at least to describe the stages of creation and the fall of man. Their accounts in myth and legend, seemingly naive, have an amazing sense of wholeness, of integrity, and contribute in a way that science, with its emphasis on the explicable and on the detailed development of successful techniques, has lost. Science, like a map,

> can furnish information, but it cannot provide a compass. Myth supplies this compass. With its help we can discover how to orient the map. . . .
>
> Myth can help with the orientation we seek, for it is in rapport with nature with which modern man has lost touch. This rapport with nature—with the unconscious, with the mysteries of life and death, of generation and transformation; with that area of knowing which linked man with life instead of holding him off, separately, as an observer—permeates the literature handed down to us in myth and legend, in art and symbol.

A question which arises naturally and insistently in relation to such expositions is: If this is the form to be taken by tomorrow's science, what about the problem of verification and the idea of '"public" truth?

The answer must be: The price of the restoration of the sciences to the humanities—if it should be called a price—is that, so far as the science of man is concerned, the expectation of "objective certainty" breaks down. The real question to be decided, however, is whether this is a loss or a gain.

REVIEW
"FRAGMENTS OF A LOST WHOLE"

IN his introduction to *Eleusis* (Schocken paperback, 1977, $6.95), C. Kerényi, speaking of the difficulty of reconstructing the full meaning of ancient myths, remarks that Carl Jung "never held that archaic contents rise up in modern man with all their original coherence and consistency, like a massive and fully visible mountain, but only that enduring elements of forgotten myths emerge, like the summits of mountain ranges." A similar feeling is expressed by Giorgio de Santillana in *Hamlet's Mill.* Myths and fairy tales, he said, embody surviving fragments and themes of a "great world-wide archaic construction" which was already in existence when the ancient Greeks came upon the scene, and he is convinced that some of these themes were preserved by Pythagoras and Plato as "tantalizing fragments of a lost whole."

Scholars now approach these themes with increasing respect, having recognized for at least a generation that the high cultural achievements of the classical world had their origins in religio-philosophic inspiration which remains unmatched in modern times. The role of Pythagoras and Plato, de Santillana suggests, was to embody in philosophic teaching certain timeless ideas which had been implicit in the Mysteries—the religious ceremonies of the Greeks—and make them subjects of rational inquiry and assimilation. De Santillana says:

> . . . the *Timaeus* and, in fact, most Platonic myths act like a floodlight that throws bright beams upon the whole of "high mythology." Plato did not *invent* his myths, he used them in the *right* context—now and then mockingly—without divulging their precise meaning: whoever was entitled to the knowledge of the proper terminology would understand them.

Plutarch, author of the *Lives*, who also wrote on the failing inspiration of the famous Oracles of Greece, suggested that philosophy would replace the ambiguous poetic expressions of Delphi and other centers of prophetic lore, drawing a comparison between the effect of serious philosophic study and the experience of the Mysteries:

> Just as persons who are being initiated into the Mysteries throng together at the outset amid tumult and shouting, and jostle against one another, but when the holy rites are being performed and disclosed the people are immediately attentive in awe and silence, so too at the beginning of philosophy: about its portals also you will see great tumult and talking and boldness, as some boorishly and violently try to jostle their way towards the repute it bestows; but he who has succeeded in getting inside, and has seen a great light, as though a shrine were opened, adopts another bearing of silence and amazement, and "humble and orderly attends upon" reason as upon a god.

A story told by Herodotus will illustrate the importance of the Eleusinian Mysteries to the Athenians and to all Greeks. At the time of the invasion of Hellas by Xerxes and his Persian host, the appointed hour for the procession to Eleusis, twelve miles from Athens, arrived. It was late in September and the whole countryside about Athens had been laid waste by the invaders. The Athenian citizens had taken to ships, their women and children having been transported to safety in the mountains. On the day for the Mysteries, two renegade Greek members of Xerxes' army were on the plain near Eleusis. They saw a great cloud of dust rise from the sacred site, while voices heard through the haze cried out words connected with the celebration. The two Greeks concluded that since Attica had been abandoned by its inhabitants, the gods themselves had come to complete the holy observance. This, they believed, meant the defeat of Xerxes.

Kerényi says:

> If this mysterious rite which encompassed the whole world could not be performed by men, the gods had to attend to it. A reason need scarcely be given since the Mysteries concerned the whole world, but an answer is provided by the victory at Salamis. Apparently what happened was that a divine host, a procession of spirits which could not be seen but only heard, replaced the festive throng of the Athenians. . .

> The procession . . . was an expression of profound awareness that all Greek existence was bound up with the celebration of the Mysteries at Eleusis. What would have happened if, in those days when the existence of the Greeks was so threatened, Eleusis had ceased to be the theater of the ceremonies which had never once been neglected since their founding? It was unthinkable.

A further testament to the part played in Greek life by the Mysteries is provided by the report of a pagan historian of the fourth century A.D., who relates that when the Catholic Roman Emperor Valentinian prohibited by edict all "nocturnal celebrations," having in mind to abolish the Mysteries of Eleusis as well as other rites, the Proconsul in Greece, Praetextus, "declared that this law would make the life of the Greeks unlivable, if they were prevented from observing the most sacred Mysteries, which hold the whole human race together." Accordingly, this official "permitted the entire rite to be performed in the manner inherited from the ancestors as if the edict were not valid."

The performances of the Mysteries were apparently instruction in the under-meanings of the story of Persephone, daughter of Demeter, carried off by Pluto, ruler of Hades, who made her his queen. Persephone is restored to her mother and life on earth by order of Zeus, who sends Hermes with his command, but before she leaves she accepts from Pluto some pomegranate seeds. Because she eats them, she must return to Hades for a portion of every year. Here may be represented the drama of death and rebirth, although the true "secret" of the Mysteries is hardly revealed by this interpretation.

According to a Homeric hymn, Demeter, the goddess of agriculture, established the Eleusinian Mysteries. Kerényi says:

> After Mother and Daughter are united, it is very briefly stated how Demeter restored to mankind the fruit she had withdrawn in her grief, the grain which in antiquity grew so abundantly on the Rharian Plain at Thria, and the other plants and flowers. But—and this should be stressed at the very outset—this blessing with which she expressed her joy over what she herself had gained at Eleusis was not her essential gift to man; the essential gift was the ceremonies which no one may describe or utter. At this point the poet falls silent, not for reasons of Homeric style but because—these are his words—"great awe of the gods makes the voice falter."

Sophocles was somewhat more explicit, saying of participants in the Mysteries: "Thrice blessed are those among men who, after beholding these rites, go down to Hades. Only for them is there life; all the rest will suffer an evil lot." Kerényi continues:

> But of the poets who speak of the Mysteries in the form of a beatitude, it is only Pindar who tells us something about their content. He speaks in such a way that the initiate could recognize the secret in the words that cloaked it: "Blessed is he who, after beholding this, enters upon the way beneath the earth: he knows the end of life and its beginning, given by Zeus!" "End" and "beginning" are seemingly colorless words. But they reminded the initiate of a vision in which the two were united.
>
> The initiate possessed a knowledge which conferred blessedness and not only in the hereafter; both knowledge and beatitude became his possession the moment he beheld the vision. Both gifts of Eleusis, a happiness both here and hereafter, are praised by the poet Krinagoras of Lesbos. His older contemporary, the Roman Cicero, in his treatise *On the Laws*, attaches the highest importance to the radiance which Eleusis cast on all life. "We have been given a reason," he writes, "not only to live in joy but also to die with better hope." Three centuries earlier, the Attic orator Isokrates was able, thanks to his calculated ambiguity, to do justice not only to the personal hopes conveyed by the Mysteries but also to their implications for the whole human race. In his Panegyric on Athens, he mentions the two gifts of Demeter: the grain and the Eleusinian rites. And in speaking of the latter he again distinguishes two blessings: "Those who take part in them," he says, "possess better hopes in regard to the end of life and in regard to the whole *aion*."

For Isokrates (436-338 B.C.), "aion" commonly meant the duration of the world itself, or the entire cycle of earthly existence. The Mysteries, Kerényi suggests, enabled the Greeks to encounter death without fear. The final end of the Mysteries, he says, came when a false

Hierophant assumed the duties of conducting the Mysteries. This occurred toward the end of the fourth century A.D., at the time when the Goth, Alaric, invaded Greece. Their corruption had been prophesied by the previous Hierophant, appointed by Julian, and the result, as recorded by Eunapios, was that Alaric and his barbarians poured through the pass of Thermopylai: "the gates of Greece had been opened to him by the godlessness of those who in their dark garments entered with him unhindered and by the dissolution of the hierophantic rules and of the bond they embodied." Kerényi comments:

> There were Eleusinian rules which defined who might be Hierophant and who might not. These were included in the written laws of the Eumolpidai; hence they were no part of the secret. One such rule, for example, was that the Hierophant's name must not be mentioned. These were probably the ordinances which Cicero wished to receive from Atticus. Eunapios also looked upon them as the bond that holds the world together. He mentions neither the true nor the false Hierophant by name. The two Hierophants whose rivalry shattered the bond witnessed the collapse not only of the Mysteries but of the whole world. The men in dark garments who moved in with Alaric were monks. A new form of existence began for Greece. The identification of Greek existence with the Mysteries is manifested clearly and movingly by their common fate.

The illustrations in this book—photographs of vases, sites, temples, and sculpture—bring richly supporting evidence of how the austere meanings of the Mysteries were woven into the fabric of ancient Greek life.

COMMENTARY
FROM ALL THE ARMIES

THE "finest legend" which grew up among the British troops of World War I (reported by Paul Fussell—see Frontiers) may seem something less than a utopian dream, but its inadequacies have partial explanation in the sort of "myths" it rejected. Writing in 1923, in the *Reformation of War*, a British Major General, J.F.C. Fuller, fondly described the psychology of the typical English soldier:

> I have watched him in two long wars struggling against odds, and I have learnt to appreciate his virtues, and his failings, and his indomitable courage. He is a man who possesses such natural pride of birth that, through sheer contempt for others, he refuses to learn or be defeated. He divides humanity into two classes: Englishmen and niggers and of the second class some happen to be black and others white. He only condescends to differentiate between these sub-classes by calling the latter dagoes. To him, all white folk, outside his own little islands, are such. From these he has nothing to learn, yet he is tolerant as he would be to his dog; he has, in fact, raised the vice of contempt to a high virtue and on this virtue is the British Empire founded.

This attitude, one may suspect, was more than a mere "folkway." A leading British anthropologist of that time, Sir Arthur Keilth, declared in 1931 that "Race prejudice works for the ultimate good of mankind." Admitting the repugnance of this view, he gave his supporting reasons:

> Without competition Mankind can never progress; the price of progress is competition. Nay, race-prejudice and, what is the same thing, national antagonism, have to be purchased, not with gold but with life. Nature . . . keeps her orchard healthy by pruning; war is her pruning hook. We cannot dispense with her services.

When science combines with everyday ethnocentrism to shape human belief, is it any wonder that the "normal" human reaction to the bestiality and madness of war should find only desperate expedients to structure a replacement? "The rumor was that somewhere between the lines a battalion-sized (some said regiment-sized) group of half-crazed deserters from all the armies, friends and enemy alike, harbored underground in abandoned trenches and dugouts and caves, living in amity and emerging at night to pillage corpses and gather food and drink."

The point, however, of this "finest legend" was sound: "that German and British: are not enemies: the enemy of both is the War."

CHILDREN
. . . and Ourselves
THE CONTEXT OF LIFE

SIX years ago (in *Cultural Affairs* for January, 1971) Joseph Featherstone used A. S. Neill's Summerhill school in England for a novel purpose—to illustrate what seemed to him the cultural impoverishment of the times. Not much "education" took place there, he contended. The achievement at Summerhill, he said, had been in another area—helping youngsters to learn how to live together. "I'm not attacking Summerhill," he said, "which is, after all, a courageous experiment in a world where simply living together does seem an accomplishment." He was, he went on, "only noting the minimal and negative character of this vision of schooling that so many American readers have embraced."

One can easily find in Neill at least part confirmation of Featherstone's comment. Arguing with Mario Montessori, Neill exclaimed that he couldn't understand what Montessori was saying:

> "It's beyond me because you're talking about education, the three R's and science, and I'm thinking about the dynamics of life, the dynamic in a child, how we re going to prevent the child from becoming a Gestapo, or becoming a color hater and all these things. The sickness of the world. I'm interested in what we're going to do *for* children to stop them from becoming haters, to stop them from becoming anti-life."

It won't do to call this outlook "negative." Learning to live in community is, after all, more important than academic attainments. And as Featherstone admits, in the kind of world we have, achievement of community is "an accomplishment." What could be more important? But then Featherstone might reasonably ask: "Why call it education when it's really something else, however important?"

Quite evidently, behind this interchange is the central question of what we should try to do for the young. Is it to get them ready for the world as it is, in terms of its existing requirements, conventions, and taste? Or should we say that the need for basic reform in the character of our society is so great, and decisive changes, one way or another, so imminent, that Neill's program is the only thing to take seriously?

Arguing out this question in such polar terms may be almost a waste of time. Besides, Neill was not a "program," but the inimitable A. S. Neill.

Were he alive, Neill might comment that his sort of education equipped people with resources to go after and get what they want in the way of necessary skills. In his book he gives some dramatic examples of this.

Then there is Vinoba's view of the matter:

> Teaching must take place in the context of real life. Set the children to work in the fields, and when a problem arises there give them whatever knowledge of cosmogony, or physics, or any other science, is needed to solve it. . . . It is not education to fill children's heads with information, but to arouse their thirst for knowledge. . . . There is an infinite sum of knowledge in the world, and each one needs some finite portion of it for the conduct of his affairs. But it is a mistake to think that this life knowledge can be had in any school. Life-knowledge can only be had in life.

It frightens parents to think of sending their children out into the world ill-equipped in the conventional sense. But children who learn self-reliance are *not* ill-equipped. The world is full of accomplished adults who didn't know much of anything until they decided what they wanted to do. We think, for example, of William Buck, who at twenty decided that he needed to know Sanskrit in order to render the *Mahabharata* and the *Ramayana* into enjoyable English. He, someone might retort, was an *exceptional* young man, but it's at least conceivable that a lot of potentially exceptional people have been rendered ineffectual by having their heads stuffed with irrelevant information.

The lesson of Ivar Berg's *The Great Training Robbery* (Praeger, 1970) is that going to school to increase one's capacities often has practically no effect. People learn to do what they need to do far better on the job. By interviewing personnel managers in industry, Dr. Berg also found out that companies which insist on hiring college graduates do so not because the graduates are shown by

experience to be superior workers, but simply because they can be expected to subscribe to middle-class values, to have "stability," and perhaps poise and self-assurance. The hiring executives, Dr. Berg said, "made it perfectly plain that the content of a college program mattered a good deal less than the fact of a successful completion of studies." As for the relation of educational background to actual achievement—the businessmen, Berg says, never bothered to find out about it. Only the military, apparently, have done this sort of research. "In the armed forces, it was found that 'high-school graduates were not uniformly and markedly superior to nongraduates' and that training on the job was more important than educational credentials." Dr. Berg comments:

> The irony will not be lost on some that the nonrational use of formal credentials, which might be taken as a symptom of "bureau pathology," is more likely to be found in our great private enterprises than in our government apparatus. . . . the faith of some in the benefits of education is perhaps no more valid than others' faith in the admittedly narrow issue of economic benefit. And one may well be skeptical if not cynical, about how much *real* education can be utilized by most industrial organizations. Meanwhile, the contention that people are changed as a function of their education and thus can change the world gains at least as much horrifying as gratifying support from history. One should note that there are as many distinguished scholars advising the Department of State on Vietnam as there are among critics of that Department, and that crackpot realism is no less prevalent among Ph.D.'s than among less educated members of advisory staffs in military and other governmental units.

All of which seems strong confirmation of Vinoba Bhave.

But a return to the sort of program he advocates will obviously take a long, long time. For parents to be converted to his outlook would amount to a great characterological change in the people themselves, a transformation of motives and goals so radical as to constitute a virtual revolution. Meanwhile there are likely to be countless intermediate steps and stages along the way.

For example, an article on Franconia College (in northern New Hampshire) in *Prevention* for August, 1976, begins:

> "This is what education is all about," Ira Goldenberg said as he washed the last remnants of the morning's meal off the dishes and shoved the final rack into the dishwashing machine. "I'm learning something new every day," he shouted through the steam. "The students are learning something I'm sure they never expected. And hopefully, this new spirit will be the one that saves the college."

Where did the new spirit come from? The college, to be brief, was going broke, and Mr. Goldenberg, the president, could see the handwriting on the wall. He began a reform in costs by getting rid of the catering firm that fed the students, making meals a cooperative responsibility with students and faculty sharing the burden. That's why he, the president, was running the dishwasher.

Since *Prevention* is interested in natural, wholesome food, this story explores mostly the dietary reforms introduced by student administrators—out with junk foods, in with fresh produce and locally laid eggs, providing wholegrain instead of white bread, with yogurt, honey, brown sugar and granola at almost every meal. The school saved money with this do-it-yourself regime, and, even more valuable, the students proved their capacity as efficient administrators. Another good thing was the establishment of working relationships with the local community. The students, moreover, now garden organically. They also maintain the grounds and compost all cuttings for humus.

The educational gains for Franconia are plain to President Goldenberg. "I think people have lost a sense of control over their own lives." Supplying the food for the school from their own garden and from local suppliers is a step toward getting it back. Meanwhile, the faculty involvement in the program has broken down the caste division between students and faculty.

From a utopian point of view, the achievement at Franconia is only a token affair; yet it represents a move in the right direction. And for some students it has been a remarkably good thing. Such changes gather momentum.

FRONTIERS

War's "Finest Legend"

THE epic, as the drama of national birth through struggle and war, the source of identity for an entire people—nourisher of their imagery, inspirer of their children—has had its day. Elizabeth Seeger, who put the story of the *Mahabharata* into English for young readers, believed that epics could be written only during some sort of dawn, when the rhythms of birth and favorable beginnings were naturally felt and were all that was known. Beginnings are a time of innocence and heroic striving, when failure and disenchantment lie far in the future.

Today the idioms of the epic spirit gain usage only in irony. The brave young men who responded to the recruiting posters of the first world war are no longer with us. Who, today, could say to his sweetheart, as did a British volunteer in 1914: "Pauline: Alas, it cannot be. But I will dash into the great venture with all that pride and spirit an ancient race has given me"? Goya, whose etchings on war are more in keeping with the present mood, found no occasion for giving the slightest relief from the ugliness, cruelty, and futility of the wars of his time. But Goya's disgust was not duplicated in many others until after the first great war of the twentieth century, in which a generation of England's finest men endured—many losing their lives—a mindless conflict which produced dark chaos throughout Europe and revulsion in the feelings of most of the soldiers who survived.

In *The Great War and Modern Memory* (Oxford University Press paperback, 1977, $3.50) Paul Fussell writes of the fantasies generated among British soldiers during the interminable months spent in the trenches:

> The finest legend of the war, the most brilliant in literary invention and execution as well as the richest in symbolic suggestion, has something of this fantastic quality. It is a masterpiece. The rumor was that somewhere between the lines a battalion-sized (some said regiment-sized) group of half-crazed deserters from all the armies, friend and enemy alike, harbored underground in abandoned trenches and dugouts and caves, living in amity and emerging at night to pillage corpses and gather food and drink. . .
>
> One reason the legend of the wild deserters is so rich is that it gathers and unifies the maximum number of meaningful emotional motifs. For one thing, it offers a virtual mirror image, and a highly sardonic one, of real, orderly trench life, . . . For another, it projects the universal feeling of shame about abandoning the wounded to spend nights suffering alone between lines. It embodies in objectified dramatic images the universal fantasy—the Huckleberry Finn daydream—of flagrant disobedience to authority. It conveys the point that German and British are not enemies: the enemy of both is the War. And finally, it enacts in unforgettable terms a feeling inescapable in the trenches—that "normal" life there was equal to outright bestiality and madness.

Literate Englishmen found the war "unspeakable," mainly, Mr. Fussell suggests, because their background afforded no images applicable to the dehumanizing degradation into which they had been thrown. Whatever they wrote seemed euphemistic.

> Inhibited by scruples of decency and believing in the continuity of styles, writers about the war had to appeal to the sympathy of readers by invoking the familiar and suggesting its resemblance to what many of them suspected was an unprecedented and (in their terms) an all-but-incommunicable reality. Very often, the new reality had no resemblance whatever to the familiar, and the absence of a plausible style placed some writers in what they thought was an impossible position. Speaking of the sights and sounds on the Somme in September, 1916, Alexander Aitken writes: "The road here and the ground to either side was strewn with bodies, some motionless, some not. Cries and groans, prayers, imprecations, reached me. I leave it to the sensitive imagination; I once wrote it all down, only to discover that horror, truthfully described, weakens to the merely clinical."

Mr. Fussell thinks that the "clinical" was exactly what was needed, and he is perhaps right. John Hersey's clinical account of what was left of Hiroshima after the atomic blast helped many Americans to understand what they—or their legal representatives—had done.

It remained for Simone Weil—who also observed that in modern war men do not fight, they are "fought"—to raise clinical description to something like an epic level. In her essay, *The Iliad, or The Poem of Force* (Pendle Hill pamphlet), she showed the amoral meaninglessness of war:

> Force is as pitiless to the man who possesses it, or thinks he does, as it is to its victims, the second it crushes, the first it intoxicates. The truth is, nobody really possesses it. The human race is not divided up, in the *Iliad,* into conquered persons, slaves, suppliants, on the one hand, and conquerors and chiefs on the other. In this poem there is not a single man who does not at one time or another have to bow his neck to force. . . .
>
> The progress of the war in the *Iliad* is simply a continual game of seesaw. The victor of the moment feels himself invincible, even though, only a few hours before, he may have experienced defeat; he forgets to treat victory as a transitory thing. . . . But words of reason drop into the void. If they come from an inferior, he is punished and shuts up; if from a chief, his actions betray them. . . .
>
> In any case, this poem is a miracle. Its bitterness is the only justifiable bitterness, for it springs from the subjection of the human spirit to force, that is, in the last analysis, to matter. This subjection is the common lot. . . . Such is the spirit of the only true epic the Occident possesses. . . . The man who does not wear the armor of the lie cannot experience force without being touched by it to the very soul.

Why does the epic belong only to the beginnings of the world or of history? Because, it seems evident, the human protagonists—all of them—are then cast in a common mold. They think and feel alike, and marshal their energies to a common beat of action. Today this is no longer possible. While humans may still feel lifted by a common inspiration, they have now to act as individuals so that they will not betray one another take part, that is, in a collective betrayal. The unity of the epic must now be reborn in a fellowship of independent souls. Thus the epic of tomorrow, if indeed there can be an epic to celebrate the unswayed integrity of individual decision and individual action, will be accompanied by no martial strains, but have a very different melody and appeal. War no longer arouses, but blights and numbs, the heroic imagination. The proof is in Mr. Fussell's thoughtful book.

Some months ago we reported here the imprisonment of seven Spanish conscientious objectors, condemned to years of confinement for refusing to become part of the military organization of Spain. These were men who would not wear the armor of the lie. While the seven were set free by the royal decree of January 5 of this year, providing that men who "for reasons of conscience of a religious character" oppose the use of arms are exempt from military service, three of their number then joined with twelve other young Spaniards, chaining themselves together at the Plaza de Espana in Madrid, on Jan. II, "to protest the imposition of religious limits on the human right of conscientious objection to military service." They were of course arrested. There is now continuing agitation in many parts of Spain for a statute allowing alternative civilian service to *all* who are conscientiously opposed to war. According to a news release by the War Registers' International (35, rue van Elewyck, 1050 Brmcelles, Belgium), "The objectors have gained enough popular and political support that they can resist a restrictive statute; the situation in neighboring France (where more than 1,000 objectors are currently refusing *that* State's restrictive statute) is a warning to the Spanish authorities." The release concludes:

> The short-term objectives of the Spanish CO groups are the recognition of the right of conscientious objection and the institution of a civilian service. Medium-range goals include education projects toward a more peaceful society . . . and a progressive demilitarization through the formation of non-violent movements and development of non-violent means of struggle. In the long term, the CO's want a world without arms.