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HISTORIC POSSIBILITIES

SOME fifteen years ago, Robert Heilbroner published *The Future as History* (Harper & Row), a book giving a general account of modern industrial and technological development, together with a review of what men have believed about the effects and meaning of this growth. It is the story, briefly told, of the Western idea of Progress, and of the threat of disillusionment which has now overtaken the most "advanced" nations, particularly the United States.

Mr. Heilbroner does not attempt to define what progress really is, or say whether it does in fact take place, but is concerned with the correction of certain delusions which, as he shows, afflict the great majority of the American people. He says, in effect, that whatever "the laws of history" are, we have not learned to live by them, and that the dawning suspicion of this failure is compounding anxiety with self-distrust. Our great material success, he suggests, was more luck than management, and the resulting optimism, which became the national faith, is unlikely to be renewed. The framework of circumstances in which our past efforts were pursued has changed; our relations with other peoples have changed; and the very accomplishments in which we take such pride have altered our lives in ways that are beginning to seem bitterly unsatisfactory. For these reasons, American optimism is now in question.

Mr. Heilbroner's definition of optimism is serviceable:

> At bottom, *a philosophy of optimism is an historic attitude toward the future*—an attitude based on the tacit premise that the future will accommodate the striving which we bring to it. Optimism is grounded in the faith that the historic environment, as it comes into being, will prove to be benign and congenial—or at least neutral to our private efforts.

American optimism is of course a composite feeling. Some of it springs from the "chosen people" notion inherited from the Puritans and the Pilgrim Fathers. More of it originated in the confidence of the historic declarations of the nation's founders, men who combined social vision with moral justification in an impressive rhetoric we try to keep alive. Finally, the habit of achievement leads to expectation that it will go on forever. Today our optimism is poorly grounded, Mr. Heilbroner says, because it fails to take into account that our success grew out of "a unique and sheltered historic experience which could not be enlarged into a model for all historic experience irrespective of its setting." It is now necessary, he maintains, to adopt another view:

> The probabilities, in other words, are that "history" will go against us for a long time, and that the trend of events, both at home and abroad, will persist in directions which we find inimical and uncongenial. It would be foolish to pretend to a degree of prescience about the future which no amount of analysis can provide, or to be doctrinaire about the evolution of events. Yet surely, to hope for the best in a situation where every indication leads us to expect a worsening, is hardly the way to fortify ourselves against the future. Optimism as a philosophy of historic expectations can no longer be considered a natural virtue. It has become a dangerous national delusion.

Why will "history" go against us? Mr. Heilbroner's reasons are economic and political. First, there is the frightening product of our technology in the immeasurably destructive instruments of nuclear war, and also the incredibly high cost of preparedness for war, which is not reduced by the genius of technology. Second, other nations, primarily the communist countries of Russia and China, are now "advancing" much more rapidly than we are. Finally, the vast populations of the underdeveloped nations are becoming aware of all they have been missing and

are angrily determined to have their share of the benefits of industrial progress. These people no longer regard Americans with a friendly eye.

In the face of these conditions, Mr. Heilbroner is inclined to predict that Americans will choose a policy of drift, allowing the present economic mechanisms to continue to be the "history-shaping force," adjusting to whatever their momentum brings about. Why won't the people rise up and intervene, in order to *change* the direction of that momentum? Mr. Heilbroner's answer is this:

> The degree to which the "common sense" of the people can be relied upon, the flexibility and farsightedness of the powers that be—these are matters about which purely subjective judgments are impossible. All that one can say is that the challenges are very subtle; that the requisite changes in institutions, while not revolutionary, are nonetheless very great; and that the required degree of farsightedness is correspondingly high. Thus it is not difficult to conclude that the possibilities of historic intervention will not, in fact, be put to use. A critic who assesses the American scene in terms of its alertness to the underlying challenges of our times can scarcely fail to be struck by the general poverty of the prevailing outlook: the men of wealth and power, mentally locked within their corporate privileges; the middle classes, more Bourbon than the Bourbons; the working classes, unable to formulate any social program or purpose beyond "getting theirs"; the academicians, blind to the irrationalities of the society they seek to rationalize.

However, this hope is offered:

> Yet it is one of the disconcerting facts of an open society that it offers so many opportunities for facile generalizations and so little ground for generally valid ones. As long as there is still visible in American society a continuing evidence of new thought and dissent, a self-control with respect to the use of political power, and above all, a nagging awareness that all is not right, it would be arrogant and unjust to shrug away our future as a hopeless cause. There are after all, great traditions of responsibility and social flexibility in America. In them there may yet reside the impetus to seize the historic possibilities before us, and to make those changes which may be necessary if the forces of history are not to sweep over us in an uncontrolled and destructive fashion. But it is useless to hope that this will happen so long as we persist in believing that in the future toward which we are blindly careering everything is "possible," or that we can escape the ultimate responsibility of defining our limits of possibility for ourselves.

What are the terms for defining possibility? In Mr. Heilbroner's view, they are essentially economic. After noting the threat to traditional humanist ideals of the march of technology, he says: "Whatever its capacity for the destruction or the diminution of man, the perfection and application of industrial technology is withal the only possible escape from the historic indenture of man." He is here referring to the need of the underdeveloped peoples to tread "the essential, but now forgotten path of early industrial development of the West." We quote this statement, not so much to dispute it as to suggest that the exclusive emphasis on industrialism has a seriously displacing effect on other conceptions of human good. No doubt some industrial development is needed, the world over, but as a single goal it leaves much to be desired. Perhaps, since Mr. Heilbroner wrote this book fifteen years ago, he would now have other things to say, or some qualifications to make. Yet the view he then expressed is still the prevailing one and needs further examination.

It seems evident that Mr. Heilbroner is convinced that the making of history is primarily an economic affair. While a great many people will agree with him, we should note, with Karl Polanyi, that mankind in general has been persuaded of this outlook for only the past two or three hundred years. In part, R. H. Tawney's criticism of Marxism applies to nearly all practitioners of the social sciences: some of Marx's followers, Tawney said, made a "theory of the processes of history do the work of a political philosophy." This is a judgment which can be applied to a broad spectrum of social thinkers since the time of Adam Smith, and we might note Mr. Heilbroner's view that communism, at present, "is not so much the successor to but the

substitute for capitalism," accomplishing for the backward nations the transformations worked by capitalism in past centuries.

Karl Polanyi points out that Marx, in his attack on capitalism, accepted the capitalist view that economic processes are the primary reality of human life. From a philosophic point of view, Marx was a revisionist, not a revolutionist. As Polanyi says:

> Capitalist society, Marx argued, was economic society, and therefore it was ruled by the laws governing the economic system, i.e., the laws of the market. Marx, however, failed to emphasize (to put it at the least) that such a state of affairs existed only in capitalist society. The discovery of the importance of "economic" under a market economy induced him to overstress the influence of the economic factor generally, at all times and places. This proved a grave mistake. Although Marx himself insisted on the influence of non-economic factors in history, especially in early history nevertheless Marxists made a veritable creed of the economic interpretation of history. This amounted to an assertion not only of the predominance of economic factors, but also of economic motives.

This last statement seems the heart of the matter. Men's daily affairs are of necessity largely economic pursuits, but this by no means requires that they see in those pursuits the meaning and end of their lives. Economic motives, in short, do not, or should not, define the objectives of human life, nor is their fulfillment the means to *human* fulfillment. The aim of economic activity is survival, which is not the same as fulfillment. To claim that fulfillment grows out of an amplification of the means to survival is to ignore the difference between mind and body, or between body and soul.

Although Polanyi does not use these words, they seem to sum up his underlying contention. The heart of modern economic theory is the market system, and the processes of the market system are actually a very recent invention, historically speaking. In a well-known paper, "Our Obsolete Market Mentality," Polanyi wrote: "The market mechanism . . . created the delusion of economic determinism as a general law for all human society." In *The Great Transformation* (1944), Polanyi said:

> A market economy can exist only in a market society. . . . A market economy must comprise all elements of industry including labor, land, and money. . . . But labor and land are no other than the human beings themselves of which every society consists and the natural surroundings in which it exists. To include them in the market mechanism means to subordinate the substance of society itself to the laws of the market. . . .
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> The crucial point is this: labor, land, and money are essential elements in industry; they also must be organized in markets; in fact, these markets form an absolutely vital part of the economic system. But labor, land, and money are obviously *not* commodities; the postulate that anything that is bought and sold must have been produced for sale is obviously untrue in regard to them. In other words, according to the empirical definition of a commodity they are not commodities. Labor is only another name for a human activity that goes with life itself, which in its turn is not produced for sale but for entirely different reasons, nor can that activity be detached from the rest of life, be stored or mobilized land is only another name for nature, which is not produced by man; actual money, finally, is merely a token of purchasing power which, as a rule, is not produced at all, but comes through the medium mechanism of banking or state finance. None of them is produced for sale. The commodity description of labor, land, and money is entirely fictitious. . . . The commodity fiction . . . supplies a vital organizing principle in regard to the whole of society affecting almost all its institutions in the most varied way, namely, the principle according to which no arrangement or behavior should be allowed to exist that might prevent the actual functioning of the market mechanism on the lines of the commodity fiction.

This extract from Polanyi's work is taken from *Primitive, Archaic and Modern Economics*, a collection of essays edited by George Dalton and available in an Anchor paperback (1968). It is valuable in showing that ancient and primitive societies did not separate out their economic functions as ruling all else, but subordinated them to other purposes. "I plead," Polanyi said, "for the restoration of that unity of motives which

should inform man in his everyday activity as a producer, for the reabsorption of the economic system in society, for the creative adaptation of our ways of life to an industrial environment." But he understood quite well the far-reaching character of this proposal:

> It is like rebuilding a house, foundation, walls, fittings and all, while continuing to live in it. We must rid ourselves of the ingrained notion that the economy is a field of experience of which human beings have necessarily always been conscious. To employ a metaphor, the facts of the economy were originally embedded in situations that were not themselves of an economic nature, neither the ends nor the means being primarily material. The crystallization of the concept of the economy was a matter of time and history.

It may appear to the reader that in considering Polanyi's analysis after quotation from Robert Heilbroner, we are confusing technology and industrialism with the market economy, while these, although related, are obviously different areas. It is evident that there can be high technology without the market mechanism, since the managed economies of the communist societies do quite well without the market, as Heilbroner's figures on their rate of growth, far in excess of present day capitalist economies, make clear. In the West, however, industry is closely identified with the market—is, in fact, guided in its plans and products by the practical necessities of marketing operations. It is just as Polanyi says: "no arrangement or behavior should be allowed to exist that might prevent the actual functioning of the market mechanism."

How, then, can we hope to rebuild the house of our economic life, "foundations, walls, fittings and all, while continuing to live in it"?

We leave the answer to this question to the no-growth, steady-state economists, to men like E. F. Schumacher who have given much thought to such problems. But something can be said about the values and motives that would prevail in a society in which economics is held to be no more than the rational aspect of food- and shelter-getting, and is limited to this practical concern, instead of having forced upon it the burdens and artificial dignity of a philosophy of life.

For help in this direction we turn to a new book by Leopold Kohr, for the past fifteen years professor of economics at the University of Puerto Rico, and presently at the University College of Wales, Aberystwyth. This book, *Development Without* Aid (Christopher Davies, Ltd., Llandybie, Carmarthenshire, Great Britain, 1973, £2.50, or about $6.00), is addressed to the developing countries. Basically, it has to do with the idea of standards of living. Prof. Kohr has a lighthearted approach, which may be the only way economic matters ought to be discussed, since few subjects rival economics in dullness, as ordinarily presented. First of all, he counsels against striving toward some abstract goal of economic attainment or living standards. He begins an early chapter:

> What would be the advantage of underdeveloped countries effecting their development within a native frame of reference in the place of the currently pursued way of international standardization? In the first place, . . . it would render development so cheap that it could be financed locally. All it would need is the proper organization and application of the available under-utilized supply of labour, just as all the English bourgeois needs to finance a splendid rock garden is to liquefy his congealed labour power by getting off the couch. And, secondly, as the Renaissance city-states showed, long before tractors, cars, or railroads were invented, a "nativist" development spells of course neither retardation nor primitivism. On the contrary, it is capable of the most sophisticated culmination considering that the material that goes into the huts of a tropical village can also be assembled in the form of mansions. . . . the simplest way of raising the levels of any given standard is not by switching to an imported variety dependent on values shaped outside the native tradition, but by ascending the rungs of the local standard as they naturally arrange themselves one above the other within the heretofore neglected framework of a long familiar pattern. In other words, the simplest development method for Trinidad is to rise in Trinidadian, not American, fashion for Cuba to proceed on Cuban, not on Russian legs; for Martinique to become a better Martinique, not a greater France; for Antigua a sunnier Antigua, not a

> linear descendent of good gray fog-bound England. If this is dismissed by so many contemporary development statesmen and common-marketeers as romantic nonsense or a callous subterfuge for prolonging imperialist exploitation, it can be explained only if they themselves have so little confidence in the taste of their own peoples as to be convinced that the Cuban, Trinidadian, or Antiguan ways of life would even in their perfection amount to nothing as compared to the marvels the detested American suburb can offer.

Prof. Kohr goes on to specifics in food production, housing, dress, and public works, stressing the natural advantages of each society discussed, and showing the folly of adopting alien standards:

> Finally, as far as healthy communal convivium is concerned: the uneconomical way of trying to improve it is by regressing in contemporary fashion from a slow pedestrian to a fast motorized existence with all the abomination this entails in suburbanization, urban sprawl, traffic jams, trade strangulation, pollution, accident, loss of identity, destruction of the spirit of both village and city life and, above all, in costs of such astronomical magnitudes that the mere appraisal of traffic difficulties in a minor conurbation such as Accra or San Juan has been budgeted with a cool million dollars.

It seems curious that the common sense of Prof. Kohr's proposals has for us the ring of a utopian dream. Why should this be? Such conceptions of economic arrangements would grow naturally enough among people who have things more important than continuous acquisition and conspicuous waste to do with their lives. Even quite "advanced" people, as well as "natives," should be able to see in these suggestions for "development without aid" some of the "historic possibilities" for change to which Robert Heilbroner referred.

REVIEW
PLANETARY HOUSEKEEPING

IT hardly seems possible that any human being could accomplish so many good things as Ellen Swallow did during the span of her sixty-nine years. Who was Ellen Swallow? She was born in 1842 in New England—on a farm near Dunstable, Mass.—a frail child with an indomitable will. She died in 1911, having, in the last eleven years of her life, produced fourteen books, dozens of papers and articles, and given hundreds of lectures, throughout the country, on the causes to which she was devoted.

Her basic concern was the care and fruitful use of the environment. She was, as Robert Clarke says in his book, *Ellen Swallow* (Follett Publishing Co., 1973), the woman who founded ecology; and she was also the originator of numerous practical applications of ecological insight—call them home, community, and social economics. She made housekeeping into a planetary idea. She was the first woman student at the Massachusetts Institute of Technology, its first woman graduate, and the first woman on the faculty. This last distinction she achieved by being willing, at first, to teach without being paid.

Why don't we know about Ellen Swallow? Mainly, it seems, for the reason that she went against the grain of scientific and academic practice: she insisted on common-sense applications of scientific knowledge, scaled to the everyday human needs. She also saw the necessity of a general development of scientific and social intelligence in individuals, as contrasted with the more popular programs of legislative control. This will be evident from some extracts from her later writings, provided by Robert Clarke. At the turn of the century she recognized the vital distinction between "better living" and "right living." Merely better living too often meant thinking only of the present and wasting the natural munificence of the land, as though nothing that was used would ever be needed again. Speaking of the rising cost of living, she wrote:

> It is customary to lay the blame on economic conditions alone. . . . (But) . . . the reason the cost of living has increased thirty times in ten years is the absence of standards of living. . . . It depends upon the ideals and standards of the person spending the money. . . . (The cost of living) is a mental rather than a material limitation; a result of education. . . .
>
> It is not in the material portion of the daily living that we are to look for improvement (of our lives or our environment) but . . . in the ideals, standards and aspirations by which the uses of the materials are governed. . . . The only criterion of true economic value (is not) in dollars and cents, but in the character of the men and women we produce.

Her appeal was for enlightened public opinion:

> In a civilized country, those who cater to the wants of its own citizens should be forced by public opinion to use their capital and . . . skill in ways which will elevate and not degrade the ideals of the people. . . .
>
> It is because I believe in the possibility of control of (the environment) and even economic conditions that I urge so strongly the dissemination of what knowledge we have. . . . (Otherwise) a cry for state interference will come in that day when it is clear that the carelessness of men threatens to extinguish the race.

Ellen Swallow may have first realized what could be done in behalf of sensible living when she worked in her father's general store at seventeen, while going to Westford Academy for her first formal education. She kept the books, managed the inventory, and counseled the customers on their purchases.

> Without knowing it [Mr. Clarke says], she was charting a course for a life that would take her out of the home and store and into the public arena where she would organize the consumer and environment movements of the nineteenth and twentieth centuries.
>
> The girl was already the peer of her elders in home skills. She knew better than her customers what should be bought, sold, and used. At school, too, she was often more familiar with her subjects than her teachers. Especially when it came to nature.

> Walking through Westford, she noted its topography, the flow of its streams, and the growth of its plants, the habits of its animal life. She made her observations in ways that were always instructive—drawings, maps, descriptions—and often more thorough in detail than school manuals of that time.
>
> She had a passion for flowers and plants. Very few of her early letters fail to mention some species that was "doing fine" in her care.

Her life during these formative years seems more important to know about than even the impressive achievements of her later career. Her extraordinary effectiveness was certainly due to the intensity of her practical concerns, giving color, animation, and strong conviction to everything she wrote and said. As Mr. Clarke puts it:

> To Ellen, science was like a language. It had a literacy all its own. In a world changed by science and technology, she saw a need for ordinary people to have some basic grasp of that language—if not its command—if they were to have some say in their own destinies. She appointed herself responsible for translating the elite language of science into a vernacular for everyday use. Directly, she made possible the science education of thousands. Indirectly, she reached millions in generations yet unborn. It does not overstate her case to say Ellen Swallow was a dominant force in humanizing American science by opening its doors to greater human participation.

The titles of her books wholly justify this claim. She wrote four with titles beginning *The Cost of,* applying to *Cleanness, Food, Living* and *Shelter.* Then there were *First Lessons in Food and Diet, The Art of Right Living, Food Materials and Their Adulterations, Sanitation in Daily Life, The Dietary Computer, Home Sanitation, Food as a Factor in Student Life,* and *Air, Water and Food from a Sanitary Standpoint.* Since she was a scientist and teacher, she also wrote *The Chemistry of Cooking and Cleaning.* The last of her published books was *Conservation by Sanitation.* As scientist, she wrote *First Lessons in Minerals, Guides for Science Teaching,* and *Notes on Industrial Water Analysis.*

While still a girl in Westford, she did tutoring and taught school. But she wanted to learn more herself, and managed to enroll at Vassar as a third-year student, where, before long, she added to her modest scholarship by tutoring in German and mathematics. On the day she left the college she said to one of her professors, "My life is to be one of active fighting."

At first she fought to get a job, but no one would hire a woman for her learning in those days. By dint of much effort and a little luck she finally persuaded MIT to accept her as a special student. While she had no fees to pay at the Institute, Ellen had little money, so she supported herself by managing a boarding house for its owner. These were the days when Ernst Haeckel was busy naming new scientific fields. In the 1860S, Mr. Clarke relates, Haeckel had said that there ought to be study of organisms in their environment. Then, in 1873, he proposed Oekologie as the name for this branch of science, but gave it little further attention. Ellen Swallow, who knew German, seized upon the term and made it virtually her own. Later she would attempt to popularize another term, *Euthenics:* "The science and art of improving the human race by securing the best external influences and environmental conditions." Her book, *Euthenics—The Science of Controllable Environment,* was published in 1910. This term, perhaps because of its similarity to Euthenics, has not caught on, but Ecology is now a secular religion.

By the middle years of the nineteenth century, the pollution of English rivers was seen to be serious and official investigation began. In 1872 Massachusetts decided on a similar testing of local waters, and the MIT professor in charge chose Ellen Swallow to make the water analyses. Six scientific specialties grew out of her tests, says Mr. Clarke. About this time Ellen began to do German translations for an engineer and mineralogist, Robert Richards. This led to another field for Ellen. She gained such

mineralogical skill that she was eventually retained as a consultant by mining interests. Meanwhile, her association with Richards led to marriage, a union that grew into a perfect partnership of professional cooperation and domestic felicity. (Ellen's books are listed, of course, in her married name of Ellen Richards.) By reason of her achievements Ellen was awarded a bachelor of science degree by MIT and she applied for and gained membership in the American Association for the Advancement of Science—another "first" for a woman. While she had hoped for a doctorate, her husband later explained that the "heads of departments did not wish a woman to receive [MIT's] first D.S. in chemistry." Meanwhile Ellen plotted to get women accepted as students at the Institute, and finally succeeded, using her connections and the idea of glassblowing as an intriguing specialty for women who would eventually teach.

It is quite impossible to convey in a brief review the story of how Ellen Swallow gradually overcame the prejudice against women scientists and women teachers of science. At the same time she resisted the strong specializing tendency in the sciences, determined to give the knowledge she gained a form that could be understood by ordinary people. Summarizing her accomplishments by the time she was fifty years old, Mr. Clarke says:

> Ellen Swallow had worked at an unbelievable pace to develop the inter-disciplines of an environmental science she believed the next hundred years required. She knew work alone was no guarantee of permanence for the knowledge she had pulled together. If anything, the changing world—specialized, mechanized, cosmetic—seemed to take things apart. . . .
>
> The First Lady of Science had gone in the opposite direction, putting sciences together to nurture the roots of environment. But to perpetuate her conglomerate body of knowledge and its applications, a permanent structure was required. Ernst Haeckel had been right when he suggested the name for a science of everybody's home. Ellen Swallow began to fill the void that accompanied Oekologie's proposal with her collection of old knowledge cross-fertilized with new to build "home science" for environment and life within it.

Her last word to the technologists was, "Do not betray the rank and file," set down in a paper she had hoped to present at the fiftieth anniversary meeting of the Congress of Technology. But death intervened.

COMMENTARY
THE HARD SCHOOL

INSPECTION of Robert Heilbroner's new book, *The Human Prospect* (Norton, 1974), reveals no significant change in the outlook expressed in *The Future as History.* Looking at the world today, he finds appalling confirmation of the pessimistic predictions he made fifteen years ago. The human prospect is now one of "runaway population, obliterative war, and potential environmental collapse," threatening a crisis "that far exceeds the reach of our present mechanisms of social control." Birth-control programs promise no solution since the countries where it has been most "successfully" applied are among "the fastest growing populations in the world." Malnutrition is believed to affect some 60 per cent of the peoples of the underdeveloped nations, "with terrible costs in physical and mental retardation, while 20 per cent suffer from undernourishment or actual slow starvation." Hope that technology and the energy-dependent Green Revolution can alter this trend seems vain: "To raise per capita energy consumption in the poor regions of the world would require a twenty- to thirty-fold increase in energy use in these areas—a calculation that, however staggering, still fails to take into account the potential demands for energy from populations, within these areas, that will certainly double and possibly quadruple over the next hundred years."

As a historian and observer of human behavior, Mr. Heilbroner expects little effective response to the exhortations of books like *Limits to Growth* and *Blueprint for Survival.* More hope lies, he thinks, in the possibility, proposed by John Platt, that a "storm of crisis problems"—local environmental disasters, fatal urban temperature inversions, crop failures, resource shortages—will galvanize people into taking the steps to "an ecologically and socially viable social system."

Where, then, should we look for guidance? The "single most important object lesson for future man," Heilbroner says, may be in the example of primitive cultures "living out their timeless histories." We shall have to "rediscover the self-renewing vitality of primitive culture without reverting to its levels of ignorance and cruel anxiety." He ends by asking how we shall summon the will to reverse the direction of the driving energy of modern man. How, in short, can the alienated and fearful man of the present persuade himself of his Promethean resources and vision?

CHILDREN
. . . and Ourselves
THE HELP WE CAN GET

IN *Journey Among Mountains* (Adamant Press, Adamant, Vermont, $5.25), a thoughtful book on the static and aimless condition of education in the United States, Forest K. Davis looks to a revival of metaphysical thinking as the means of restoring direction and purpose to education. He identifies what is needed in terms of what has been lost—the reasoned transcendentalism of the nineteenth century. Mr. Davis calls this outlook the rational romanticism "which asserted the capacity of the individual to rise above himself and his environment, eventually enabling him to recognize that man could and did create the world in which he lived, using the term 'world' to refer to his own immediate world, brought forward out of the ground-world." The meaning of the restoration in the present is given this explanation:

> The expansion of the concept of the individual from that of neurologically responsive animal to the decisional human being in turn requires revision of various conservative notions of the self into the broad and deep conception of rational-and-romantic-man. Rationality and reason are here understood as referring to the capacity and instrument of judgment involving the full range of the natural and spiritual self able to strive for understanding and accomplishment, capable also of recognizing the limitations of the human self in its relation to the Ultimate. The term romantic is used to convey the notion of man as striving and effortful entity, yearning always for greater understanding and accomplishment, aware of the emotional range and resource of human life but not confined to it, aware of the enormous capacity and power of the intellective reach of the self while constantly mindful of the Unreachable, profoundly sensible of the delicate balance of self-confidence and humility which in some strange way provides human life with its capacity to move most usefully within the receding ranges of its limitations.

One feels in this passage a comprehensive understanding of the deep need of modern man for an ennobling idea of the self. It is also a general statement which recalls confirming testimony—as, for example, the appreciation of the romantic poets in Roszak's *Where the Wasteland Ends,* and Maslow's paper (in *Toward a Psychology of Being*) on transcendence as the goal of human life. The problem is to give this vision content, structure, and continuing animation. Mr. Davis hopes that with a renewal of basic philosophical questions, new life and order can be imparted to education. He lists these questions as four: (1) What is the real? (2) How do you know what you know? (3) What is the nature of human nature? (4) What is the ultimate?

Such questions are seldom asked, and as a result there is little metaphysical clarity in educational thinking. Some early passages in this book show what happens when basic questions are ignored:

> Liberal religion does not have a theory of human nature at all, unless a simplified physico-chemical notion derived from naturalistic origins or a semi-religious cloud of unknowing derived from Judaeo-Freudian sources can be said to provide one. Both of these types of theory represent reductionist patterns by which a distinctive individuality or a precise metaphysics of human nature can be escaped through re-description in terms of other disciplines.
>
> Liberal religious education still maintains a progressive approach in which is a residual romanticism expressed in confidence that the individual can learn and be effective. Trust in the individual is then one of its assumptions. Notice, however, that 20th-century progressive education along with pragmatism has adopted a poor relation of the natural sciences, to wit, physico-social environmentalism, and permitted it to abstract from itself any romantic and rational content. Thus liberalism has been left aligned with determinist philosophies. Environmentalism has seen human nature as creature of its surroundings. In the education of the child the conditions of learning were in theory varied to produce a desired result. Where adult originality comes from to vary the environment in ways that are educational is less clear. A philosophy of originality is missing. Change is ascribed to random physical and social motions amid selective forces and circumstances.

Therefore, Mr. Davis says:

> For present purposes the crucial concern is the redefinition of human nature and the relation of the self to the object. In this fundamental realm liberal religious thought, if it wishes to work with serious reflective questions, must have the courage to reassert its classic heritage, producing the general ideas necessary in metaphysics, to the extent of denying even its present positions, if that were called for. . . . There might then be some gain over the profound philosophic silence to which liberalism is otherwise accustomed.

As critical analysis, this needs little improvement. But what are we to *do?*

Called for is a sustained inspiration which combines the fire of a Blake with the intellectual discipline of a Whitehead and the natural insight of a Thoreau! We cannot, alas, produce this inspiration at will, but what can be done is to make ourselves hospitable to the inspiration which is now available. It is certainly just to say that we have not used the strength of mind and heart that we have. In *Great Books,* Robert M. Hutchins says:

> Great books explode sociological determinism, because they show that no age speaks with a single voice. No society so determines intellectual activity that there can be no major intellectual disagreements in it. The conservative and the radical, the practical man and the theoretician, the idealist and the realist will be found in every society, many of them conducting the same kind of arguments that are carried on today. Although man has progressed in many spectacular respects, I suppose it will not be denied that he is worse off today in many respects, some of them more important than the respects in which he has improved. We should not reject the help of the sages of former times. We need all the help we can get.

Unfortunately, when books are labeled "great," there is a tendency for people to suppose that because they have been classified they do not need attention. The classified is the already "known"! The experts have taken care of it for us. This is the penalty paid by those who undertake to start "movements." Publicity brings journalistic definition and classification. Even the perennially seminal ideas found in great books are regarded as somehow disposed of, not only because someone has classified them, but also because they have champions, and champions (or advocates), it is assumed, are partisans of one sort or another. Partisans, of course, do not have "open minds."

But all that this response to the idea of great books shows is the fact that we have been thoroughly conditioned by both the "specialist" and the "adversary" approaches to knowledge. To ignore books deservedly called great is no more reasonable than to ignore an idea because someone maintains that it is True. (In what sort of age, we might ask, do honorific descriptions produce an effect the reverse of what they intend?)

Those able to get past these barriers have opportunity to make the discovery Mr. Hutchins made:

> The books . . . hold before us what Whitehead called "the habitual vision of greatness." These books have endured because men in every era have been lifted beyond themselves by the inspiration of their example. Sir Richard Livingstone said: "We are tied down, all our days and for the greater part of our days, to the commonplace. That is where contact with great thinkers, great literature helps. In their company we are still in the ordinary world, but it is the ordinary world transfigured and seen through the eyes of wisdom and genius. And some of their vision becomes our own." . . .
>
> There is something called man on this earth. He wrestles with his problems and tries to solve them. These problems change from epoch to epoch in certain respects, they remain the same in others. What is the good life? What is a good state? Is there a God? What is the nature and destiny of man? Such questions and a host of others persist because man persists, and they will persist as long as he does. Through the ages great men have written down their discussion of these persistent questions. Are we to disdain the light they offer us on the ground that they lived in primitive, far-off times? As someone has remarked, "The Greeks could not broadcast the Aeschylean tragedy; but they could write it."

For the kind of change Mr. Hutchins and Mr. Davis seek, there are two requirements. One is the thrust of a fresh moral and intellectual greatness, to generate new lines of force and fields of awareness in which men may unite in the participation in a new vision. But genius is required to produce this thrust; we cannot order it up. Who knows how to call into being an age of Pericles, a Revival of Learning, an Elizabethan flowering, or a gathering of Founding Fathers? The other requirement, happily within our power, is a basic hospitality toward greatness, so that people gain at least some chance of feeling its spur and reach. One way of fostering this hospitality lies in asking the basic questions, and examining what the best minds of the past have said about them. "We need," as Mr. Hutchins said "all the help we can get."

FRONTIERS

Energy and Food

RESEARCH by Eric Hirst at the Oak Ridge National Laboratory on the amount of energy used in connection with U.S. food production and consumption reveals the tendencies encouraged by "affluence" and points to the changes in outlook and direction required for harmonious balance between the natural environment and human activities. The data of this study are briefly given:

> A total of 6,100 trillion Btu—12% of total 1963 energy consumption—was required to grow, process, transport wholesale, retail, refrigerate, and cook food. This includes 190 billion kWhr, 22% of total electricity used that year.
>
> Farming accounted for less than one-fifth of the energy used for food. Farming and processing together used just over half the total. The remainder was used for transportation, trade, and household functions.

These are the bare facts, which need analysis and amplification to obtain meaning. For one thing, personal expenditures for food increased from 1960 to 1970. The contributing factors:

> The percentage of food dollars spent away from home (eating out) increased from 20% to 22% in 1970. This, plus a shift to more expensive foods, accounted for the increase in food expenses. . . .
>
> During the 1960's, per capita consumption of meat, poultry, fish, and processed fruits and vegetables increased, while consumption of fresh fruits and vegetables declined. Thus there was a slow but steady shift towards: expensive foods (such as beef), processed foods and consumption of food away from home. These factors increased expenditures without increasing per capita consumption.

The study shows that processed foods are not only more expensive, but require more energy in their production. (We might here recall the views of the nutritionists who said last April that the refinement and processing of foods, which eliminates their natural fibers, has become a threat to the health of the American people.) Food, according to this study, takes 23 per cent of disposable personal income. And 12 percent of total U.S. energy use (including 22 per cent of total electricity use) "was devoted to the production, processing, transportation, trade, and consumption of food."

More figures:

> Agriculture and processing together account for just over half the food energy budget. The household sector accounts for a surprisingly large 30% for cooking, refrigeration, freezing, and food shopping by car. Trade accounts for another 16%. Thus services associated with food used almost as much energy as did farming and processing.

In his conclusion Mr. Hirst says:

> From past trends, it appears that food-related energy use will continue to grow at a rate faster than population, principally because of growing affluence (i.e., use of processed foods, purchase of meals away from home, use of energy-intensive kitchen appliances).

What can be done about this trend? Mr. Hirst recommends more efficient appliances such as smaller, betterinsulated refrigerators, which might help a little, and increased use of unprocessed foods, such as fresh potatoes instead of frozen french fries. It takes, he says, "three times as much energy to deliver a physical unit of food from processing than from agriculture." He remarks that much processing is done "for health reasons" because of the need to preserve foods, but we should note that this requirement of preservation is largely a result of shipping food over long distances and of the storekeeper's need for products having a long "shelf-life." Increases in local food production and distribution would eliminate much of the need for preservation. Another saving of energy would be accomplished, Hirst says, by "substituting vegetable protein for some animal protein."

In this booklet, *Energy Use for Food in the United States* (available from Oak Ridge Laboratory, P.O. Box X, Oak Ridge, Tennessee), the writer ends by remarking that the high cost of food and energy shortages might lead to increasing the efficiency of food-related energy use. In his new book, *Energy and Equity*, Ivan

Illich makes a very different attack on the problem. He points out that if modern society had not inflated the importance of rapid mechanical transport, many of these problems would not even exist. This one basic excess, in other words, creates the requirement of excesses in numerous other relationships. In *Energy and Equity* (Harper paperback, 1974, 95 cents), Illich says:

> Past a certain threshold of energy consumption, the transportation industry dictates the configuration of social space. Motorways expand, driving wedges between neighbors and removing fields beyond the distance a farmer can walk. Ambulances take clinics beyond the few miles a sick child can be carried. The doctor will no longer come to the house, because vehicles have made the hospital the right place to be sick. Once heavy lorries reach a village high in the Andes, part of the local market disappears. Later, when the high school arrives at the plaza along with the paved highway, more and more of the young people move to the city, until not one family is left which does not long for a reunion with someone hundreds of miles away, down on the coast.

Illich's solutions are "mop-up" solutions; he does not prescribe specific remedies but points to ways of life in which our most preoccupying problems would not even exist. The issue is how we *think* of the good life. Politics as presently conceived is irrelevant. As Illich says in *Tools for Conviviality* (Harper, 1973):

> It would distract from the core of my argument if I were to deal with political strategies or tactics. With the possible exception of China under Mao, no present government could restructure society along convivial lines. The managers of our major tools—nations, corporations, parties, structured movements, professions—hold power. This power is vested in the maintenance of growth-oriented structures which they manipulate. . . . The major institutions now optimize the output of large tools for lifeless people. Their inversion implies institutions that would foster the use of individually accessible tools to support the meaningful and responsible deeds of fully awake people. Turning basic institutions upside down and inside out is what the adoption of a convivial mode of production would require. Such an inversion of society is beyond the managers of present institutions.

The people, in short, in their individual lives, must accomplish this inversion themselves. The changes needed would then begin on an individual scale, and eventually, under development, would spread out to reach the scale of effective social change.