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WHAT IS THE STUFF OF HISTORY?

HOW does a man find the growing edge of his life—the best place to focus his determination and his energies on the raw materials of experience? If we could have a workable answer to this question—one that would not reduce or externalize the unique needs of each individual; after all, a man's growth is never exactly the same as any other's, although it is bound to be an *analogue* of the growth of every other man—much of the typical conflict between human beings might melt away. But this answer is not readily available; that is, the more comprehensive its language and the wider its application, the more abstract it becomes, until, gaining universal meaning, it seems to say no more than the truisms we have possessed from the beginning.

Yet we do have the analogues, some of them richly instructive. For example, in the Preface to her book, *Between Past and Future* (Meridian), Hannah Arendt describes the feelings of extreme loss experienced by the Resistance fighters following the liberation of France, when "they could only return to the old empty strife of conflicting ideologies which, after the defeat of the common enemy, once more occupied the political arena, to split the former comrades-in-arms into innumerable cliques which were not even factions and to engage them in the endless polemics and intrigues of a paper war." Paradoxically, it was under the conditions of a ruthless occupation that an authentic sense of freedom came into their lives for the first time. This feeling was born of their struggle and became their treasure—lost when the war was over. Miss Arendt continues:

> What was this treasure? As they themselves understood it, it seems to have consisted, as it were, of two interconnected parts: they had discovered that he who "joined the Resistance, *found* himself," that he ceased to be "in quest of (himself) without mastery, in naked unsatisfaction," and that he no longer suspected himself of "insincerity," of being a "carping, suspicious actor of life," that he could afford "to go naked." In this nakedness, stripped of all masks—of those which society assigns to its members as well as those which the individual fabricates for himself in his psychological reactions against society—they had been visited for the first time in their lives by an apparition of freedom, not, to be sure, because they acted against tyranny—this was true for every soldier in the Allied armies—but because they had become "challengers," had taken the initiative on themselves and therefore, without knowing or even noticing it, had begun to create that public space between themselves where freedom could appear.

They made this freedom themselves—it existed wherever they were, and when they moved it diminished to nothing behind them. Freedom was an attribute of the narrow space of their active lives, but it was *real.* The "paper war" which came after produced no such reality at all. Rationalized and institutionalized political forms, meant by men of earlier times to establish the "conditions of freedom," could not have the same meaning for them. So their treasure was gone.

What should a "historian" make of such matters? What the *maquis* thought they were fighting for was not what they finally got. The substance of the freedom in their wartime lives was made of another stuff. It hardly seems possible to tell what that stuff is. Even if, by deep psychological analysis, we devised a series of abstractions to tell why, under the Nazi occupation, these men felt free, yet after final Victory and triumphant Liberation felt confined—if we could so delimit and define with subtle precision this growing edge of their lives—could we then make our account into a chapter of "history"? Would it even *be* history?

Yet surely, history which neglects such psycho-moral realities ignores the most profound meanings of human life. One is constrained to

wonder how much history instructs in the meaning of human life.

Men of the Western world have a socio-political tradition which devotes much attention to those great constitutional forms which are held to have made freedom possible. This and other values—individual rights and equality before the law—are supposed to be the issues of political dialogue and public debate. We cannot in reason say they are unimportant, yet there seems a sense in which a constitutional form, once solidly established, no longer embodies the same meaning that it had for those who struggled to make it into law. The true content of history, one might think, now lies in the texture of striving behind the façade of those forms, and how can the historian keep track of such elusively subjective matters? How, indeed, can the individual keep track of them in even his own life?

But what shall we say of an education which fails to be constant in its effort to persuade men to *try* to keep track of these things? The very least we can say is that such education is doomed to be branded as "irrelevant"!

Today there are many earnest books which report on the failure of our corporation- and technology-dominated society to serve the true interests of the people. The old, democratic arrangements put into effect by the Founding Fathers, and continued by later law-makers, we are told, take no account of the vast manipulative power of industrial and commercial enterprise. The charge seems accurate enough. So there are elaborate plans afoot for instituting "controls" to rule the enormous corporations, and for rewriting entirely, if necessary, the Constitution in order to accomplish this end.

Perhaps this should be done. But the matter is vastly controversial, and one quails at the thought of the interminable "paper war" that would precede any sort of agreement. One must ask: Is the growing edge of the life of the people really in issues of this sort? Could such measures ever bring "the apparition of freedom" to anyone at all?

An informed and articulate social critic of the existing state of affairs might find the ground of this question frivolous and irrelevant. Who, he might ask, can know about such obscure subjective states? *Not he,* the answer probably ought to be, for in effect he is really arguing that since the inner substance of man's life is inaccessible, we must interest ourselves in its external forms. It is at least possible for those with power to control the forms, or to try to control them.

Well, yes. Great labors can bring forth new constitutions. Compilations of statistics can mirror the grosser human needs, and equity can be defined in terms of material subsistence and what we call "common decency." But will these proud and demanding activities help to bring men into any closer contact with the growing edge of their lives? Not that subsistence and decency are unimportant. But what can be compelled never covers the things that are *most* important.

There is for example a large corporation in Los Angeles—one of the most successful and influential in the life of the city—the owners or managers of which enjoy positions of great power and prestige. These men have a sense of duty to the world of their operations—according to patterns familiar to us all. In that corporation there is a lowly department where young men who acquire certain small skills and practice reasonably responsible behavior can make a fairly good living. They give value received in the work they do, but their *lives* are not lived there at all, except for the accidents of delighting human contacts. Among them are artists, teachers, a landscape designer, a filmmaker, and pursuers of various other *amateur* callings—in short, these men, or many of them, do things which they are drawn to do as ends-in-themselves. The place where they work for money is the least part of their lives. It might be compared to a forest where men go to cut firewood or to get building materials. The

corporate "institution" has for them little more identity than that. If you were studying contemporary culture and history, looking for its growing edge, you would not visit the chairman of the board or the directors of that corporation, but would mingle with these unpredictable people, who have "found themselves." The big company is just part of the scenery.

Politics is the study of the life of the people to see what social processes can be institutionalized in order to preserve them well. The role of politics ought to be restricted to functions which can be made into mere habits without interference with the growth-processes of human life. This, at any rate, would be the politics of the mature, and the politics of the immature should at least be aimed at the goal of becoming the politics of the mature. Any other politics tends to become obsessed by its own presumptions, and will corrupt the people along with itself. The State, in other words, must wither away at the beginning of the good social life; otherwise, *everything* else is sacrificed to its survival.

The best part of a man's life is always the part that isn't institutionalized, and can't be. This is his growing edge. The attempt to politicalize the growing edge is a form of cultural suicide. There would be no anarchists if politics had restricted itself to matters of unimportance, humanly speaking. It is only when men suppose that they can find out how to force or guarantee growth in the right direction that crimes of ideology become an everyday occurrence, generating dark forces of terrorism and nihilism as the inevitable response.

Various intuitions along these lines are finding expression nowadays, sometimes short-circuiting into dogma because they have so little intellectual support. Rationalism in Western culture is characteristically either political or scientific, and neither the political nor the scientific tradition offers much of anything concerning the dynamics of human growth. Both live by the translation of discovery into established structure which tends to become rigid. Both claim to rest upon unambiguous, and therefore in a sense "dead," truths.

So, schooled by a rationalism that neglects the uniqueness of human growth, Western man habitually systematizes whatever he learns of the growing edge of human life. One suspects that the freedom discovered by the Resistance fighters in France was not very different from the truth learned by Che Guevara, who decided that it was necessary to spend his life on the uninstitutionalized frontier of guerilla war, where he could still *feel free.*

In the *Atlantic* for May, Ray Mungo, a former student journalist, tells the story of a canoe trip he took with some friends on the Concord and Merrimack rivers, somewhat after the example of an illustrious predecessor, Henry David Thoreau. According to an editor's note, Mungo was one of the first of the radical student leaders to "drop out" of The Movement. He and nine of his comrades have been living for nearly two years on an isolated farm in Vermont, "where they raise their own food and attempt to build their own lives." In this article, which is titled, "If Mr. Thoreau calls, tell him I've left the country," Mungo says:

> It was the farm that allowed me the luxury of this vision for the farm had given me the insulation from America which the peace movement promised but cruelly denied. When we lived in Boston, Chicago, San Francisco, Washington (you name it, we lived there; some of us still live there), we dreamed of a New Age born of violent insurrection. We danced on the graves of war dead in Vietnam, every corpse was ammunition for Our Side; we set up a countergovernment down there in Washington, had marches, rallies & meetings; tried to fight fire with fire. Then Johnson resigned, yes and the universities began to fall, the best and oldest ones first, and by God, every thirteen-year-old in the suburbs was smoking dope and our numbers multiplying into the millions. But I woke up in the spring of 1968 and said, "This is not what I had in mind," because the movement had become my enemy; the movement was not flowers and doves and spontaneity, but another vicious system, the seed of a heartless bureaucracy, a minority party vying for power rather than peace. It

> was then that we put away the schedule for the revolution, gathered together our dear ones and all our resources, and set off to Vermont in search of the New Age.

The difficulty, obviously, is that neither Mungo's generation nor the ones before it have language for giving faithful intellectual substance to an account of human freedom, human discovery, human growth. The meaning behind these wonderful qualities requires a language that is forever new. Thoreau managed to express himself in it, and perhaps a few others, but to distinguish between human freedom and the settings it once inhabited is a very difficult thing to do.

Those who lay claim to serving their fellows often say that they know what freedom is, and that they have a plan for making it official, so that everyone can have it all the time. They know, they say, how to make human growth into a sure thing.

But growth, or the discovery of freedom, is not in a particular process; it only seems to be. It works the first time; the second time, it begins to be imitation, and a few times after that it is only dead routine. Freedom and growth are destroyed by routine. They have reality only where routines do not exist.

Here the analogue of a comparison of science with art or poetry may be serviceable. In the *American Scholar* for the Winter of 1967-68, Wylie Sypher draws on Gaston Bachelard's book, *The Politics of Space,* to show the difference between the free and spontaneous and the "official." He says:

> The scientist must repeat his observation if it is to be verified. In scientific experience "the first time doesn't count." By the time the observation is again confirmed, it is no longer new. In a marvelously poetic vein Bachelard remarks, "In scientific work we have first to digest our surprise." The poet not the scientist, is one who can trust his first vision, before the recognition is endorsed by duplicating it, before it is first codified into ideas, theories, laws.
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> As Bachelard says, the poet is always living on "the threshold of being"—"he has no past." The images of art are unpredictable and unrepeatable, and thus liberating. They validate the instant. The artistic response is an unexpected increase of life, a surprise that keeps consciousness from becoming somnolent or routine. The poet, then, has a privilege which the scientist, as scientist, must forego: the poet's world is forever new. His recognitions may be disturbing, for they are not yet crystallized into explanations. We hardly need be reminded of Keats's spatial experience in first reading Chapman's Homer:
>
> > Then felt I like some watcher of the skies
> > When a new planet swims into his ken.
>
> This first time the astronomer feels his wild surmise he is a poet, and the poetry in science is this instant of revelation or epiphany. Then his discovery must be *reduced* before it is reliable science. So Bachelard describes science as a way of organizing our disappointments under the guise of knowledge. Knowledge in scientific form is coherent disillusion, a sacrifice of discoveries to concepts and systems, a loss of an epiphany.

A loss of an epiphany, but a gain in practicality. There is no inevitable shame in this, however, nor any anti-human tendency unless there is also the presumption that, somehow or other, the consolidating and certifying techniques of science can turn epiphanies into production-line certainties. This is the scientific sin against the Holy Ghost—a form of the Faustian pact, of the Grand Inquisitor's self-justification, and of the prudent administrator's reasons given by Zeus for shackling and confining Prometheus.

But only mystics and philosophers, poets and artists, it will be said, want and are able to live by epiphanies, and these people are very few, while the masses are many. This, regrettably, is true but even our conventional histories show that societies which rule without allowance for innovation, fresh vision, and change turn into schemes of coercive conditioning which defeat even ordinary efficiencies and finally abort in intolerable crimes of excess and waste. A society which provides no avenues of escape from mediocrity to excellence, and from excellence to the daring of genius, eventually becomes a prison

for all men. The welfare of the masses depends in truth upon free upward mobility to high plateaus of originality and wonderful invention. An "ordinary" man will lose even his "ordinary" good unless his latent capacity to do something extraordinary is assumed and encouraged.

As has been suggested, there are many who *feel* that this is the truth about human life. All the optings-out, the growing distrust of Establishment assumptions, the migrations of the young in search of a New Age—even the futile quest for a never-never land of refuge from accountability in drugs—can be seen as ways in which people attempt to express this feeling in their lives. Yet it is a feeling with a wide gamut of possible meanings, and the question arises—can the alternatives they suggest be better understood? Can a spread of human possibilities be rationalized without being systematized? Is there, indeed, thought "without prejudice"?

It is not claiming too much to say that already a new intellectual frontier exists where thought of this sort is going on. The contentions of Michael Polanyi in his major work, *Personal Knowledge*, are one example. Similar qualities are evident in the recent writings of Jacob Bronowski, perhaps most explicitly in his remarkable essay comparing art with science in a paper in the *American Scholar* for the Spring of 1966. With Godel's Theorem as a foundation, Bronowski declares that all closed systems of knowledge must eventually break down. This applies most obviously to the sciences which obtain their certainty from mathematical disciplines. The only remedy, when such a system proves inadequate, is for the user of the system to go back into himself and discover a new axiom or principle to add to the system, in order to restore it to working condition. By this act of *self-reference*, as Bronowski names it, he recreates the forms of his technique, so that they can continue to be of use. With this periodic necessity as illustration, Bronowski points out that the creative surges of science come at cyclic intervals, separated by system-dominated periods of operation. The self-reference, in short, is intermittent. An artist or poet, and certainly the philosopher, on the other hand, ideally practices continuous self-reference; he cannot be an imitator, repeating the forms of the already said. The poet can suffer no bondage to the past, nor can he celebrate any "official" truth.

All history, it seems clear, will have to be rewritten when the implications of these discoveries are generally understood.

REVIEW
WAR RESISTERS IN PRISON

IN the fall of 1967, the father of a war resister who had dropped out of graduate school brought a question to Dr. Willard Gaylin, a New York psychiatrist. Since the young man did not feel that his objection to war was "religious," his father wondered about the comparative psychological effects (harm) of either going to jail or leaving the country. What did the psychiatrist think?

Well, he didn't know. Under the initial provocation of this question Dr. Gaylin began some research which led him, finally, to write a book—*In The Service of Their Country: War Resisters in Prison* (Viking, $6.95)—presenting the substance of tape-recorded interviews with six of the twenty-six black and white imprisoned war resisters he met with over a period of two years. Since the total number of war objectors in prison was seventy-four at the time his investigation began, these twenty-six subjects constituted "thirty-five per cent of the total population." The six resisters of the book seemed to Dr. Gaylin the most representative. Of all the men he talked to, he says toward the end:

> As to character structure, they demonstrated a high degree of ego strength (stability, sense of self), considering their age group, but this was combined with a disproportionately severe super-ego (conscience). As a result, they expected a great deal of themselves and tended to be grossly intolerant of their own failures. This punishing conscience, particularly when combined with a low capacity for expressed anger, is conducive to development of depression—and depression was a factor of real concern with some of the men. . . . In personality they tended toward the quiet, contemplative, and introspective. There was a relatively low level of aggressiveness and hostility, particularly when allowing for the elevation from norm that one would expect to see in a prison environment.
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> In sociological terms they were service-oriented individuals who believed that a man must be judged by his actions, not his statements, and that ideals and behavior were not separable phenomena.
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> And assuredly they were not the population at which the Selective Service Act was directed, for under the intention of the act most of these boys were indeed conscientious objectors.

Dr. Gaylin went into this project a curious and wondering man, intending to apply psychoanalytic techniques for exploration and the collection of information. He came out of it involved and enriched. He describes his book as an attempt to share with others "the passion, the sacrifice, the witness of some men of principle." There was some distrust of him, at first, but it seemed to dissolve quite early in the interviews. Some explanation of this distrust, and for its quick dissipation, is found in the following:

> There is a tendency to think of "psychodynamic" and "psychopathological" as identical terms. If we discover complex symbolic reasons rooted in infancy and childhood that have been determinants in a man's going to jail rather than into the Army, that does not *per se* make his going to jail a neurotic action, for we would find equally intricate unconscious factors determined another man's decision to go into the Army. It is the psychoanalytic assumption, remember, that *all* behavior is psycho-dynamically determined. There is that infuriating and erroneous tendency of both psychoanalysts and lay people to see the unconscious determinants as somehow discrediting the conscious action. I suppose this is a residue of the fact that traditionally the exposure of the unconscious has been incidental to and in the service of psychotherapy. There we start with a neurotic symptom and work back to discover its origins. While I am utilizing a similar method, I do not in advance define going to jail as a neurotic symptom.

Later, in a generalizing chapter, Dr. Gaylin returns to this question:

> Whenever I have discussed this group in the psychoanalytic community I have encountered a bias that assumes in advance a high degree of psychopathology. For one thing, it is behavior that represents a marked deviation from the norm, which is automatically suspect. Second, the fact that they have chosen prison suggests masochism—on the assumption that to choose to be in a punishing situation is in itself an act of masochism.

Such assumptions were not confirmed by Dr. Gaylin's research. Speaking of all his subjects, he says:

> . . . the conventional stereotyped equation of imprisoned war resister with the college radical becomes suspect with the mere breakdown of religious backgrounds. Most of them come from a personal sense of moral outrage with the war and with a strong conscience, which would not permit them to participate in it or avoid the confrontation. When they are political, they are still not politicians. They are not for the most part organizers, and when they attempt such activity often fail. They are activists who believe in action by example and witness.
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> Politically they subscribe to no clear-cut dogma. Only two of them are professed Marxists, and even that in the modern sense of the word. Two of them are conservative, Goldwater Republicans. Most do not even think in political terms. There is a high percentage of sympathy with anarchist-pacifist writings, and many of them describe their political philosophy as essentially "Christian pacifist." There are only two who by any stretch of the imagination would be called "hippie" types, unless one wants to include the Catholic Worker group (four members) who in dress and manner of living might be misinterpreted as such, but who in intention and action are entirely different.

In giving attention to this book, it seems a mistake to do much more than Dr. Gaylin does, which is to let the men speak for themselves. What we have quoted from him shows the level of his generalizations and his basic attitude. The interest of the book lies in the quality of the war resisters. One of them, just twenty-one, told his questioner:

> "It's funny how much more opposed to the Establishment I feel lately. I'm beginning to think not just in terms of the war but the entire system. Before I never thought that way. I have the sense that democracy has failed. That the system has stopped working, at least in the way that it had been outlined to me, and I don't know why. It's simply become too big and too powerful for its own good. Many times I wish I'd been born in a fifth-rate power like Denmark. I'd rather be Danish than American and free of this burden. People say that America is so powerful she has responsibilities, but responsibilities require an enlarged conscience, not a diminished one. I have lost my respect for the institutions of this country. At this point I don't even know if I would go to war if it were attacked.

Curiously, most of Dr. Gaylin's subjects were oldest sons: "Jimmy" was an exception:

> He was small, even by the standards of the CO's, and young even by their standards. Jimmy was constantly putting himself down and acting the joker. He was the youngest in his family (the only one in my entire study), and he was still a baby in his own eyes even though he was a man in the eyes of his colleagues and myself. He told me:
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> "All through high school I was upset and angry about the war. I planned on being a CO. I was always a pacifist and completely against violence in any form. I wouldn't eat meat and I wouldn't wear leather. Then, by the time my eighteenth birthday came, I was so repelled by the war that I didn't want to cooperate with it even to the point of registering. I didn't want any part of it. I didn't want to make any contribution to the functioning of any law which in itself contributed to the war. Everyone knew my convictions for a long time, and I had been told by my next-door neighbor who was the head of our local draft board that I would have no trouble getting a CO status.
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> "My birthday was in July. I gave myself three months to think about it and decide what to do, and in the beginning of November I notified my draft board that I was three months delinquent and had no intention of registering. I wanted them to know I was breaking the law. I didn't want them to feel I was trying to evade anything.
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> "Then things moved rapidly. In court, I made a statement that I thought fairly expressed what I felt. I thought it was a good statement—there wasn't lots of rhetoric—I know I can be silly and snotty and I thought I avoided that. I remember the prosecutor's dosing remark to the effect: 'What right does this nineteen-year-old child have to presume to decide what is right and what is wrong?'
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> "The jury carefully deliberated for ten minutes, and after giving it all of this consideration, they decided that this child was guilty. The prosecutor said, 'Why don't we give him three years?' and the judge evidently thought that sounded nice. For that's what he gave me."

Who are the imprisoned war resisters? Why did they go to prison? How are they affected by

this by this experience? These are the questions Dr. Gaylin set out to answer. The first two questions seem fairly well covered by the material of these interviews, but the answer to the third remains uncertain. Prison life is certainly wearing and degrading. Young men who go to prison think of it as a single act, but after they get there it stretches out into mindless duration, and the self-renewal of purpose they need, every morning, becomes more and more difficult. Some of these men will doubtless be tempered and strengthened, but others may be hurt. The latter possibility, obviously much on Dr. Gaylin's mind, led him to close his book with a devastating expose of the sentencing and parole procedures of the American penal system. No other Western country, he says, leaves the arbitrary sentencing power of the judge so free from review. And the federal parole board, he found, systematically discriminates against conscientious objectors while favoring other groups. Dr. Gaylin has written an absorbing and useful book.

COMMENTARY
PIETY AND ABERRATION

FOR interesting incidental information concerning the Aswan Dam (see Frontiers), we borrow the following from the *Britannica Year Book* for 1969:

> Formal ceremonies on Sept. 22, 1968, marked the successful transfer of the temples of Abu Simbel, threatened by flooding from the Aswan High Dam, to cliffs above the Nile River. The salvage operations had cost $36 million, of which $15.5 million was budgeted by the U.A.R. The largest foreign contribution ($12 million from the government, $1 million from private sources) came from the U.S. Still remaining to be salvaged in the Nile Valley were the temples of Philae.

This expensive act of pious regard for monumental objects of art, for *symbols* of the wisdom of the ancient Egyptians, makes an ironic contrast with the simultaneous neglect of the wisdom itself, so far as use of the waters of the Nile is concerned. If, more than a hundred years ago, an intelligent man, using information available in the encyclopedias and "yearbooks" of his time, could show how the *sapientia Egyptiorum* concerning land and water use avoided precisely the abuses and excesses now threatened by the High Dam, this extraordinary construction of technology may be a clear illustration of the modern preoccupation with means, to the point of blindness to ends.

The whole issue of "modern progress" is involved in questions of this sort. Also the bone of contention in the "two cultures" argument. The point is lost if the argument degenerates into claims about who knows the most about how "to do" things. The techniques of modern engineers are obviously far in advance of the means available in ancient times. But fascination with techniques and awe at technological "miracles" can easily obscure holistic common sense and intelligent pursuit of ends. Why, asks E. F. Schumacher, do politicians in underdeveloped lands devote so much of their "foreign aid" to construction of hydroelectric plants when their economies have far greater need of other things? Because, he answers, there is power and romance in dramatic technological monuments; they bring in votes.

Wisdom, Francis Bacon to the contrary, does not come from power over nature. It is the fruit of the development of quite other skills.

Wisdom is clarity concerning ends. Science is the elaboration and command of means. When the splendors of means displace attention to ends, science becomes obsessive and eventually destructive. The exactitudes of science are impressive and can, when subordinated to ends, greatly increase the human capacity to reach them. But these exactitudes and skills, admired in isolation, result in what Polanyi calls "unbridled lucidity," which, he says, can obliterate the original meaning which called for the application of science in the first place. Polanyi's book, *The Tacit Dimension* (Anchor, 1966), is a searching investigation of how and why scientific enterprise loses its head by mistaking its methods and techniques for the *meaning* of what it is supposed to accomplish. When a method is allowed to reshape and interpret meaning, achieving a monopoly on thought as a result, aberration assumes high authority and rules the affairs of mankind.

CHILDREN
. . . and Ourselves
INTERACTION WITH LIFE

IN the Winter (February, 1970) issue of *Teaching Exceptional Children* (published at 1499 Jefferson Davis Highway, Arlington, Va. 22202), Edith Sennet tells the story of teaching a little boy of eight who had been blinded by an accident when he was five. Joey was depressed, hostile, and withdrawn. Rejected by his father, he had become emotionally dependent upon his mother. When both he and she contracted tuberculosis at the same time, and were cared for separately in a sanatorium, the boy reacted so bitterly that afterward it seemed wrong to send him away to a school for the blind, causing another separation. So Mrs. Sennet was assigned to be his teacher at his regular school. She describes the setting of their work together:

> Our classroom was a closet in a library. Our materials were a braille-writer, standard braille paper (much like thin oak-tag), an abacus, and several preprimers with tactile representations of stories, words, or numbers. At the end of four weeks we had disposed of all but the brailler, and had Joey had his way, I would have been discarded with the rest. He was angry and hurt, confused by any and all outside stimuli. I symbolized to him merely one more source of irritation and intrusion. No amount of teaching ingenuity or creativity could entice him to want to learn. He was humiliated at having to use the brailler, and made the same errors daily in spatial judgment as he groped and lurched his way through the halls. If he spoke at all, it was in a barely audible monotone. Here was a child who had truly "turned off" and "tuned out." He defied me unmercifully. It was "stupid to remember that dumb alphabet just so you could be stupider and read with your dumb fingers."

However, before the school year was out, Joey had transformed the brailler, "that original source of terrible humiliation," into a status symbol!

> He had *offered* to give an oral demonstration in its use to the entire class! As he practiced what he would say or recounted the gossips and gripes of the day, I delighted in his choice of words, the tone and quality with which he delivered them, and the keenness of his memory, so evident in his sparkling accounts of what he had "seen" and heard.

What happened between Joey and the teacher? After her first three weeks of complete frustration Mrs. Sennet realized that the only part of Joey that still seemed alive was his terrible hatred of the sanatorium where he had been separated from his mother. So—

> Since I was unable to fight this obsession, I decided to join it, and to make an asset of it. If Joey was investing all his energies into negative feelings and thoughts, real or imaginary, revolving around that painful experience, then perhaps that experience could be used as the pivotal point in our heretofore defeated educational program. I told him that I was very interested in the sanatorium, and indeed I was, that I had never seen one, and that I would very much like to visit "his," if he cared to take me and arrangements could be made. He was astonished the first day, thoughtful the next, and enthusiastic several days later.

Arrangements for the visit were made. The doctor at the sanatorium agreed to it, and so did Joey's mother. Likewise the staff consultants at Joey's school. Since he needed to explain to Mrs. Sennet about this place, Joey became "teacher":

> Both before and during and after the visit to the sanatorium, I asked Joey question after question. We discussed his views on the length of the trip in terms of time and space, how large he envisioned the building to be as compared to his school, the size of the doctor's office in relation to our "closet," and the proximity of the institution to the town's airport, railroad, or highway.
>
> I also asked him what he recalled about the people. Did he think the doctor was tall or short, fat or thin? Was he grumpy or pleasant, a loud dresser or conservative, ugly or nice looking?
>
> On the ride home, we reviewed the same relationships in the light of all Joey had perceived while consciously searching for oral and auditory dues. He was amazed at how much he had forgotten. I was delighted by how much he had learned. On the ride home, it was Joey who deluged me with questions. He was still angry, but he was, for the first time, curious.

What was Mrs. Sennet doing? She was using the only tool for overcoming evil that is really effective—the power of the imagination. Imagination, William Blake said, uncreates evil. Exercising his mind, Joey began to *use up* the raw material of his obsession. The next step was to write a story about his trip. He dictated it to Mrs. Sennet. These are Joey's words, which she put into braille:

> I HATE THAT SCARY PLACE.
> THE DOCTOR IS A FINK.
> HE DONE HIDE MY MAMA.

Actually, Mrs. Sennet brailled the story three times. She cut up the words of one copy and they made up word games with them; the other duplicate became resource material for lots of things to do. Then she put the story on a record so he could play it at home.

> I had given Joey the option of enlarging on his story in his own voice on the other side of the record whenever he felt he was ready. We could either work on it together first, or he could try it immediately. He chose the latter course and plunged right in. He was hurt and furious when I played it back, after first playing my side. He had forgotten the sequence, and had mumbled whatever it was he had managed to recall. I convinced him that it might be interesting to practice, re-record, and compare the results. A spark of pride was stirring. He liked his story, and I, in effect, had stolen it.

The story became Joey's salvation myth. They made puppets to act out what happened, with little figures recognizable by touch to represent the nurse, the doctor, Joey's mother, and a dog. More stories were told by Joey. The idea words in each story were cut apart and put into fires. They had an "action" file and a "library" file. For keeping these records a shoebox was outgrown, so they got a lady's hatbox. Joey's life began to be filled with reading, writing, listening, and speaking activities, instead of just hating the sanatorium:

> Each new dictated story was a revelation in the growth that was starting to occur at ever quickening tempo. In one story, he would tell of his raising a hand to ask or answer a question in class. In another, one could see his self-confidence emerging as he told of his request to the teacher that he be allowed to "take tests like the rest of the kids."

Mrs. Sennet ends her report:

> The facts that have been presented, although limited in scope, are true, have happened, and are still in process. They illustrate that unique phenomenon, the teacher-pupil relationship, one of the highest forms of human interaction, involving as it does total communication between two human beings. The relationship demands that the encounter be met with no holds barred. It cannot occur through passion or intellect. Nothing less than the union of both will do when teacher and child engage in combat. And combat it is, loving and not so loving, but always moving in vital life-giving flux. It is the mutual risking of one's self to another, what trust and living are all about. It is what happened to Joey and me. His is still a very limited communion: one teacher, a few new experiences, a box full of words, and a head full of stories. But teacher, trips, words, and stories are all representative expressions of a child who is once again reaching out into his environment, and hesitantly but actively engaging those who people it. Primarily, he has learned to trust another human being. Because of this, I am confident that he will continue to seek with all his senses a dynamic interaction with life.

FRONTIERS

On Some Ancient "Ecologists`'

WHILE ecology is thought to be a very recent development in science—Lynn White observing that the term first appeared in 1873, and Wilfred T. Neill (in *The Geography of Life*) saying that Ernst Haeckl coined it in 1869—plenty of serious thinking had gone into earlier investigations of man's effect on his natural environment. Sometimes old books filled with such concern make very interesting reading.

The present controversy over the dubious benefits of the Aswan High Dam on the Nile river, to be completed soon, is considerably enriched by past scholarship going back to the Greeks. Yet the new issues are crucial enough. Medical critics are voicing alarm at the possibility that the waters of Lake Nasser—which will extend far into Sudan territory behind the dam—and the extended irrigation system will harbor the snails that carry the blood parasite infection of bilharziasis (see MANAS for May 3, 1967) and make breeding-grounds for malaria-producing mosquitoes. World Health Organization specialists anticipate that even with preventive measures the increase in bilharziasis will afflict over a million more people. Other infectious diseases are also expected to spread.

Champions of the dam argue that Egypt's population grows at the rate of a million a year and that without the additional irrigation and hydroelectric power it will provide, famine is sure to overtake the land. But critics call attention to what is known to be already happening to the land itself. An article in the Los Angeles *Times* for April 27 summarizes:

> The major drawback is that the High Dam will retain most of the silt in the river—backed up in Lake Nasser. The sediment contains the nitrates and phosphates washed down from the highlands that supported the chain of life in the Nile Valley and the Delta.
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> In the past, the silt and sediment in the river—130 million tons a year—were left behind by the annual flood and actually formed the rich alluvial soil of the valley of lower Egypt. To make up for that enormous deposit, Egypt will have to build fertilizer plants using electricity from the dam.
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> The river's sediment also carried the nutrients that maintained marine life both in the Nile Delta and in the eastern Mediterranean Sea. Deprived of this food fish have virtually disappeared off the mouths of the Nile and Egypt has suffered already an estimated yearly loss to the fishing industry of $7 million.
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> The sardine catch has been drastically reduced, and there are reports that the delta shrimp is dwindling. And now that the course of the Nile has been slowed by the High Dam, experts worry that delta marine and plant life may be further damaged by intrusion of salt water from the sea.
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> Additionally, mud from the Nile deposited in the delta has been the main source of building material—in the form of bricks—for millions of Egyptian farmers. But with the mud no longer being spread in the delta, Egypt must build plants to fashion other building blocks—concrete or sand blocks.

Lake Nasser's waters are expected to achieve their normal level in 1974, at which time they will have displaced some 120,000 Nubians in both Egypt and the Sudan. Already, in presently disturbed traditional societies, criminality and delinquency rates have gone up.

Guesses as to how long it will take for the lake to fill with silt behind the dam vary from two hundred to seven hundred years. Meanwhile, there is the nasty suggestion that an Egypt become vitally dependent on a single, massive hydrological installation will be peculiarly vulnerable to bombing attack from the air. Defensive missile bases are now in evidence near the construction site.

The dam is enormous—more than two miles long, 330 feet high, and almost 3,000 feet thick at the bottom. The top will be 120 feet wide, crossed by a black-top road with trees planted along the sides.

The Aswan High Dam, erected for Egypt over a period of ten years by Soviet engineers, is located near the "low dam" constructed by the British at the turn of the century and twice raised years later to higher levels.

Irrigation made possible by the new dam is expected to add some 3,000 square miles to Egypt's arable land. It was this figure which made us

wonder how much of Egypt had been in cultivation during ancient times, under the Pharaohs. All that we could find on the subject in the 1953 *Britannica* was the figure for 1950. In that year Egypt had 8,593 square miles in cultivation. The writer said that, properly used, the gravity flow of the Nile *could* irrigate a total of 11,250 square miles, and that the area would be increased to 14,375 square miles if pumps were added to the system.

According to our "old book," *The Earth as Modified by Human Action* (New York: Scribner, 1874), by George P. Marsh—first published in 1863 under the title of *Man and Nature*—the Egyptians of that time, a little more than a century ago, had under cultivation seven thousand square miles. (The farmed area has thus been increased by 1600 square miles during the past hundred years.)

Mr. Marsh then says: "But the industry of the Egyptians in the days of the Pharaohs and the Ptolemies carried the Nile-water to large provinces, which have now been long abandoned and have relapsed into the condition of desert." Using then existing historical research, Marsh reports: "In the best days of Egypt, probably all the land was cultivated that could be made available for agricultural purposes, and hence we may estimate the ancient arable area of that country at not less than 11,000 square statute miles." He also speaks of passages in Diodorus Siculus, Plutarch, and Pliny the Elder which describe "the mixed system of embankments, reservoirs and canals built by ancient engineers in Egypt." The object of these constructions was "to diffuse the swelling waters and their sediment over as wide a surface as possible, to store them up until the soil they covered has been thoroughly saturated and enriched, and then to conduct them over other grounds requiring a longer or a second submersion, and, in general, to suffer none of the precious fluid to escape except by evaporation and infiltration." If, Mr. Marsh says, the Egyptians had really retained all the water behind elaborate embankments, "it is conceivable that the productiveness of the small area of cultivable soil in the Nile valley might have been long kept up by artificial irrigation and the application of manures." He adds, however:

> But nature would have rebelled at last, and centuries before our time the mighty river would have burst the fetters by which impotent man had vainly striven to bind his swelling floods, the fertile fields of Egypt have been converted into dark morasses, and then, perhaps, in some distant future when the expulsion of man should have allowed the gradual restoration of the primitive equilibrium, would be again transformed into luxuriant garden and plough land. Fortunately, the *sapientia Ægyptiorum*, the wisdom of the Egyptians taught them better things. They invited and welcomed, not repulsed, the slimy embraces of Nilus, and his favors have been, from the hoariest antiquity, the greatest material blessing ever bestowed upon a people.

Until the present—for forty or fifty, perhaps a hundred centuries—the Nile has been adding this fertile silt to the Nile valley at the rate of three or four inches per century. Borings to great depths indicate this, says Mr. Marsh. "The old Egyptian system of embankments and canals," he relates, "is probably more ancient than the geological changes which have converted the Mississippi from a limpid to a turbid stream, and occasioned the formation of a vast delta at the mouth of that river."

Well, our research is hardly "scientific," and the moral perhaps uncertain, unless it be that today's heightened power for disturbing nature is stimulating a more rapid feed-back from the earth herself. One implication of the disasters known and predicted because of the Aswan High Dam may be that a less forceful use of natural resources might bring a more durable balance between the requirements of man and the needs of other forms of life. If the old Egyptians, using only gravity flow, could put as much as eleven thousand square miles of land under cultivation maybe that is enough for the population which Egypt ought to sustain.