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A DREAM

THE dimensions of the place are vast, stretching beyond sight, with levels and rooms too numerous to count. Rooms is hardly the word to describe these spaces, since they are marked off by porticos through which light enters freely, brightening the forms and shapes that are kept there, making only soft, friendly shadows. The whole place is both real and unreal, some of its halls and corridors defined with geometric exactness, others fading into cloudlike uncertainty, making it difficult to know whether these parts came into being only vaguely, or sight of them is obscured by a thickening atmosphere.

The arrangements in the rooms, too, are varied as structures would be in a dream, but an intently focused gaze will give them order, even as a seminal thought in the disordered mind of a poet might, by a glow of illumination, put all in an array of meaning. Old costumes, fallen casually on chairs or tables, can be recognized as having dramatic uses, the garb of reanimated thought.

The porticos enclose regions of extraordinary portraiture—sometimes images with the likeness of men or gods, yet no fabricated forms, but rather what are seen in the mind's eye just as the artist lowers them into the substance of his craft. In that place they endure with the wiry coherence of tendons of the imagination, although, waiting there, like actors in the wings listening for cues, they rest with a calm that could easily last for centuries. Indeed, they are and they are not, being the stuff on which dreams are made, yet having the sempiternal existence of things of mind, constant in essence, protean in possibility.

Many of the rooms are marked with names, so one can know what he may find in them, and where to look for a particular sort of imagery. Sometimes the rooms are only fields having a certain kind of light, and if you can not see by the light there is hardly a reason to enter. Other places are widely inviting, as though inhabited by unambiguous presences. The hall of Euclid is such an area, very precise, everything sharply defined, the Platonic solids seeming to capture the rays of the sun and to direct them through every plane of transparency.

Blake's area is at once a cavern, a vine-garnished dell, and a height which reaches far out of the world. Here children and fierce spirits walk hand in hand. Here primeval gods groan with awful cries and angels sing sweet anthems. Here history wrestles with myth, being thrown again and again. Even the dark is alight in Blake's domain, a place where slow thunders murmur mightily in the distance, and soprano clarions sound from every peak. In these days the borrowings from Blake are rapidly increasing, making his room a busy place. The Tyger paces around, feeling summons after summons, although no one yet calls him to fitting duties. Jerusalem, embarrassed by current events, hides her face, wondering if she might change her name.

Shakespeare has a castle of his own, from which rivers of jostling humanity flow into all the centuries since. High on a shelf which is the limb of an ancient oak, Ariel watches the brooding Hamlet, puzzling as innocence must at the agony of a man struggling with divided allegiances.

Some of the rooms open out to forgotten ages where archaic meanings experiment with today's Procrustean jargons, cringing at the harsh confinements they impose. Far off from the rest, an asylum shadowed by ancient griefs gives the misunderstood gods refuge from the damnations of the human world. Here Kronos comforts Polyphemus, Christ tempers the desperation of Lucifer, and Chiron brings balm to the tortured Prometheus, telling him of the return of Hercules.

Here the blinded Polyphemus broods over the sly deceptions of Ulysses, dreaming of tomorrow's Golden Age. All these gods, mistrusted and misshapen by men, need time to regain their dignity.

Egypt, India, Tibet, and other, older regions—even the lost Atlantis—have their mansions of undying memories. There are craggy apartments for Chinese dragons, and forests sprung from three great roots of Yggdrasil where unicorns wander unhunted and dryads live among leaves that never wrinkle or brown. Curtained off from the classical figures is a later subdivision where the atoms of Lucretius bound in aimless play, and world-machines, long left unlubricated, screech and grind their gears. Bloodless abstractions perform routine gyrations, shutting out novelty, and here and there are little epiphenomena pretending to be thoughts and tripping each other in random sequence. A mad computer winks owlishly, hoping by accident to gain a sense of humor. A clumping parade of robots moves in a vaguely circular path, once labelled "Progress," later "Rat Race," but now going in directions which are ominously unmarked. In these outer regions shabby warehouses are filled with files of greying prints showing Men of Distinction, Scientists at Work, and Economists Explaining Things. However, both fog and smog are invading the premises with a dissolving slime, and before long these portraits will be only smudged pieces of paper.

Meanwhile, in the air all about are darting little gleams which visit the rooms, apparently bent on missions which animate some of the images while passing others by. Life and movement come from these impulses. Visages fill with new expression, supple energy restores limbs that have been motionless for generations. A wonderful suffusion of vitality spreads around the room, and by noetic catalysis generates the feeling of rich mental activity. Viewed from a distance the entire constellation of structures, towers, passageways and galleries is like a vast beehive of intellectual industry, all in translucent process, filled with unembodied yet energically defined intelligence, endlessly diverse, flowing, changing, now swelling toward some timely birth, now quiet with the hidden potency of a sleeping seed.

So, on occasion, players troop forth from the portals of this old and private place to enter upon the stage, to play a scene, or a drama long or episodic. They are called, and they come, sometimes lacking an essential actor, or from an interrupted growth, made to give a performance they hardly understand before an audience indifferent or unready to see and hear. When the misunderstood gods are called to service, they perform only reluctantly, as though their hour for renewal is still far in the future. Yet poets do what they can to make the world ready for another return of the gods.

One such scene had its hour upon the stage but sixteen years short of a century ago. It was called a "Dream" by the author, Olive Schreiner. It tells of a man who believed he could not forgive another for a certain wrong. This is a portion of the Dream:

The angel went down and found the man with the bitter heart and took him by the hand, and led him to a certain spot.

Now the man wist not where it was the angel would take him, or what he would show him there. And when they came the angel shaded the man's eyes with his wing, and when he moved it the man saw somewhat on the earth before them. For God had given it to that angel to unclothe a human soul; to take from it all those outward attributes of form, and colour, and age, and sex, whereby one man is known from among his fellows and is marked off from the rest, and the soul lay before them, bare, as a man turning his eye inwards beholds himself.

They saw its past, its childhood, the tiny life with the dew upon it; they saw its youth when the dew was melting, and the creature raised its Lilliputian mouth to drink from a cup too large for

it, and they saw how the water spilt; they saw its hopes that were never realized; they saw its hours of intellectual blindness men call sin; they saw its hours of all-radiating insight, which men call righteousness; they saw its hour of strength, when it leaped to its feet crying, "I am omnipotent"; its hour of weakness, when it fell to the earth and grasped dust only; they saw what it might have been, but never would be.

The man bent forward.

And the angel said, "What is it?"

He answered, "It is *I*! it is myself!" And he went forward as if he would have lain his heart against it; but the angel held him back and covered his eyes.

Now God had given power to the angel further to unclothe that soul, to take from it all those outward attributes of time and place and circumstance whereby the individual life is marked off from the life of the whole.

Again the angel uncovered the man's eyes, and he looked. He saw before him that which in its tiny drop reflects the whole universe; he saw that which marks within itself the step of the furthest star, and tells how the crystal grows under ground where no eye has seen it; that which is where the germ in the egg stirs; which moves the outstretched fingers of the little new-born babe, and keeps the leaves of the trees pointing upward; which moves where the jelly-fish sail alone on the sunny seas, and is where the lichens form on the mountains' rocks.

And the man looked.

And the angel touched him.

But the man bowed his head and shuddered. He whispered—*"It is God!"*

And the angel recovered the man's eyes. And when he uncovered them there was one walking from them a little way off;—for the angel had recovered the soul in its outward form and vesture—and the man knew who it was.

And the angel said, "Do you know him?"

And the man said, "I know him," and he looked after the figure.

And the angel said, "Have you forgiven him?"

But the man said, *"How beautiful my brother is!"*

And the angel looked into the man's eyes, and he shaded his own face with his wing from the light.

Letter from **LEBANON**

BEIRUT.—Education in the Third World, it would seem, ought to be geared toward the specific needs and problems arising in that area of the world. Yet, such a pedagogy is probably the exception rather than the rule. A look at the educational system in Lebanon, a heavily Westernized Third World country, reveals a system of education geared more toward satisfying the antiquated status needs of its old-guard, European-educated academicians than to the human needs of its indigenous population.

Physics and science majors are graduated in a country without any significant industrialization. All they can do upon graduation is obtain highschool teaching jobs, at a pittance of a wage. Minor government clerical jobs are filled by people with law degrees—to make room for the oversupply of law graduates. Some 700 lawyers, doctors and other professionals emigrated from the country in 1972 because of the shortage of jobs in their fields.

Salaries of teachers are low at all levels of teaching. A Ph.D. after several years of teaching makes only $8000, while some private elementary school teachers earn as little as L£205 ($80) a month—less than the new minimum wage of L£275 ($119), which, through a fluke in the law, doesn't apply to them.

The curriculum in the schools is a classical one through the ninth grade, with minute attention to the details of a classical education. It is distressing to see children of eight and nine, neatly dressed in their school uniforms, carrying home packs of books on their backs, to do two to three hours of homework a night.

While some of the public schools in Lebanon are good, many parents prefer to send their children to private schools. These private schools are mostly church-connected (usually with the Maronite, Catholic Church), and are called French, English, Italian or German, depending upon the language they stress as the second language for their pupils. So, for example, a French school—which is the most common—is one in which students learn Arabic and French, beginning in the first grade, and then English beginning in the 6th grade. Instruction is in both Arabic and the second language, in all classes. At an English school, the emphasis is reversed, and students learn Arabic and English beginning in the first grade, and French, beginning in the 6th grade. All students learn at least three languages (students at the Italian and German schools now learn four), which makes the population a multilingual one, except that for all practical purposes Arabic and French are the main languages, with English spoken and used by a very small percentage of the population.

The ultimate test of the student's knowledge, at the pre-university level, comes at the age of 17, when he takes the difficult Baccalaureate First Part examination. If he passes—and only about 20-40% do—he can then study for and take the Baccalaureate Second Part a year later. Only some 60% of the students pass this examination, and they are then eligible to go on to the university, which begins with what in the States is the sophomore year of college.

Grading in the schools, including the university level, is according to the French "absolute" system, rather than on the curve, as in the States. This accounts for the very high failure rates in the Lebanese schools. Thus, a biology student at the Lebanese National University said that of 115 students in her class, only 15 passed. She was thinking of transferring to the private, U.S. funded American University of Beirut, where grading is done on the curve.

It is not surprising that while students at A.U.B. were on strike last year, protesting high fees, students at the Lebanese University were striking for more participation in the conduct of the university. Students lost at both universities.

University academicians, who are mainly French educated, are very concerned about "standards," including the standards according to which faculty are hired and paid. So, Ph.D.'s from American universities not adjudged "the best" are paid at a lower rate than Ph.D.'s from Harvard, Yale, Princeton and Chicago. Holders of the top Doctorat d'Etat from French universities and Ph.D.'s from the prestige American universities are paid the same. However, Ph.D.'s from other American universities and holders of the French Doctorat troisieme cycle are paid at a lower rate and do not have the same promotion possibilities. The French Doctorat troisieme cycle is a lower French degree and is roughly equivalent to the American Master's Degree. Thus, a country with a heavy French influence rewards its French educated academicians highly.

Innovation in the Lebanese educational system is, as would be expected, non-existent (though it may come eventually as a result of innovations outside the Lebanese system: the Evening Division of the American University of Beirut has begun to conduct workshops and courses in group communications, patterned after similar programs in the States, but more structured, so I was told, in order to "meet the greater need for structure of people here"). A harsh grading system combines with an impersonal lecture system and a classical, or scientific, curriculum to produce people who, if they pass, may know something about the classics and the sciences but almost nothing about the world in which they live—except for what they've learned outside the classroom. Such an education encourages competitiveness, showiness and social irrelevance, all traits which the Lebanese manifest in their daily lives.

CORRESPONDENT IN LEBANON

REVIEW
"SOUTHERN EXPOSURE"

FORTY-FIVE years ago, twelve Southerners published *I'll Take My Stand,* in which they defended the agrarian way of life. The book didn't attract much attention in 1930, but lately the fundamental sense in these writers' contentions has become increasingly evident, and is now widely recognized. In a statement of principles they said:

> The philosophy of applied science is generally quite sure that the saving of labor is a pure gain, and that the more of it the better. This is to assume that labor is an evil, that only the end of labor or the material product is good. On this assumption labor becomes mercenary and servile. . . . The act of labor as one of the happy functions of human life has been in effect abandoned. . . .
>
> Turning to consumption, as the grand end which justifies the evil of modern labor, we find that we have been deceived. We have more time in which to consume, and many more products to be consumed. But the tempo of our labors communicates itself to our satisfactions, and these also become brutal and hurried. The constitution of the natural man probably does not permit him to shorten his labor-time and enlarge his consuming-time indefinitely. He has to pay the penalty in satiety and aimlessness.

This cultural judgment is now echoing everywhere—most effectively, in the South, in the work of Wendell Berry. A forthright social reading of conditions in the American South appeared in 1972—*You Can't Eat Magnolias* (McGraw-Hill) by twenty-seven young men born and raised in the South. This book is good evidence that the South has reached a level of self-consciousness hardly matched in other regions of the country. The unity of the South is no doubt due to the defeat of the Civil War and the bitter aftermath of Reconstruction, but curiously, the fate of "backwardness" imposed on the South by aggressive Northern interests led to a preservation of values belonging to an earlier age. It is this sense of precious heritage along with resistance to calculated economic exploitation which gives Southern writers an animated and coherent point of view. One of the contributors to *You Can't Eat Magnolias,* Thomas H. Naylor, tells briefly how the economic peonage of the South came about:

> Although in theory the reins of political power were transferred back to the South around 1877, in practice the region remained at the mercy of Northern business interests for nearly fifty years. The period between 1877 and the late 1920s was characterized by the exploitation of the South's natural resources by Northern capitalists seeking a short-term payoff with regard to the long-term implications of their actions. The allocation of land, timber, minerals, and human resources in the South during this period was determined primarily by forces outside this region.

We now have for review a quarterly magazine, *Southern Exposure,* which is adding chapter after chapter to the self-awareness of the South, and spelling out in particular detail what needs to happen there for the restoration of both the cultural and economic life of the common people. *Southern Exposure* is published at $8.00 a year (P.O. Box 230, Chapel Hill, N.C. 27514). The ("double") issue we have is for the Fall of 1974—with 225 pages devoted to the land. It contains more than twenty long articles, some of them filled with facts and figures, but all of them infused with an ardor that is suggested by two introductory editorial paragraphs:

> If you live in Canton, North Carolina, or West Point, Virginia, or Savannah, Georgia, you know what wealth from the South's land means for your community's environment and economy. You can see and smell the results of having a paper mill in your backyard. If you're from Claiborne County, Tennessee, maybe you can remember those forested hillsides that are now covered with stripminers' rubble. And those of you who grew up in the Delta have no doubt pondered the ambiguities of living close to the land. Wherever you're from in this region, it probably wouldn't take you long to trace your town's life back to the special assets of its earth. In the South, identity is still bound up with the land.
>
> Soil, timber, and minerals have shaped the South in peculiar ways and continue to stand in a precarious limbo between potential and exploitation. Not only has profit-oriented development devoured the South's natural resources, it has also produced our own home-grown, land-hungry barons. The by-products of this process are sharecropper and entrepreneur, clearcut forests and ravaged mountains,

> the cotton plantation and agribusiness. The gas shortage and oil profits, our electric bills and strip-mined coal, skyrocketing food prices—all accent the critical position of land-based enterprises in our contemporary society.

The South is the source of 52 per cent of the country's mineral production, 40 per cent of its timber, and 27 per cent of its food products. This issue of *Southern Exposure* gives "a picture of a region rich in highly-treasured resources, yet lacking in strategies to keep that wealth in local areas, for the benefit of the many rather than the few." The immediate prospects are not bright. A report on food, fuel, and fibers says:

> As the cost of some foreign supplies rises and as others are cut off, U.S. corporations (and foreign corporations too!) are turning toward our domestic supplies. The South is the center of many of the most important domestic supplies of raw materials. The question of whether these resources will be used for progressive development of the region or whether, as in the Third World the resources will be taken, the people left poor and the landscapes raped is both a crucial and an unanswerable question.
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> Already the corporations that control one source of energy (oil) have seized control of another source (coal). With such control, shortages in one source can be created to justify an increase in prices and to drive consumers to the alternative source whose price (due to artificially increased demand) is likewise raised. When a few friendly corporations control the wealth of the land, the consumer can be batted like a ping-pong ball between one fuel and another, between one product at the grocery store and another, both produced by the same company whose ownership of both gives it the opportunity to manipulate the supplies and of course the price. . . .
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> Corporate planning is planning for profits. This is a world where words have strange meanings. Shortages are good. Strip-mining is less costly than other methods. A hillside denuded of trees is beautiful. Rational planning—planning which protects the integrity of the land, planning which conserves resources and sees that they are used wisely is not corporate planning—the South with its many scars from resource extraction is a testament to this. But rational planning is worth fighting for. Our hope is that the following information will be used for this purpose—to work for a dream, a dream that the public interest will some day dictate the ways in which our land is used and, we trust, preserved.

The contents of *Southern Exposure* are not "ideological." The goal of its efforts is not the realization of a particular socio-economic theory but the practical welfare of the land and the people. Instead of arguments from social doctrine its pages are loaded with facts about the land and its present uses, the people and their needs. The reader gains an education about the realities of community and regional life and a growing sense of direction and responsibility.

Certain disastrous trends need to be stopped or slowed down. One is the pattern of migration from country to city. In a report on the loss of land by black owners, there is this comment:

> To be sure, there are some signs that a degree of value reversal is taking place in recent years as the cities, and even the inner suburbs, become mired in unsolvable problems of pollution, transportation, crime and other deterrents to pleasant living. We are, however, far from being faced with a massive return-to-the-land psychology despite a current boom in rural real estate investment for leisure and recreational residences. The basic pattern of living is still best described by the fact that 75 per cent of the U.S. population resides on 2 per cent of the nation s land area. This pattern is further clarified by census figures which reveal that agricultural employment constitutes a swiftly declining percentage of our labor force, and rural population a dwindling portion of our total population.

In 1910, black ownership of land in the U.S. reached a peak, when non-whites, mostly blacks, owned or operated (as tenant farmers) 890,000 farms, and blacks were full or part owners of more than fifteen million acres. In 1969, with the black population considerably more than doubled since 1910, only six million acres were owned by blacks.

> Impersonal economic forces, operating in their inexorable manner, have moved half of the black population out of the South and three-fourths of it out of rural areas. These people's wishes have not been consulted, nor have the full consequences of this dramatic migration been assessed. The obvious deterioration of America's cities, combined with the

> growing restlessness in suburban areas as both blacks and whites attempt to flee the cities as well as to flee from each other suggest that steps need to be taken to provide the one quarter of the black population which still resides in the South with a viable option to remain where it is if it so desires.

An article by Bill Finger on the work and objectives of the National Sharecroppers Fund gives insight into one means available for providing this "viable option." The NSF now operates a training center near Wadesboro, N.C., where organic farming methods are taught on an experimental farm. There is also instruction in co-op procedures. "The goal is to provide a farmer planting five to ten acres with the knowledge of organic farming and access to a market so that he can stay on his small plot. His income could then be supplemented with work in small construction during the winter months."

The larger aspect of economic trends is thoroughly dealt with in detailed studies of the operations of the large corporations which own so much of the land in the South, and there are state-by-state analyses of economic potentials, with critical attention to misuse and exploitation. Each issue of *Southern Exposure* amounts to a crash program of education concerning the crucial factors of reform and redevelopment for the South.

COMMENTARY
HOPE FOR THE MIDDLE EAST

SHORTLY after reading proof on this week's "Letter from Lebanon" (page 2), we came across Norman Cousins' article in the March 22 *Saturday Review*—"Last Chance for Peace in the Middle East?" Mr. Cousins went to Cairo, Beirut, and Jerusalem and Haifa in Israel. He talked to various leaders, compared what they said, and concluded that "a workable design for peace is not beyond reach." His article is especially worth reading, since Mr. Cousins is an editor who has both genuine and articulate concern for the cause of world peace.

In Beirut he met with Charles H. Malik, generally regarded, the *SR* editor says, as "Lebanon's greatest living elder statesman." Malik's observations, many of which are quoted, led Mr. Cousins to end this part of his report by saying:

> To the extent that human intelligence and a highly developed sense of justice are requisites for an enduring settlement in the Middle East, Charles Malik would be an ideal peace-maker. If some way could be found to persuade both sides to delegate their vital interests to this man, thousands of lives might be saved.

We have no idea where Charles Malik went to school. Quite possibly, his early life was free of the stultifying influences of the conventional schools in Beirut, but it seems clear, from what Norman Cousins says about him, that no matter where he went to school he is no off-print of typical cultural influences. This seems important to note. It is obvious that there is little hope for world peace unless we find ways of increasing the number of people who have not been shaped by existing institutions.

Our correspondent in Lebanon comments that Lebanese students who go through the conventional schools, even if they don't reach the top levels of the academic world, nonetheless acquire attitudes that are esteemed in their society, and can expect to be rewarded for this when they enter the business, professional, and social worlds. Interestingly, Mr. Cousins reports that Beirut is now one of the "money capitals" of the world. "A great deal of the money pouring into and out of the OPEC countries is banked in Beirut," he says, and "Investment companies from all over the world are setting up shop."

So you could say that the Lebanese, at least in Beirut, are enjoying some material success. Perhaps this is the root of their trouble. The preoccupation with money has produced similar forms of blindness in other lands where wealth accumulates. See, for example, the effect of acquisitive drives in the American South, described in this week's Review.

CHILDREN
. . . and Ourselves

EDUCATION AS A SEAMLESS WHOLE

TOO often, the discussion of ways and means to break through the stranglehold of tradition and improvised usage in higher education focuses on the administration of teaching, not upon what is taught. One such statement, issued several years ago by a research body, proposed teaching by dialogue rather than lecture, tailoring programs to individuals, evaluation of learning results, selection of students, and related matters, but made no reference to the content of the teaching. The restriction was doubtless deliberate, and the result was a ranging inquiry into the *how* of education. While such investigations have some use, the fact remains that in practice the *how* and the *what* of education cannot be separated.

It should be of value, in considering the importance of the *what,* to take note of how the existing forms of higher education came into being. Conventional formal education grew from recognition that certain skills, acquired by man chiefly during the last two millennia, are not adequately developed in the informal course of family and social life. Reading and mathematics, for example, require designed and tested methods to ensure their being learned. As civilization became more complex, the advanced disciplines were increasingly transmitted by formal institutions, while common, practical skills were left to be acquired through the ordinary course of living. This somewhat haphazard pattern of development, mainly a proliferation of forms of education in special skills, has been influenced by authority, tradition, usage—with occasional breakthroughs of insight—producing an almost random medley of method and content, without consistent coverage of basic questions. By reason of the exclusive attention given to certain intellectual skills, a large part of human culture is ineffectually transmitted by unorganized social processes. Needed, therefore, is a fresh concept of education which encompasses the entire range of living, with particular attention to matters of human importance thus far neglected by organized education.

The possibilities of education conceived in this way have occupied my thought for more than sixty years—due, initially, to my own extreme dissatisfaction with the unimaginative traditional education to which I was exposed, which failed to meet many of my own needs and cravings. My education was indeed limited, so limited that it left me free to dream. I sought to see education as a single, inclusive, unitary process—a conception which required freedom to create a radically new pattern. Precedent, experience, and literature (of various fields) would be exhaustively explored, but always as evidence, stimulus and suggestion, not as unquestioned authority. The aim would be to explore the full scope of human potential, including hitherto unconsidered possibilities of development. Every essential factor in human growth—involving, that is, a choice between better and worse, in the entire range of human experience—should have a place in general education.

This far-reaching plan, first conceived during the years before World War I, proved impracticable to carry out, and after much reflection I undertook a project more within my capacities—the reorganization, renewal, and reorientation of Antioch College. This was in 1921. Pursuant to the idea of general education, I initiated at Antioch a program of research into factors affecting human development—environmental, physical, physiological, social and cultural. (This program is now the Fels Institute for the Study of Human Development, which for more than forty years has been studying this entire area, under the direction of Dr. Lester W. Sontag, until his retirement in 1969.) An early undertaking at Antioch was the attempt to implement "general education." My assumption was that the fundamental concepts of any general field could be reduced to dimensions allowing them to be

covered by an uncrowded, one-year course. Such a course would acquaint the student with the language of the discipline, introduce the basic literary resources, and give him at least a few significant glimpses of first-hand experience in the area.

This program experienced some success, but more failure. I underestimated the difficulty of transmitting general concepts and overestimated the capacity of teachers to reduce the essential content of their subjects to a proportion that could be taught in the time available. We had hoped, for example, to unite physics and chemistry in a one-year course, but the teachers who collaborated in its preparation each included material which by itself would make a stiff one-year course, so that the combination proved extremely heavy. In another area of learning a similar attempt resulted in only a pleasant overview, entertaining but not sufficiently taxing for intelligent students. The inadequacy of this approach to general education was evident.

Needed, first, was a clearer general idea as well as a teaching program. The two elements of *how* and *what* should be worked out together. A degree of success attended the development at Antioch of a one-year course on the human environment, called Earth Science. Through this study students learned how to find their way in interesting and useful experiences over a wide range. In other areas, however, the Antioch attempt was obliged to surrender. A student required to have some involvement in science may now choose *either* physics or biology—a defeat of general education. This seems inevitable so long as faculty members are trained without attention to the goal of general education. The conception does not arise spontaneously, and will doubtless need persistent effort to make it functional.

Yet I believe the concept of general education is valid and that its time will come. All have a natural desire to participate as widely as they can in the full range of wholesome and productive human experience. Nor need the idea of an inclusive and unified education be regarded as visionary. The general sense of meaninglessness, so often despairingly expressed these days, points to the pressing need for comprehensive, orderly inquiry that would have a working conception of general education as its fruit.

Most educated men become specialists. In our society specialization is necessary, yet general and special education should both be part of an over-all design. Often eminent specialists are called upon to deal with issues outside their areas of competence—questions on which they have casually acquired only bits of information, and without understanding of the fundamental principles involved. Yet these issues may be crucial, as is certainly the case in matters such as maintaining personal health, rearing children, personal economics, and other concerns in which we are all involved. A nation of specialists may find itself living on what must be identified as a low level of general education.

Of central importance to general education is deliberate inquiry into the meaning and significance of life. By reason of the uncertainty of this question, it has been systematically neglected, or so it would seem. But the consequences of this neglect are now before us. In a country like the United States, there has been a truce among competitive theologies, resulting in tacit agreement that "the church" shall convey "the meaning of life" as determined by tradition, while public education shall instruct in practical ways and means. This cultural failure to relate ends and means has meant uncritical reliance on biological drives, emergence of vacuum-filling cultural tendencies, and acceptance of residues of traditional belief—a policy of drift balanced somewhat by free, critical inquiry. But unless strong concern for purpose and significance introduces an ordering principle for both life and education, sustained effort will be lacking, and there will be a tendency to lapse into biological hedonism.

Another factor of prime importance to general education is physical fitness. Many common habits now tend to reduce our fitness for life. Education hardly concerns itself with such matters, which are left to chance influences, many of them prejudicial. Sound and simple care of the organism, beginning with prenatal needs, would be a part of general education. Of what importance is the knowledge of specialists unless they, together with educators, devise means of transferring what they know to the people at large? Continuous effort to make general education effective could in time have a transforming effect on even the modes of research, since the need to gear investigation to common needs would become a governing motivation.

Day by day many experiences come to us, affording opportunity for interest and growth. The education we have does not prepare us to assimilate this wide range of experience. Conditioned by its time-honored division into various specialties, conventional education explains that little can be done about this lack of preparation, there being not even enough time to cover the special fields of learning.

So the dilemma is repeated over and over again. Great values we seek can be had only at the sacrifice of others, and these, too, seem important. While human beings crave to be well-rounded, to find meaning and to develop symmetry in life, the ever-expanding content of each field drives people into narrowing specialties. In the face of this dilemma, education has largely given up.

Yet surrender can hardly be tolerated. Education should be a single, inclusive, undivided program covering the course of human life. The phases of life and circumstance bearing significantly on necessary choices and destiny should all give content to education. While holding in mind this ideal, our present practice should be to close gaps, increase awareness of relationships, and seek to generate a sense of proportion. It begins to be plain that a "general education" is not something that can be invented or planned, but is rather a great undertaking in cultural evolution. Its method and content can unfold beyond existing practical limits only through collaborative pursuit of the ideal. Each step of progress will permit a larger vision. What we cannot now even imagine may become evident to a future generation. The task, then, is to formulate, to illustrate wherever possible, and to strengthen the conception of the ideal. Without the ideal, the achievement, even relative achievement, will remain impossible.

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FRONTIERS

Energy and Control

THE articles of Wilson Clark, appearing lately in *Smithsonian*, amount to basic education on the subject of energy production and use. His contribution to the last December issue summed up the views of Howard T. Odum, University of Florida ecologist, who has pointed out that expensive energy sources may yield practically no *net* energy. Reducing our consumption of non-renewable fuels and adapting our needs to the natural systems of energy supply—sun and wind—may soon become absolutely necessary. Mr. Clark is persuaded that economists had better start taking instruction from ecologists:

> According to Odum's energy concepts, a primary cause of inflation in this country and others is the pursuit of high economic growth with ever-more costly fossil fuels and other energy sources. As we dig deeper in our search for less-concentrated energy supplies to fuel our economy, the actual value of our currency is lessening. "Because so much energy has to go immediately into the energy-getting processes," he notes, "then the real work to society per unit of money is less."
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> Economists, who generally resent intruders on their turf have not embraced this equation of energy and money with much enthusiasm. According to Joel Schatz of Oregon's energy planning office, Odum's work leads the way toward effective government planning in this age of economic uncertainty. "The more successful the United States is in maintaining or increasing its total energy consumption," he says, "under conditions of declining net energy, the more rapidly inflation and general economic instability will increase."

Clark notes that California Congressman George Brown Jr. is one of a handful of legislators who seem to have an understanding of such issues. Trained as a physicist, Rep. Brown points to the basic fact that the energy available to us is declining, and that all planning for the future must be founded on this reality.

In the January *Smithsonian* Mr. Clark begins an article on food supply by quoting the Stanford Research Institute: "We can state immediately that without petroleum, field crop agriculture is virtually impossible in the United States [agricultural] system." There are many hazards in this system—some obvious, some potential. Clark cites various authorities whose views, over the years, have been quoted in MANAS (Barry Commoner, Michael Perelman, Eric Hurst, Georg Borgstrom, and Frances Lappé), developing factual indicators which point decisively toward basic agricultural reform. For one thing, the oil crisis may force a return to older methods of farming through the high cost of artificial fertilizer and pesticides, both made from petroleum. Mr. Clark says in his conclusion:

> The alternatives to continuing the present system, which delivers each calorie of food to the consumer at the expense of 10 to 20 calories of energy, include searching for better ways to use natural fertilizer, instead of depending upon synthetic fertilizers. And, in fact, interest in the use of organic materials for fertilization is picking up—not just among home gardeners—but in major cities such as Chicago, which has undertaken a study of the potential use of sewage in conjunction with farming in nearby Illinois and northwestern Indiana.
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> Other ways to decrease energy use are to encourage the development of smaller, less energy-intensive farms; to use farming methods based on diversity and to plant legumes such as soybeans, which add nitrogen fertilizers to the soil and minimize the need for nitrogen fertilizers; and to use biological pest-control methods as substitutes for the intensive use of chemicals. In addition, hand spraying of pesticides and herbicides, rather than application by large machines and airplanes, can save energy in large doses. Diversity of this sort could be the starting point for the development of a sound, efficient agricultural system.
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> Such a system would also make better use of natural energy sources such as solar power. Solar crop-drying techniques are under development in many states, including Indiana where 60 million gallons of liquid petroleum fuel are now used yearly to dry the corn crop. Windmills can be used to pump water for agricultural irrigation, rather than fossil-powered electrical pumps. Methane gas can be made on the farm from various organic substances, including animal wastes.

Mr. Clark ends with a quotation from E. F. Schumacher, who says that solving the energy problem "must begin with a change of man's relation to the soil, of which he is a product and which alone sustains his life."

This article by Wilson Clark could be termed a "progress report" on the social intelligence of America, since he presents impressive evidence that the ideas of ecologists such as Odum and of economists such as Schumacher are beginning to take hold. Meanwhile, another sort of progress, equally important, seems evident from the contents of the joint issue of two British magazines—the *Ecologist* and *Resurgence*—which combined for one big issue at the end of last year. The lead article, "Religion in a Stable Society," is by Edward Goldsmith, editor of the *Ecologist.* Satish Kumar, editor of *Resurgence,* says in an introductory note:

> The institutionalised religions have failed to recognise or restrain the anti-religious expansion and centralisation of our political and economic activities. They have failed to put a spiritual content in the social body; they have ignored human happiness, community relationship and existential fulfillment all of which have been largely destroyed by industrialism an] economic materialism. Perhaps, in consequence, no one needs more of religion than the religious bodies themselves.
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> The helplessness and powerlessness of religious institutions has left the political and economic institutions to operate in a moral wilderness and as a result we face a possible breakdown of our social relationships, the destruction of this beautiful planet and an end to natural wealth and resources.
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> But the failure of religious institutions is by no means the failure of the religious spirit or the death of religious experience. The wild technology, the savage science, the rapacious industries, the monstrous political institutions, the impersonal bureaucracies are the root causes of much of present-day human problems and we have to find human solutions. This is the relevance of religious and spiritual values we are exploring in this issue.

Edward Goldsmith's article makes a socio-scientific approach to the role of religion in a stable society. He points out that religious ideas and ideals once set limits to economic activities and exercised control over the material aspects of people's lives. He sees this function as a cybernetic principle—"detecting data relevant to the maintenance of the system's stable relationship with its environment, transducing them into the appropriate medium and interpreting them in terms of the model which the system has built up with its relationship with its specific environment."

A brief reference to current events shows that neither science nor government has been successful as a system of control; on the contrary, during the period when these sources of authority have been in charge our common life has been the victim of "wars, massacres, intrigues, famines; in other words, of precisely those discontinuities in terms of which one can measure social and ecological instability—and which it is the function of social and ecological control to eliminate."

On the other hand,

> What few people seem to realise today is that *the religion of traditional societies, i.e., the religion of human beings in normal conditions, admirably satisfies these cybernetic requirements.*

Mr. Goldsmith opts for no particular religious outlook; he offers an enlightened sociology of religion, noting its achievements in traditional societies. Then, in his conclusion, he answers the objection that religious ideas are not "objective" by saying: "Objective knowledge has never yet served as a basis for truly adaptive social behavior, and Science which seeks, unsuccessfully as we have seen, to organize it, never has, and never can, replace religio-culture as the control mechanism of stable societies."

Here the familiar question, "What is Truth?", is asked in an unfamiliar way that compels attention.