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THE HUMAN DILEMMA

BACK in 1973, Annie Dillard wrote a letter of articulate complaint to the Management. In the chapter on Fecundity in *Pilgrim at Tinker Creek*, she detailed her extreme dissatisfaction with the way the universe is run. The profligate ingenuities of birth—and not a spot on earth without some sort of fertility—seem diabolically paralleled by cunning devices for extinction. Creation is everywhere overtaken by wearing decay, and since both are continuous, what happens in between may seem little more than incidents with elusive meaning. We speak of the wonder of life, and there are fine books to read on the splendors and beauties of Nature. But there are other books on the hot pursuit of death—heartless, sudden, or tortured and lingering. Ripeness seems always to end in entropy. Who can make sense of all this?

In a remarkable book on the world of nature, *Instinct and Intelligence* by R.W.G. Hingston, there are paired chapters such as "The Perfection of Instinct" with "The Inflexibility of Instinct," and "The Wisdom of Instinct" with "The Folly of Instinct." If only we knew what all these creatures are doing—what they stand for, or live and die for! But they do not, will not, can not, say. So, with ample justification, Annie Dillard declares the world "a monster."

> Any three-year-old can see how unsatisfactory and clumsy is this whole business of reproducing and dying by the billions. We have not yet encountered any god who is as merciful as a man who flicks a beetle over on its feet. There is not a people in the world who behaves as badly as praying mantises. But wait, you say, there is no right and wrong in nature; right and wrong is a human concept. Precisely: we are moral creatures, then, in an amoral world. The universe that suckled us is a monster that does not care if we live or die—does not care if itself grinds to a halt. It is fixed and blind, a robot programmed to kill. We are free and seeing; we can only try to outwit it at every turn to save our skins. . . .
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> That something is everywhere and always amiss is part of the very stuff of creation. It is as though each clay form had baked into it, a blue streak of nonbeing, a shaded emptiness like a bubble that not only shapes its very structure but that also causes it to list and ultimately explode. . . . The world has signed a pact with the devil, it had to. It is a covenant to which every living thing, even every hydrogen atom, is bound. The terms are clear: if you want to live, you have to die. . . .

There are lots of would-be explainers around; some people even have the impudence to offer explanations of life and death for money; and there are those who, if you express personal bewilderment, will write you a letter about a question-answerer they know who will make everything perfectly clear. No doubt things can be made clearer, but if a final explanation could be given in words, and we could understand the words, we should all—everybody, including the birds and the bees—have long since been transported to Nirvana. It begins to be evident that if we have something *to do* in the world—and having something to do is the foundation of meaning—the *sine qua non* of all explanation—then only by doing it shall we obtain the explanation. Knowing is an act, not a result of listening.

Annie Dillard's letter to the Management is itself a clue to the meaning of the human enterprise. Humans have a moral sense. They have a need to understand, to know *why.* There is no final satisfaction in anything else. We are obliged to do a lot of other things besides understand—things such as eating, sleeping, sheltering ourselves, and having children—and we seem able to do them whether or not we have a sense of larger meaning. Yet if we knew the reason for our own being and our involvement in all these other things, we should probably suffer fewer disasters, or perhaps none at all. The disaster of our present life and course is, after all, legendary. The follies of instinct are indeed minor—no more than casual aberrations—when compared with the blunders of human beings, once we start going in some carefully rationalized direction. In the *Groundswell Quarterly* for the Winter of 1975-76 (published in Norwich, Vermont), we found this apt summary of certain current doings:

> Beating at the doors of the Pentagon constantly are the representatives of the powerful companies that manufacture both conventional and nuclear arms; back of them are those who speak for the companies that supply the materials for such manufacture. Not only profits but many thousand jobs are at stake unless the lethal process continues. The basic economic health of this nation is more deeply dependent on the manufacture of armaments—both for our defense "needs" and for export—than most of us realize.
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> Moreover, the competition for contracts with the government is intense. Last September the 29th annual Air Force Association Convention was held at the Sheraton-Park Hotel in Washington. All the paraphernalia of the usual U.S. trade show was present. But the merchandise displayed was very different. The purpose of the show was to permit the companies that make the materials for mass murder to compete for Pentagon orders. Thus in a sort of carnival atmosphere complete with svelte models to pass out propaganda the rival concerns exhibited their deadly fighter aircraft provided with the newest devices for obliterating cities, laying waste the landscape and for burning and tearing flesh. And no one seemed aware of the obscene horror of the whole exhibit. Yet no more complete perversion of any basic sense of morality can be imagined.

Demon, some wise Kabalist said, *est deus inversus*. To have the capacity of a god is to have the potentiality of a devil. That is one of the background conditions of morality. There is no morality without a choice between good and evil. While it is true that the finer points of morality are always arguable, who will seriously maintain that there is anything but evil, reflecting hideous intent, in all those devices for obliterating cities and burning and tearing flesh?

We are obliged to admit that both the offense and the feeling of outrage it excites are a part of "morality," or arise out of the capacity for moral judgment.

"Nature" is not much help. Thinking about such dreadful acts—as more temperately disclosed by the habits of barnacles and praying mantises—Annie Dillard muses:

> Evolution loves death more than it loves you or me. This is easy to write, easy to read, hard to believe. The words are simple, the concept clear—but you don't believe it, do you? Nor do I. How could I when we're both so lovable? Are my values then so diametrically opposed to those that nature preserves? This is the key point.

Well, the creatures of the natural world don't *know* about life and death; they just live and die, gracefully, furiously, eternally. They don't "know" anything at all. But we know, and we entangle ourselves with one mythic credo after another, to give life meaning. We have a god or a half-god for every mood. Pan is sobered by the tears of Niobe; Prometheus is heroic, but every day the vultures come to torture him. Tantalus and Sisyphus are indispensable symbols these days. Faust and the Grand Inquisitor seem to have teamed up to initiate modern civilization into their secrets. What enables us to do these terrible things we read about in the papers? Is it because we have the capacity to know, are able to think about good and evil and to make up theories about them?

If you escape to the woods, you may not be able to stay. You may, if you think about it, reach Annie Dillard's conclusion:

> Look: Cock Robin may die the most gruesome of slow deaths, and nature is no less pleased; the sun comes up, the creek rolls on, the survivors still sing. I cannot feel that way about your death, nor you about mine, nor either of us about the robin's or even the barnacles'. We value the individual supremely, and nature values him not a whit. It looks for the moment as though I might have to reject this creek life unless I want to be utterly brutalized. Is human culture with its values my only real home after all?

> My rage and shock at the pain and death of individuals of my kind is the old, old mystery, as old as man, but forever fresh, and completely unanswerable. . . . It is true that many of the creatures live and die abominably, but I am not called upon to pass judgment. Nor am I called upon to live in that same way, as those creatures who are mercifully unconscious.

But what, then, are we called upon to do? Is there a voice in Nature, or even one outside it, which speaks to this point?

Ortega has a passage on a difference which seems to bear on the question. In *Toward a Philosophy of History* he says:

> Every morning the poor beasts have to face almost total oblivion of what they lived through the day before, and their intellect has to work with a minimum fund of experience. Similarly, the tiger of today is identical with that of six thousand years ago, each one having to begin his life as a tiger from the beginning as if none had ever existed before him. But man, thanks to his power of memory, accumulates his past; he possesses it and can make use of it. Man is never the first man but begins his life on a certain level of accumulated past. That is his single treasure, his mark and privilege. And the important part of this treasure is not what seems to us correct and worh preserving, but the memory of mistakes, allowing us not to repeat the same ones forever. Man's real treasure is the treasure of his mistakes, piled up stone by stone through thousands of years. It is because of this that Nietzsche defined man as the being "with the longest memory." Breaking the continuity with the past, wanting to begin again, is a lowering of man and a plagiarism of the orangutan. It was a Frenchman, Dupont-White, who around 1860 had the courage to exclaim: "Continuity is one of the rights of man; it is a homage of everything that distinguishes him from the beast."

Continuity? What is continuity? In Ortega's account humans have continuity because we have minds including the power of memory. Mind is also the instrument of shared identity. The mistakes of our other selves need not be ours. We can learn from the past. That is the idea, at any rate. How does it work?

A proposition might be offered on this question—a proposition made from an analogue of all the births and deaths that Annie Dillard writes about so well. All that fecundity and mortality *is* the story of nature, and we now propose that for humans the flooding multiplicity of *ideas*—which sometimes come in great waves—is parallel to the vast flow of biological existence. Today the human world is everywhere fertile with countless mental seeds of innovation. The germs of change, of new beginnings—in the form of ideas, enthusiasms, trials, and struggles—pervade the vital atmosphere of human life. The tangible evidence of this for most of us comes in the form of countless pieces of paper. Just the bibliographies of books and articles on envisioned changes occupy many pages. The pioneers are as profligate with plans as nature is with seeds. Some days it seems to be snowing diagrams for solar heating, collecting solar energy, building methane plants, fish farms, green houses, windmills, and ingenious applications of intermediate technology. We exaggerate, of course; but then, we see only a fraction of the tide of new ideas. Can anyone count the seeds of the trees? We do not exaggerate. And at least *some* of these seeds will germinate and grow.

The universities are lining up, offering courses in these areas, sponsoring conferences and giving shelter to research organizations. Dozens of newsletters report the developments of experimenters, list sources and titles of reports, give the dates of conferences, publish interviews with people working in the field. The spirit of much of this work is exemplified in an editorial announcement in *Acorn*, a bi-monthly issued by the Midwest Energy Alternatives Network (Governors State University, Park Forest South, Ill. 60466):

> We are trying to establish linkages between people approaching similar situations from diverse backgrounds (including the range of alternative energies, organic gardening, appropriate technology, community action, cooperatives, architecture, engineering, energetics, planning, and education).
>
> What are our present perspectives on this process? Our "new" formulas must acknowledge the

> natural limits of cycles. Any "new" technology must leap from the bed of Procrustes. Here is the start of an ecologically compatible life/energy template of human community.
>
> Must the era of recognizing the natural limits of global resources spell deprivation and hardship for many? An answer suitable to every nation comes from Gandhi when he said, "There is enough for everyone's need, but not enough for everyone's greed."
>
> In finding the appropriate technologies for each niche and system, we must respond to other essences as well as humanity. They must also be appropriate for the particular cultural and economic milieu of the people who will use them. Diversity and integrity are a pattern of interdependence that can be seen widely in nature.

Among the articles in a recent issue of *Acorn* is a description of a home and life-support system—including dwelling, food supply, energy supply, waste disposal, barn, solar pond, water supply, and anaerobic digester—that would provide the home-owner with "nearly all of his physical, and many operational, needs through his own work from a piece of land at the rate of one acre per person." The writer, John Martin of Argonne National Laboratories, says:

> This synthesis of "primitive" and industrialized is intended to improve the opportunities for more abundant living among the peoples of this nation and the world. In self-supporting domiciles, people would be less vulnerable to control of their life's necessities by economic and political systems—over which they have little or no control.

Here and there, around the country, schools of natural farming and gardening are appearing, run by people who know what they are doing and have the ability to attract others who want to learn and apply what they learn. A California group called Ecology Action is demonstrating ways of increasing crop production up to sixteen times typical yields in Santa Clara County, California. A former actor, Alan Chadwick, who has gardened for fifty years, and who taught gardening without chemicals or machinery at the University of California at Santa Cruz, is developing a program for mini-farms. He is training apprentices. The program involves food plant cultivation in small raised beds suitable for urban use. Information about these activities may be obtained by writing to Ecology Action, 2225 E1 Camino Real, Palo Alto, Calif. 94306 or the Institute for Man and Nature, P.O. Box 67, Covelo, Calif. 95428.

Michael and Carla Emery, two former urbanites who moved to a 450-acre farm in Idaho in 1970, turned their place into a school after Mrs. Emery's *Old Fashioned Recipe Book*—which is really a treatise on living on the land—caught on. The school teaches a variety of "lost arts":

> "They keep talking about this explosion of learning in our modern world," Carla Emery said. "But nobody stops to think how much we've forgotten in the last hundred years. Do you realize what a tremendous wealth of learning we have been losing over these years as older people are the only ones who've learned these things because they are not things taught anywhere any more?"
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> The School for Country Living teaches these "forgotten" things. Its curriculum includes such things as harvesting, planting, preserving and cooking crops, blacksmithing, animal husbandry, beekeeping, fence-building, soap-making quilting, and other related skills. Last year, from June through September, persons came from all over the United States to the School for Country Living to learn the crafts their grandparents deemed necessary for survival on the land. . . .
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> "Last year most of our courses were taught by our neighbors here," Mrs. Emery said. "We had 17 instructors, some were part time, some worked full time. We do pay our instructors $10 a week and room and board. This year we've got 10 full-time instructors, 10 part-time instructors, and 35 experts-in-their-fields to run 36 workshops. They come from all over the country.
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> "This year we've got an educational director, Frank Jacobson, who resigned as principal from Monterey High School in California to come here with his wife for $10 a week and board and room. . . . This is a very real educational experience and we intend to keep building on that. We teach 150 classes a week here and nine tenths of them can't be found in any school curriculum in the country. . . .
>
> "What we're really doing out here in our school is two-dimensional. On the one hand we're trying to hold on to all the wonderful things people used to know about, like building your own kiln out of mud,

> or learning how to make adobe bricks—you know, the lost arts. On the other hand we're very active in what could be called the frontier of intermediate technology and alternative science. Out here you can learn to build a geodesic dome. We are also using alternative energy with our solar heat collector that warms a spring-fed tank of water for hot showers and other things. . . . We'll send a list of our classes to anyone who wants one."

How can the school operate without charging tuition? According to the story in the *Los Angeles Examiner* (March 4), Mrs. Emery received an advance of $115,000 from Bantam for the paperback rights to her recipe book. The school's address is Box I, Kendrick, Idaho 83537.

So there is this wave of change coming over the country and the world. While still in the pioneer stage, it seems to gather strength every day, becoming more audible and visible all the time. It has standard-bearers of various sorts—people like E. F. Schumacher, Howard Odum, John Todd, and Wendell Berry—all extremely individual human beings, diverse in capacities but with deep common concerns. They are all, to recall Henry Beston's phrase, "on the side of life."

One sees in this movement—if it ought to be called a movement—many of the higher qualities which spring from self-consciousness: a sense of continuity, deliberate correction of past mistakes, a feeling for the whole by individuals who reflect symmetrical aspects of the being of the whole in their minds. This may be nearly all there is to "morality."

What about the unanswered question we started out with? Do these people have an answer? Or do they feel reasonably comfortable in not having an answer that can be put into words?

There seems little doubt that people who live on the side of life generate a field of meaning which alters the quality and direction of their questions. The assumptions they start out with have somehow changed. The "givers" of self-conscious beings are no longer muted by an alien way of life. For one thing, the sense of self is no longer a citadel of isolation. The feeling that the self cannot die becomes as strong as the sun's radiance. No hearsay, no preaching helps in such matters, although, in the environs of human activity and awareness on the side of life, another kind of speech may become possible, with fresh, natural arts bringing deeper forms of communication. Then, perhaps, the earth—the earth with all its ceaseless dyings and bornings—will emerge as a matrix fostering meanings that reach beyond both life and death.

REVIEW

DISCONNECTED MUSINGS ON PUBLISHING

A FEW months ago we heard about a book on psychology that was said to be very good, but which had been generally neglected, so we asked for a review copy. The book is Andras Angyal's *Neurosis and Treatment—a Holistic Theory,* first published in 1965 and brought out by Viking in paperback in 1973. We reviewed it in MANAS for March 10. Two weeks later we heard from a reader who asked where she could buy the book. She had tried several stores, but none of them had it in stock.

Of course. In the first place, the original publisher was Wiley, which issues mostly school texts or technical volumes noticed mainly in professional journals. The Viking paperback attracted little attention, since reviewers seldom write about paperback editions. There is a sense in which they can't afford to. Paperbacks seem to come out by the hundreds, these days. So Dr. Angyal's book remained virtually unknown, save for certain enthusiasts who knew his work and found it valuable in both practice and in education. One of his admirers was A. H. Maslow, who wrote the introduction to *Neurosis and Treatment.* Actually, Dr. Angyal and Dr. Maslow had some qualities in common, one being that what they wrote is understandable by the general reader. Publishers finally found this out in relation to Maslow's writing, but it took a long time. They had begun by issuing his books as textbooks, which meant that the general public would not normally hear about them except by accident. It sometimes happens that within a publishing organization the people who work in the textbook division don't even talk to the people in the "trade" division (trade books are for the general reader), so that works published as texts are planned for a limited market with no effort made to get them into the stores. They're not *supposed* to be in the stores. They are sold to college professors by special representatives who try to get them adopted as texts for courses.

The publications of university presses are somewhat similarly regarded. University presses issue books which, by reason of their scholarly content, no one else can *afford* to publish. Our debt to the university presses is therefore great. They often put into print material of lasting importance. But now and then an academic writes a great book, and by some mysterious process the word of its excellence gets around. People hear of it and try to buy copies. Dr. Maslow was sometimes embarrassed by the fact that his university publisher printed only three thousand copies of a book whose press run should have been at least ten times that. Teachers in universities wanting to use his book wrote him in desperation—where could they get thirty copies for a course starting next month? Eventually, Maslow's books began coming out in trade editions right from the start.

But not all good books have that kind of magic. Some never "catch on." The astonishing thing is not their neglect by booksellers and the public, but the fact that they are published at all. In some of the better publishing houses, it seems, there are still a few "book people" with the capacity to recognize merit, and the firms they work for still have some kind of conscience about issuing a few good books every year, even though they are not expected to sell. But little effort is expended on persuading the stores to buy them. The money for promotion is devoted to books with a better chance of reaching the mass market. Without a number of titles which sell in tens or hundreds of thousands, the publishers won't survive. Oddly enough, they want to survive.

So, year in year out, good books are neglected and forgotten. After a number of months, the publishers remainder everything that hasn't sold. They have to. They can't afford storage space, for one thing, so the books are sold to mail-order houses, often for less than ten cents on the dollar. Meanwhile, only the stubbornest of "book people" talk or write about good books that didn't sell. Mere book people, alas, haven't the power to keep good books alive. The accountants who are schooled in economic survival rule here, and publishers who don't listen to their accountants are a rapidly diminishing breed.

Writers, of course, are much affected by these conditions. About a year ago we heard from a writer who is intellectually eminent and widely quoted, yet who finds that his publisher—a big one—is doing little to get his books into the stores.

> My publisher [he writes] appears not to do business with an enormous number of bookstores due to certain credit requirements, but these are mainly the stores my books must sell in. It's gotten to the point where I just don't expect to see my books carried anywhere. . . . It's galling in the extreme to see your work handled so cavalierly. And after a certain point, demoralizing, if you have any hope of ever living by your writing.

The implication here is that the stores run by people determined to stock good books, even if they sell only moderately well, are stores which are likely to be slow pay. The accountants rule here, too, so that the publisher's salesmen are instructed not to call on those stores; and if the dealers, who are sometimes literate, send in orders by mail, the orders may not be filled.

This seems to be a problem without much of a solution. Since we live in a time when thirty-six thousand books are published every year, there is small possibility of assuring adequate attention to the few that deserve to be widely read. So, simply to locate good books to read is likely to go on being hard. Perhaps it has always been hard. It was certainly not easy to get hold of any sort of book back in the days when they were hand-written on parchment. No doubt we're better off, now, with all those wonderful paperback editions of the classics, and of many current volumes available at low cost. But there are still problems in knowing *what* to read in an age when *selling* reading matter is so much more important than admiring and understanding it. The laws of the market place govern all easy reading.

There was probably a golden age for readers back in the Renaissance (they weren't so many, then), when the pioneer printers regarded it as a great privilege to put fine writers into print. There must have been much less junk reading in those days. And there was certainly less junk put in print two hundred years ago, when the founders of this country read the classics of the Enlightenment.

What about a hundred years ago? Those were the days when Emerson and Thoreau were being published—something of a golden age, too—but Thoreau, we should remember, didn't sell very well, not to his contemporaries, anyway. Couldn't people *see* how good he was? No, they couldn't. And their lack of perception can hardly be blamed on the market place. Conversely, one of the reasons for today's dominion by the market place was the failure of Americans to appreciate Thoreau until it was too late. Recognition of merit is a chancy thing, and those who set themselves high standards need to be prepared for disappointments.

In the *Nation* for March 20, the magazine's poetry editor, Grace Schulman, put together some notes on the poetry and criticism which appeared in the early issues of the *Nation,* a magazine which began weekly publication a little over 110 years ago. Walt Whitman's *Drum-Taps* was reviewed in the first issue—Nov. 16, 1865. The critic, Henry James, then twenty-two years old, called it "an offense against art." A year later another *Nation* writer gave attention to Herman Melville's poems on the Civil War, expressing surprise that the author "should have mistaken some of these compositions for poetry, or even for verse." Other *Nation* reviewers were more perceptive, but the hazards of talent or even genius are evident enough in these samples of the critical art. One recalls that van Gogh sold only one painting throughout his tortured life, and that Mark Twain, in order to get *Huckleberry Finn* into print, had to start his own publishing company. Paine's *Common Sense* was self-published at first, and William Blake printed and published almost all his work with the help of his wife.

Excellence has never been easy to produce, easy to recognize, or easy to maintain. The writer of books has a harder time, actually, than a magazine publisher, since a periodical, once started, has opportunity to grow over a period of years. The book author has no way of keeping in touch with his readers. He can of course go into the mail-order business, as some writers have done. Writers have even bought up the remaindered portion of their work from publishers and offered it for sale through the mail, and this has worked fairly well for writers who produce a succession of books and become known for their courage and the strength of their ideas. Scott Nearing is an example.

But meantime magazine publishing lends itself more naturally to the identification of a particular audience. At twenty-five, William Lloyd Garrison, already a skillful printer, started the *Liberator* on January 1, 1831, without a dollar of capital o, a single subscriber. He wrote and printed it himself, and continued publishing for thirty-five years—until the Civil War fulfilled the cause for which he had for so long contended. It can hardly be said, however, that Garrison supported himself with the *Liberator*. He and his partner, Isaac Knapp, slept on the floor of their press room. The market place was not a factor. Other considerations enabled the *Liberator* to survive and to record not only President Lincoln's Emancipation Proclamation, but also the amendment to the Constitution prohibiting slavery forever. Then Garrison stopped publishing. He had said what he had to say.

The ideal role of the book is to make a permanent record of seminal ideas. The role of the magazine is to create fields—publics, you might say—to facilitate the spread of seminal ideas. Without the fields, the books won't circulate very much. Some years ago, an Indian publisher of Gandhian works, chiefly the writings of Jayaprakash Narayan, asked MANAS how the most promising American students could be reached. The reply was that there was really no way to find them—they were dropping out of college so fast and doing so many different things that no common denominator existed. This still seems true. Some day, if the circulation of MANAS should ever grow large enough to support the publication of what seem especially good books, some experiments in book publishing might be attempted. Meanwhile we shall continue to review works that seem worthy of attention, whether or not they are available in the stores. Often such books require some effort to track them down.

COMMENTARY
ON TEACHING MATHEMATICS

THERE are various ways of supplementing what Mr. McClintock says in this week's "Children." In *An Introduction to Mathematics,* first published in 1911, Alfred North Whitehead began by explaining that for most students, the study of mathematics brings disappointment. He tells why:

> The reason for this failure of the science to live up to its reputation is that its fundamental ideas are not explained to the student disentangled from the technical procedure which has been invented to facilitate their exact presentation in particular instances. Accordingly, the unfortunate learner finds himself struggling to acquire a knowledge of a mass of details which are not illuminated by any general conception. Without a doubt, technical facility is a first requisite for valuable mental activity: we shall fail to appreciate the rhythm of Milton, or the passion of Shelley, so long as we find it necessary to spell the words and are not quite certain of the forms of the individual letters. In this sense there is no royal road to learning. But it is equally an error to confine attention to technical processes, excluding general ideas. Here lies the road to pedantry.

Mr. Whitehead proceeds to an engrossing exposition of general ideas about mathematics. Every teacher of mathematics could profit from this small but exciting book; and students, too, would gain a sense of adventure from it. *An Introduction to Mathematics* (now a Galaxy paperback) keeps the subject philosophically and humanly alive.

Another "old" book with similar purposes is Scott Buchanan's *Poetry and Mathematics.* Mr. Buchanan says:

> Mathematics suffers much, but most of all from its teachers. As a result of bad pedagogy—and I mean the kind often judged best by administrative pedagogues—the appearance of the algebraic formula, a geometrical figure, or an innocent set of symbols, reduces the reader to an unbecoming attitude of hypocritical humility. A great many sometime students of mathematics try to persuade themselves that they haven't mathematical minds, when as a matter of fact they have only had nonmathematical teachers. Mathematics is not what most teachers of mathematics teach. They, with the good intention of conveying what they themselves have only as a skill of manipulation, have unconsciously worked hocus-pocus on their students. They have repeated and illustrated opaque formulae, sometimes to the admiration, but almost always to the bewilderment of their students.

In a comparatively brief volume, Mr. Buchanan does much to help the reader to think "mathematically."

CHILDREN
. . . and Ourselves
THE EDUCATIVE VOICE

IN a review of the new (fifteenth) edition of the *Encyclopedia Britannica*, Robert McClintock measures the success of the editors in achieving their declared double purpose—to provide a work which is both authoritative and efficient for reference, and also to serve as the doorway to a program of basic education. In Mr. McClintock's view, the new *Britannica* is a fine and much improved reference work for looking up particular things, but a poor tool for self-education. His point is that while the material has been technically arranged to give easy access to the person who wishes to broaden kits understanding in a given area, it is not *written* with this objective in mind. The *Britannica* articles achieve "authoritativeness, comprehensiveness, encyclopedic brevity of condensation, accessibility, accuracy, and international orientation," but these qualities are often of secondary importance in education. The articles, for one thing, are written in "the authoritative voice." Mr. McClintock comments:

> A summary statement of learning need not be presented only in the authoritative voice. It can equally well be presented in the "educative voice," and the difference between the two voices, understood as ideal types, can be clearly stated. When one speaks in the authoritative voice, one's prime concern is to give a good exposition of the attained body of knowledge; and when one speaks in the educative voice, one's prime concern is to communicate the questions, the posing of which has led to the attainment of the body of knowledge. . . . The question is whether the proper balance between the authoritative voice and the educative voice has been attained with the *Macropaedia* in order to do justice to the dual intent the editors gave the work. To me, the answer is clearly negative.

The problem, Mr. McClintock says, "lies with the habits of editors and writers and readers who have long been accustomed to thinking of an encyclopedia primarily as a standard work of reference." What has been left out?

> Certain latitudes were given authors, *as authorities*. Nothing seems to have been said about the latitudes they could take, *as educators*. Telling emphasis and selection are the genius of good educative discourse, balanced neutrality and comprehensiveness are the hallmarks of authoritative discourse. Whether these two forms can be well synthesized within a single article is moot. To me, the editors would have come much closer to such a synthesis had they proceeded with a full and explicit recognition of the duality of their intent, informing authors that what they wanted might be impossible. I believe that they would have done better asking authors to first draft essays that, in the author's judgment, would engage the curious, intelligent layman in thinking critically about the matter at hand, and then ask these authors to work into that text an authoritative reference coverage of the topics specified. . . .

For illustration Mr. McClintock chooses the material at the beginning of the *Propaedia* (the "beginner's" section), which is on "Matter and Energy." This is logical enough, since this is where the modern scientific world-view begins—with elemental stuff and forces. The reader is first directed to "Atoms," which describes nuclei and particles; then he is to turn to Energy, involving radiation and states of transformation of matter. Wandering wide-eyed through this maze of authoritative physical information, the student is almost certain to be overwhelmed. "Nothing in the outline or the headnotes to it warns the beginning student against trying to follow it as printed in the *Propaedia."* If he does follow it, he will dive directly into the heart of the atom, finding "an extremely compact summary statement of our current knowledge about the atomic nucleus." This, Mr. McClintock suggests, "presumes too much for him to comprehend it as a useful beginning, as his introduction to the field."

Well, after all, it is an *encyclopedia* article, isn't it? And in the *Britannica*, too! Surely Mr. McClintock is asking too much. Well, perhaps not. Not, that is, if we take seriously the

Britannica's claim to being an avenue to self-education.

But, thinking about the location of Matter and Energy at the beginning of *Propaedia,* or the "guide" section, we recalled a course on cosmology given in adult education by an astronomer in the Los Angeles area. He began by saying: "There are two broad accounts of how the universe came into being: One is found in myth, the other in modern physical theory, and it has not yet been decided which of the two is superior." Why not start the "Guide" with a *caveat* of this sort, instead of telling matter of factly and at length about matter and energy as though they were the keys to wisdom? Or, why not insert, somewhere near the beginning, a quotation from Albert Camus—say, the one where he exclaims:

> These scents of grass and stars at night, certain evenings when the heart relaxes—how shall I negate this world whose power and strength I feel? Yet all the knowledge on earth will give me nothing to assure me that the world is mine. You describe it to me and you teach me to classify it. You enumerate its laws and in my thirst for knowledge I admit that they are true. You take apart its mechanism and my hope increases. At the final stage you teach me that this wondrous and multi-colored universe can be reduced to the atom and that the atom itself can be reduced to the electron. All this is good and I wait for you to continue. But you tell me of an invisible planetary system in which electrons gravitate around a nucleus. You explain this world to me with an image. I realize then that you have been reduced to poetry: I shall never know.

What might the *Britannica* reader make of this? Some insecurity, perhaps. Possibly some wonder and gratitude to Camus. At least he may be less awed by the "authoritative voice."

But this is philosophy, and we are supposed to be considering Matter and Energy! Ah, yes. Physicists are no longer Natural Philosophers. Visit another department, another section of the book. But philosophical questioning while you are studying physics is of the essence of education, these days. Or in any days. The authoritative voice is fine in relation to facts, but leads to dogma and stultification when it comes to meaning.

Maybe the *Britannica* should stick to being a reference work until the rank and file of scholars rediscover the fact that their job as teachers is violated whenever they use the "authoritative voice" for anything but facts. Never mind leading people around. Let the alphabet rule without prejudice. Possibly Mr. McClintock's criticism is a counsel of perfection—too much for the generation of scholars he addresses to take on. Yet these things ought to be said, whatever the result. (His review is to appear in the second volume of the *Proceedings* of the National Academy of Education, to be available about now from the Academy, at Ventura Hall, Stanford University, Stanford, Calif. 94305.)

FRONTIERS

An Embrace of Peace

FRONTIERS for April 28 reported on the activities of the five—now seven—young Spaniards who last Christmas day declared themselves conscientious objectors, describing the civilian services they were performing instead of going into the army. Releases from the War Resisters International (35, rue van Elewijckstraat, B-1050, Brussels, Belgium) now make it known that on February 8 six of these men were arrested by the Civil Guard, the seventh two days later. At the time of their arrest they were actively serving the community of Can Serra in Hospitalet, a suburb of Barcelona. That work is an endeavor to establish and give visibility to service which conscientious objectors are eager to undertake as an alternative to military training. In a public statement, the men said:

> Currently, we are all legally "draft dodgers," or so we're told. If being a "draft-dodger" means fleeing from the madness of arms, we accept the title proudly. If one suggests however, that our flight is from reality, from service to others, we loudly protest. For we are *not* fleeing from our duties to society—but are meeting them in our chosen way. . . . Our instruments of struggle are to make homes for the aged, to provide nurseries for children, instruction for the illiterate. These are in a sense works of mercy, but also a vindication of our refusal to join the army, in order to work with our people to further their real interests.
>
> We are not intimidated by the possibility of being thrown into prison for from three to eight years. We *are* terrified however, when we think that the worst injustices of our age fall upon those least able to bear them, and of the ceaseless escalation of violence, and the great increase of nervous disorders which loosen aggression. What would make us fearful is silence in the face of all this, because that would be an indication of our having lost one of the most precious things that we have: the love of truth.

The idea of an alternative service program for conscientious objectors was first proposed in Spain by a national group, Justicia y Paz, in 1975. Last August several young men, including those now under arrest, began working in the *barrio* of Can Serra. There they helped with construction of a House of Reconciliation and pursued other activities in behalf of the community. Their statement, intended as a means of spreading the idea of alternative service, includes the following:

> Public discussions give us a certain amount of exposure we are very conscious, though, of the many who deserve this attention but are unable to get it. Every time we initiate a discussion, we think of the anonymous ones who work in factories and slums. Only then do we begin, "Friends, we're supposed to be in the army now . . ."
>
> The campaign of broadcasting the idea of civil service goes on apace. This is the truest dimension of what it is to be a CO: to be a person who, because of love of society does not wish to use means of violence and death, but those of constructiveness and peace.
>
> The fruit is in the means. For objection to be attractive to the simple people, to the community, it ought to use ways which show clearly that we wish to be servants, collaborators in the largest and most marvelous task: that of the liberation of all humanity.

The civil service inaugurated by the COs affects the community in diverse ways:

> 1. *Cultural:* Instruction in literacy, to give the dispossessed means of personal expression. Lack of culture is a factor in debility and resignation. We must start, then, with this. We give classes in the adult school.
>
> 2. *Educational..* The working-class children have neither nurseries nor schools. This discrimination strikes very early in their lives. Our nursery aims to help mothers who must work because of the freezing of wages and the layoffs that follow a pay increase.
>
> 3. *Assistance* (this translates a Spanish word which has in it the idea of personal presence): Beyond having been squeezed out all their lives, the old are abandoned to the street and to loneliness, because they are no longer productive. We have fixed up a place for them and it doesn't trouble us at all that one of our number has dedicated himself only to being with them. This relationship breaks down profound loneliness and gives a more human character to the hardest time of one's life.
>
> 4. *Craftsmanship:* Faced with a society that forces us to be wasteful consumers, we believe that we

> should recover the feeling of creation, of works done with our own hands. We are also giving classes in basket-making and pottery.

An underlying idea of this work is that help should be given personally, through direct human contact, by the civil workers. It is pointed out that the government, if it really exists for the service of the people, should recognize and support such activities, which are urgently needed. The Spanish COs also call attention to the fact that their work in the *barrio* relies on the help and cooperation of the people living in the *barrio*, who know best what their needs are. The government, it is said, should help this work economically and provide COs doing civil service with stipends for food and lodging, "in conditions similar to those of soldiers."

The concluding portion of this statement by the Spanish conscientious objectors, issued shortly before they were arrested, speaks of their long-term purposes:

> It is advantageous that we are a group, as communal living greatly enhances the possibilities of action. It's time to shatter the individualistic schemes of contemporary society. We should create grass-roots communities. Groups for coming together, ones for action. It is said that these are utopian ideas; we say that they are the only means to initiate new ways of communication.
>
> Nor is it necessary to plan everything on a grand scale. Our group includes those of different persuasions, including those who are radically opposed, but we are "glued together" by three common principles about which we agree:
>
> 1. We're not going to join the army. For different reasons—ethical, religious, social, political, human, etc. Each of us has a mass of reasons. Sometimes we say we are COs because we are overcome by the many reasons to be so!
>
> 2. Our alternative is to perform a civil service. We agree that our service must be full-time, in order to be deserving of its name.
>
> 3. We consider our struggle as one of many in Spain to obtain recognition of democratic liberties (association, assembly, expression), and respect for human rights, among which is the right not to learn to kill—the right of conscientious objection.
>
> We shall soon describe other aspects of our experience, if we are not imprisoned. We hope that our gesture will encourage you to be faithful to your conscience, and together we shall act.
>
> To all, an embrace of peace.
>
> *Jesús, of the group of COs of Can Serra*