

## PRETENSIONS OR CLUES?

THE idea of self-knowledge had its beginnings in Western thought with the Delphic injunction, "Man, know thyself." Socrates, who was singled out by the Oracle as "the wisest man in Athens," embraced this counsel for its practical value. A human being, he was convinced, ought to take charge of his own life, and this was hardly possible without some knowledge of what a human being is, does, and is capable of. So he, and Plato after him, insisted, "Study yourselves."

What did the Greeks mean by "taking charge"? Well, they declared that all men pursue the good, or what they believe to be good. This means that they make choices between what seems good and what seems not good, or evil. The best choices, they argued, are of things which are really good. To know the really good means knowing what is good for man, and this depends on self-knowledge. Therefore, know yourselves.

The common sense of this argument seems evident, but repeating it this way omits an underlying reality—the fact that self-knowledge is extremely *difficult*. The self habitually looks at things outside the self. To look is to look *away*. So, not remarkably, nearly two thousand years after Socrates, an Italian expert at looking around declared that it was pointless to look at the self. You can't be certain of anything that goes on inside of human beings. Certainty, Galileo declared, depends on measurement, so if you want to have knowledge look at things you can measure. That way you get *primary* knowledge. Don't bother with anything else.

Galileo's claim proved vastly persuasive. The men interested in attempts to take charge—of the world, not of themselves—were impressed by his reasoning: "Methinks that in the discussion of natural problems, we ought not to begin at the authority of places of scripture, but at sensible

experiments and necessary demonstrations." The story of Galileo's victory, winning acceptance from practically all the shapers of the modern mind, has been told hundreds of times, but is nowhere better summarized than in E. A. Burt's *The Metaphysical Foundations of Modern Science*. Pausing at the end of the chapter on Galileo, Prof. Burt says:

... just consider that the history of thought must turn to this single individual as the one who, by experimental disproof, overthrew a hoary science, who confirmed by sensible facts a new theory of the universe, that hitherto had rested on a *priori* grounds alone, who laid the foundations of the most stupendous intellectual conquest of modern times the mathematical science of physical nature, and then as if these accomplishments were not enough, we must turn to him likewise as the philosopher who sufficiently perceived the larger implications of his postulates and methods to present in outline a new metaphysic—a mathematical interpretation of the universe—to furnish a final justification for the onward march of mechanical knowledge. Teleology as an ultimate principle of explanation he set aside, depriving of their foundation those convictions about man's determinative relation to nature which rested upon it. The natural world was portrayed as a vast, self-contained mathematical machine, consisting of motions of matter in space and time, and man with his purposes, feelings, and secondary qualities was shoved apart as an unimportant spectator and semi-real effect of the great mathematical drama outside.

What does this mean, in practical terms, for people who want to take charge? First of all, it means that the world has no purpose of its own—it is simply something going on around us—which we are able to use. Taking charge now means managing the world, and managing the self means no more than focusing our attention on how the world works in order to get what we want. Knowing how the world works means translating its activities into mathematical formulas.

The practice of this program was even more persuasive than the theory. During the three hundred years and more since Galileo's time, Western man has learned how to control (if not to manage well) a great many of the processes of nature. There was, however, one hardly noticed consequence. The idea of the self gradually dwindled in importance from lack of attention. The Socratic idea of self-knowledge had no recognition at all in the sciences devoted to the study of man. Man, psychologists and sociologists said, is what the mechanical (and chemical) forces of nature determine. What else can there be to him?

These theories do not work. They work after a fashion, but the good they produce seems to go bad. They haven't of course been very carefully applied for the reason that they have never had more than superficial intellectual acceptance. Even hard-headed mechanists conceal (from others and themselves) assumptions and feelings expressive of deep human longings which go far beyond any mechanistic goal, while totally ignoring the contradiction between humans animated by purposes—sometimes very high and noble purposes—and a world of nature which has no purpose, yet produces human beings. But even if the machine conception of man doesn't and can't be made to work, the dominance of mechanistic theories has the effect of suppressing other ways of thinking about our lives. The only remedy for this situation seems to be waiting for disaster, or a whole collection of disasters. Consider, for example, what the psychiatrist, Viktor Frankl, says in his latest book, *The Unheard Cry for Meaning* (Simon and Schuster, 1978). A large collection of disasters is surely behind the following report:

At an American university, 60 students who had attempted suicide were screened afterward, and 85 per cent said the reason had been that "life seemed meaningless." Most important, however, 93 per cent of these students suffering from the apparent meaninglessness of life "were actively engaged socially, were performing well academically, and were on good terms with their family groups." What we have here, I would say, is an unheard cry for

meaning, and it is certainly not limited to only one university. Consider the staggering suicide rates among American college students, second only to traffic accidents as the most frequent cause of death. Suicide *attempts* might be fifteen times more frequent.

This happens in the midst of affluent societies and in the midst of welfare states! For too long we have been dreaming a dream from which we are now waking up: the dream that if we just improve the socioeconomic situation of people, everything will be okay, people will become happy. The truth is that as the *struggle for survival* has subsided the question has emerged: *survival for what?* Ever more people today have the means to live, but no meaning to live for.

This is one impressive demonstration that the learn-how-the-world-works theory of knowledge breaks down in practice. Another is considered by Michael Polanyi in some musing about the Hungarian Revolution of 1956. The troubled Communists responsible for that revolt had recognized that the moral longings on which the search for truth is based had been displaced by the "truths" of the Communist Party. Since Marxism is supposed to be *scientific* socialism, it was natural for the politics of the Party to be identified as the Laws of Nature. Individual feeling about that truth could have no standing or reality. As one of the rebels put it, "we had come to believe . . . that truth and political expediency are in fact identical." This unpalatable item of self-knowledge could not be ignored, and the self-study continued:

"And so we arrived at the outlook . . . which poisoned our whole public life, penetrated the remotest corner of our thinking, obscured our vision, paralyzed our critical faculties and finally rendered many of us incapable of simply sensing or apprehending truth. This is how it was, it is no use denying it."

Despite their thorough indoctrination in scientific method and scientific socialism, the rebel Hungarians couldn't stand this discovery about themselves. An unborn Socrates finally kicked his way into their thinking, and the self-examination

he prescribed made a revolution. As Polanyi relates:

They affirmed that truth must be recognized as an independent power in public life. The press must be free to tell the truth. The murderous trials based on faked charges were to be publicly condemned and their perpetrators punished; the rule of law must be restored. And, above all, the arts corrupted by subservience to the party must be set free to arouse the imagination and to tell the truth. It was this outbreak that created the center of opposition that later overthrew the Communist government of Hungary.

For Polanyi, who had an active Socratic daemon of his own, the Hungarian revolution confirmed irrespressible wonderings about the relation between science and truth—wondering that had been going on for ten years or more. He was himself a scientist—a chemist, with numerous original discoveries to his credit—and he knew something about how scientific knowledge is accumulated. He realized that the separation of a discovery from the mind of the discoverer—as though "truth" could be made independent of its knowers—was a grave distortion of the idea of knowledge. *Truth*, he came to see, is a subjective reality and goal. The famous "objective knowledge" of the scientific tradition, he decided, does not exist. Holding up this conception of Truth as the goal of human striving, he concluded, destroys the very foundation of any sort of reliable knowledge, since it excludes the human beings who search for it. If, he said, we are to understand science and to practice it well, we must first understand ourselves as human beings and how we know. For Polanyi, all history became testimony in support of this proposition. He went from chemistry to philosophy and sociology in order to restore the reality of noetic man to the universe studied by science. As he explained:

I have often been asked why I gave up my work in chemistry in favor of economics, sociology, philosophy, and the like. The answer is really quite simple: a desire to go back to normal. We all started with being interested in the whole world; it's the only genuine interest we can have.

When it comes to objection to the claims of scientific "objectivity," Polanyi is but one of many critics. He, however, added to his objection the explanation that the only objectivity that is possible—and desirable—lies in the agreement obtained through the consensus of a number of disciplined and honest investigators. The essence of scientific knowledge, then, lies in the integrity of the scientist. The body of truth cannot be isolated from the aims and motives of its discoverers, which are ethical through and through. By a study of history he showed that the moral qualities of human beings are never erased or eliminated, but only frustrated and refused recognition. The persisting reality of the moral intentions of human beings becomes evident in the distorting disguises assumed by righteous longing when this underlying motive is denied any validity. While the denial itself may be futile, cultural and social chaos is its result. In a recent book offered as an introduction to Polanyi's thought, *The Way of Discovery* (Oxford University Press), the author, Richard Gelwick, says:

The sense of scientific objectivism has led to a revulsion at our hypocrisy in not living up to our moral ideals. This desire to honestly expose our faults demands immediate recognition of failures and changes to the right behavior. Here the radical attempt to establish the moral perfection intrinsic in our hopes for human society inevitably encounters its own finitude and inadequacies. But this radical protest and quest for improvement are unable to control and stabilize themselves. In the very nature of its scientific beliefs, society has undermined the moral restraints that should question and nurture its life. In the demand for objectivism, it has created pervasive self-doubt. To cling to our humanitarian visions, we have to believe in the value and power of ideals that are traditional and transcendent. These are values we know but cannot fully define or objectify. Truth, beauty, justice, love, and honor are such ideals. The notion of the objective ideal reduces them to petty and pedestrian proportions. Beauty and love become emotions. Justice and honor become conformity to current conceptions. Truth becomes the mathematical measurement of quantities. In such a situation, the potentiality of genius is imprisoned, human creativity sterilized. . . .

Our civilization is in a strange plight. It has launched itself upon a grand mission only to find itself in self-doubt and disintegration. The goals that it has set itself are ones that continually demand change. Such a dynamic society is always adventuresome, promising new horizons and richness. In the process of seeking these goals, we have corrupted them with doubt about all goals that cannot be made fully articulate and realizable. In this loss of the credibility of our vision, we have been left to the powers of what seems most tangible. The variations with which this consequence has developed are many. In one form, it has led to the conclusion that there is no ultimate meaning except absurdity. In another, it has led to the exercise of exposing our failures, the partial joy of honest analysis without a commitment to suffer for any long-range ideals. In still other forms, it has led to a grim way of life determined by the conceptions of a machine. . . .

In the twentieth century, we have reaped the destructive fruits of trying to make our knowing completely explicit and objective, ending in an absurd denial of the very structure of our own being as persons, and as society.

How would Polanyi persuade the world of modern thought to change its idea of knowledge? The answer to this question is the burden of Mr. Gelwick's excellent book. Briefly, Polanyi decided that the human act of discovery needs attention in order to transform how we think about what we know. It *is* a part of self-knowledge to understand how we learn. We should begin by acknowledging that "nature is not an object; it is our home." Everything that we have to do with in the world *is* a joint product of our imagination and some fragment or portion of that home. All our knowledge actually depends upon a web of countless reciprocities between nature and ourselves. No separation is possible. From the first moment of wanting to know something, we find our way by using unidentified powers of perception. A. H. Maslow called this "embryonic knowledge" and Polanyi named it "tacit knowing," going back to Plato to explain what he meant. In his book, *The Tacit Dimension*, Polanyi said:

To see a problem that will lead to a great discovery is not just to see something hidden, but to

see something of which the rest of humanity cannot have even an inkling. All this is a commonplace; we take it for granted, without noticing the clash of self-contradiction entailed in it. Yet Plato has pointed out this contradiction in the *Meno*. He says that to search for the solution of a problem is an absurdity; for either you know what you are looking for, and then there is no problem; or you do not know what you are looking for, and then you cannot expect to find anything.

The solution which Plato offered for this paradox was that all discovery is a remembering of past lives. This explanation has hardly ever been accepted, but neither has any other solution been offered for avoiding the contradiction. . . . The kind of tacit knowledge that solves the paradox of the *Meno* consists in the intimation of something hidden, which we may yet discover. There exists another important manifestation of these mental powers. We are often told that great scientific discoveries are marked by their fruitfulness; and this is true. But how can we recognize truth by its fruitfulness? Can we recognize that a statement is true by appreciating the wealth of its yet undiscovered consequences? This would of course be nonsensical, if we had to know explicitly what was yet undiscovered. But it makes sense if we admit that we can have a tacit foreknowledge of yet undiscovered things. This is indeed the kind of foreknowledge the Copernicans must have meant to affirm when they passionately maintained, against heavy pressure, during one hundred and forty years before Newton proved the point, that the heliocentric theory was not merely a convenient way of computing the paths of the planets, but was really true.

What is Polanyi undertaking? He is giving instruction in the nature of man by disclosing how human beings know. He is saying that each one of us has a hidden Ariadne's thread which winds through every portion of the knowable universe. He is saying, in effect, that we both know and don't know. He is saying that in order to know the world we must look at the world, but never forget that *we* are doing the looking, so that there is always a part of ourselves in what we see. He is saying, therefore, that man is both subject and object, both the knower and the known. As we look at the world, we come to know the object, but know it truly only if we, simultaneously, learn to know ourselves by noting *how* we know.

Polanyi is a careful man, unwilling to risk the concentration of all reality and knowledge in either subject or object. A human being, he seems to be saying, unites subject and object. We render man meaningless—nonexistent—if we say that he must be either one or the other. If we say that he is all subject, and the rest illusion, we may drive him crazy. (Dr. Frankl has this note in *The Unheard Cry for Meaning*: "Years ago I showed through experimentation that the language of schizophrenics is no longer directed to an object, but merely expresses the mood of the subject.") If we tell him that only a world of purposeless processes exists, we may drive him to suicide, for what is the use of struggling against such difficult odds if we don't really exist—are not able, that is, to be some kind of cause of what is happening in the world? The suicides in the college Dr. Frankl told about were among the students who got the best marks, which suggests that theory and thinking had become important to them. The conclusion they drew from what they learned at college was that it would be better for them not to be.

Polanyi decided to show that human beings reveal their full character, promise, and possibility when they make discoveries. What is a discovery? It is a link established between subject and object. A discoverer extends his being—the radius of his knowing—by learning more about the world. If the world can be improved, the improvement can be made only by intelligent beings able to make choices, beings who know the difference between good and not-good and can explain why the good is desirable. And if the world is improved by us, we improve along with it. After all, the world is our *home*.

But through the same power of choice we are also able to degrade the world. Human beings do not always behave like human beings. That is, they may do their worst instead of their best. We are obliged to admit that they are neither good nor evil, but *definers* of good and evil, and choosers between the two.

This is a vastly unsettling idea. If a human being is neither a subject nor an object, neither spirit nor matter, neither an animal nor a god, what is he? Science cannot even comment on such a combination of opposites. Both science and common sense rule out ambiguity. We don't know how to handle it. We want our truth to be objective, as Galileo said it ought to be. For example, objecting to an article arguing for human immortality (in *Modern Maturity* for August-September), a reader said: "Man is an animal with pretensions to a grandeur that his savage and animal acts belie. It is his ego that convinces him of his immortality." But what if there are two egos in man, one animal and mortal, the other mental and at home only in eternity? Perhaps some Polanyi of the future will ask what these godlike pretensions are a clue to, and if, as Plato and some others never tired of suggesting, an immortal monad has somehow lost itself on earth and thereby created the species of man.

## *REVIEW* DATED BUT GOOD

A REREADING of two books—one famous, first published more than fifty years ago and endlessly reprinted; the other, appearing during World War II and now practically forgotten—points to a common conclusion: What survives in intellectual expression is the sage asides, not the major theses or ideological contentions.

This is certainly the message—whether or not intended—of Will Durant's *The Story of Philosophy* (Simon and Schuster), a book which fully justifies the eleven years of preparation and three years for setting it down that the author found required. The modern world, for example, is now in process of abandoning the major claim of Francis Bacon concerning what is knowledge and how it is to be obtained, while retaining and quoting with undiminished respect his aphorisms and epigrams.

What was the Baconian thesis? Durant calls it "a magnificent enterprise":

It would differ from every other philosophy in aiming at practice rather than at theory, at specific concrete goods rather than at speculative symmetry. Knowledge is power, not mere argument or ornament, "it is not an opinion to be held . . . but a work to be done; and I . . . am laboring to lay the foundation not of any sect or doctrine, but of utility and power." Here, for the first time, are the voice and tone of modern science.

Bacon, Mr. Durant tells us, quoting *Novum Organum*, was practically a "behaviorist" in psychology. He easily eliminated free will for man, noting that "what chance is in the universe, so will is in man," and chance, he maintained, "is the name of a thing that does not exist." In any event, the scientific pursuit of causes would abolish it. Yet as scientist, or an inventor of science, Bacon was a shameless moralist and a philosopher devoted to the Good. "Philosophy," he said, "directs us first to seek the goods of the mind, and the rest will be supplied, or not much wanted." Philosophy, in short, when it is real,

produces a taste for high ends along with its wise conclusions. The chapter on Bacon is salted throughout with Bacon's sage asides, one of which seems to throw light on his own career: "Wisdom for a man's self," he said, "is the wisdom of rats, that will be sure to leave a house somewhat before it falls." Mr. Durant etches the character of Francis Bacon:

Friends are for Bacon chiefly a means to power, he shares with Machiavelli a point of view which one is at first inclined to attribute to the Renaissance, till one thinks of the fine and uncalculating friendships of Michelangelo and Cavalieri, Montaigne and La Boetie, Sir Philip Sidney and Hubert Languet. Perhaps this very practical assessment of friendship helps to explain Bacon's fall from power, as similar views help to explain Napoleon's; for a man's friends will seldom practice a higher philosophy in their relations with him than that which he professes in his treatment of them.

Like some other ambitious and talented men, Bacon offered his hobby as the means to salvation for mankind. For hundreds of years the Western world accepted and pursued his program, given in a paragraph by Will Durant:

What is refreshingly new in Bacon is the magnificent assurance with which he predicts the conquest of nature by man: "I stake all on the victory of art over nature in the race." That which men have done is "but an earnest of the things they shall do." But why this great hope? Had not men been seeking truth, and exploring the paths of science, these two thousand years? Why should one hope now for such great success where so long a time had given so modest a result?—Yes, Bacon answers; but what if the methods men have used have been wrong and useless? What if the road has been lost, and research gone into by-paths ending in the air? We need a ruthless revolution in our methods of research and thought, in our system of science and logic; we need a new Organon, better than Aristotle's, fit for this larger world.

In *The New Atlantis* Bacon presents his utopian vision of a society in which the "Knowledge of Causes and secret motions of things" will lead to "the enlargement of the bounds of human empire, to the effecting of all things possible." Evidently, the politician is to be

replaced by the scientist. It is a picture, Durant remarks, in which we see "again the outline of every philosopher's utopia—a people guided in peace and modest plenty by their wisest men." Why, the historian wonders, haven't such efforts long since been made to come true? Why haven't people called upon the scientists to assume control, since they are obviously bright and skillful individuals? "Perhaps," he concludes—with a sagacity not at all common in 1927—"science has not yet merited mastery of the world. . . ." The other book we have been reading—*Development of A Collective Enterprise* by Seba Eldridge and Associates, published by the University of Kansas in 1943—has its most sagacious aside right at the beginning, in the first chapter by Prof. Eldridge, who tells how the book originated:

When the writer of these lines was very young and idealistic he was quite sympathetically disposed toward "socialism," which was commonly defined as social ownership and democratic control of the means of production, together with production for use and not for profit but understood to take in many other good things as well, such as a peaceful, harmonious family of nations, maybe even a world state. Like almost everybody else interested in the matter, he was sure that a socialist regime would be brought about by the wage-earners, who in due season would become class conscious, effect the necessary organization, and some fine day overthrow their oppressors, the wicked capitalists.

After he became a "professor," Eldridge taught current history in more or less these terms, remaining convinced that no accounts of revolutionary change "except the Marxian doctrines merited serious attention." But then it began to be apparent to him that a comparatively rapid "socialization" was already going on in the United States, wholly without the aid of Marxist persuasion. Nobody but the Webbs, he discovered, had shown interest in such developments. The ideologists were all writing about what *ought* to be, not about what was going on. Hence this book on *Collective Enterprise*, which took for its thesis the following proposition or "hypothesis":

In a "capitalist democracy" (where capital is owned mainly by individuals, and where ultimate political power is exercised—in some measure—by the "masses" ) extensions of collective enterprise (in which capital is owned by groups, not by individuals) are effected *mainly* and *primarily* through the pressure of consumer and/or general public needs or interests; although all other major categories of economic and social interests will operate variously as minor, secondary, auxiliary, derivative, or conditioning factors in processes of collectivization.

The book had thirty contributors, many of them teachers at the University of Kansas, who assembled the evidence supporting this proposition. Two qualities are apparent: First is the tough-minded integrity of the writers, which gives the reader confidence in what they say; second is the kind of awareness which the chief editor and contributor, Seba Eldridge, displays in his notably non-academic beginning. If there are unexamined assumptions behind this book—and, in the nature of things, there must be—they are not neglected from any devious habits of the writers. The value of the book, then, is not in its conclusions, however accurate, but in the motives of its authors, which make it worth reading.

How are such qualities identified? If you don't have a philosopher's stone to test a book with, one kind of evidence is provided by certain economic considerations. What scholars do because they must, and not for money, deserves special attention. This seems to explain publication of *Development of Collective Enterprise*. The contributing scholars received no "grants-in-aid" or subsidies from either Government or foundations. "No material compensation could be offered except a sharing in royalties, if any, that might be earned by the volume reporting our findings."

What did they find out? That the socialization of the United States was coming about because the people wanted it to. Prof. Eldridge says in a concluding chapter:

Developments have been designated by such terms as public undertakings, public services, mutual companies, or, more simply still as extensions of

public health, educational, recreational, or welfare services, as the case may be. Such terms as socialism or the cooperative commonwealth have been eschewed, perhaps because they took in too much territory. Leaders have usually been innocent of anything that could be called an "ideology," save for such hand-to-mouth doctrines as served to justify their several programs. Doubtless most of them would be shocked had they been informed they were undermining the existing social order, and far more effectively than avowed "radicals." . . .

Stated symbolically, the center of economic control, and, therewith, of political power was and is being transferred from Wall Street to Washington, a fact which doubtless explains the extreme bitterness of the 1936 and 1940 campaigns. . . . The country operating through the national government is slowly building a new politico-economic system while perforce keeping the old system running during the process of reconstruction.

What is the point of taking note of this study? Most of all, it shows that even far-reaching social change in the United States has been a piecemeal, ad hoc, non-ideological procedure, responsive to the pragmatic thinking of the people themselves. It is not really "managed" by anybody. Another such great change seems to be going on now.

## *COMMENTARY*

### USE AND ABUSE OF LITERACY

IN a paragraph crowded out of this week's "Children" article, Kishorelal Mashruwala gave his evaluation of "literacy":

In the Segson Method, literacy (that is, information on various matters through reading and writing, and capacity to follow logical or pseudo-logical controversy) is not considered knowledge or even the medium of knowledge but is regarded only as a symbolical representation both of knowledge as well as accomplished ignorance. The knowledge of these symbols is necessary and useful if the sources of knowledge are alive. It will be the aim of the Segson Method to keep these sources alive. The means of doing so are work, observation, experience, experiment, service and love. Without these, learning through books acts even as a hindrance to the development of the spiritual and rational faculties of the student, and also impairs his physique.

Essentially the same evaluation was made by Ortega (in *Some Lessons in Metaphysics*, Norton, 1969). Writing about "book learning" that students seldom apply and are not really interested in, he said:

Meanwhile, generation after generation, the frightening mass of human knowledge which the student must assimilate piles up. And in proportion, as knowledge grows, is enriched, and becomes specialized, the student will move farther and farther away from feeling any immediate and genuine need for it. Each time, there will be less congruence between the sad human activity which is studying, and the admirable human occupation which is true knowing. And so the terrible gap which began at least a century ago continues to grow, the gap between living culture, genuine knowledge, and the ordinary man. Since culture or knowledge has no other reality than to respond to needs that are truly felt and to satisfy them in one way or another, while the way of transmitting knowledge is to study, which is not to feel those needs, what we have is that culture or knowledge hangs in mid-air and has no roots of sincerity in the average man who finds himself forced to swallow it whole. That is to say, there is introduced into the human mind a foreign body, a set of dead ideas that could not be assimilated.

These are the considerations which should be engaging the planners of curriculum reform—the reform now going on at Harvard and elsewhere. To face them squarely would of course throw administrators into almost total confusion. The solution then would be to put teachers like Paulo Freire and Wendell Berry in charge. This is not a likely possibility.

## CHILDREN

### . . . and Ourselves

#### GANDHI'S "BASIC EDUCATION"

WHEN the life of M. K. Gandhi came to an end in 1948, the editorship of his weekly magazine, *Harijan*, passed to Kishorelal Mashrowala, who had been closely associated with Gandhi since 1917. That he was a worthy successor in this work soon became evident to those who read *Harijan* regularly. Mashruwala lived a few years longer—he died in 1952—but in those years he showed the qualities of an independent thinker as well as an articulate crusader for the causes that Gandhi represented. Not the least of these was Gandhi's plan for Basic Education—*Nai Talim*—first offered to the Indian nation in 1937.

*Towards New Educational Patterns* (Navajivan Press, Ahmedabad, 1971) collects Mashruwala's writings on Basic Education, most of which appeared in *Harijan* between 1937 and 1952. The first chapter is the writer's exposition of Basic Education (called here "The Wardha Scheme"). The leading ideas of this plan should be of general interest for a variety of reasons. Mashruwala's account is in numbered paragraphs. He begins:

1. The Segaoon Method is the name given to the Principles and System of Education enunciated by Mahatma Gandhi.
2. It is the application of the law of Non-violence in the training of the child as a prospective citizen of the world.
3. It is claimed that the method is applicable, with appropriate changes, to children of all countries and classes where the military spirit is to be replaced by the peaceful. Anyway, it is the only proper system for the people of India.
4. Its aim is to make the child share the obligations of citizenship from the earliest age at which it begins to show some power of discrimination.
5. The center of the Method lies in a productive industry. All training will be principally through the medium of and in correlation with such industry. Thus history, geography, mathematics

physical and social sciences and general literature will center around and be related to that industry. Other matters in the above subjects will not be omitted, but greater emphasis will be laid on the former.

6. Industry will not be the only means and medium of instruction; but, to the extent it is an inevitable condition of human life, it will also be an end of instruction. So that the aim will be to inculcate in the pupil a sense of the dignity of all manual labor—even scavenging—and the duty of earning an honest livelihood by labor.

In this scheme the schools are to be self-supporting, as far as possible. All pupils will work three to four hours a day, and will be given a wage. In support of the idea of using industry and craft as the vehicle of education, Mashruwala quotes Kropotkin, who said: "In the interests of both science and industry, as well as of society as a whole, every human being, without distinction of birth, ought to receive such an education as would enable him or her to combine a thorough knowledge of science with a thorough knowledge of handicraft."

Mashruwala contrasts this conception of teaching with the existing practice in India:

Under the present system, most pupils do not know even at the end of their college career what they will do after completing their studies. Young boys and girls, unless their material circumstances are hopelessly adverse, pass on from primary to secondary schools, and from secondary schools to colleges at an enormous expense, not for the love of cultural and other education which the schools and colleges profess to give, but simply because they do not know what else they should or can do. They go on with their studies merely in order to put off till the last day the difficult question of settling the main career of life. More than twenty years of the growing period of life spent in such aimless manner must inculcate in the pupil the habits of procrastination, hesitation, irresoluteness and inability to take decisions in the pursuits of life. The Segaoon Method will aim to bring about in the child at as early an age as possible the determination of the future career it should expect to pursue, and will arm him with at least one occupation, which will give him a wage enough for a healthy subsistence.

"Higher Education" in India, as elsewhere, now produces a great deal of dissatisfaction with the jobs available to graduates. High school graduates complain that they can find employment only as water sprayers or errand-boys, and a university graduate once wrote to *Harijan* pointing out that for three hundred jobs as drivers and conductors of a transport system in West Bengal, there were 50,000 applicants, hundreds of them holders of college degrees. "Is there," he asked, "any use for such university training?" To this and similar inquiries, Mashruwala replied:

Indeed, if we want education to spread universally, having regard to the present standard of high school and collegiate education, no water sprayer should have less education than that of a high school boy, nor should a *chaprasi* be less educated than an undergraduate. . . . If there is to be eight years' compulsory education the whole nation will be educated; every boy and every girl, even a road laborer a sweeper, and a cart-driver will be a matriculate or an undergraduate, that is, will have the amount of information and literary equipment of the present-day matriculate or undergraduate. Since the illiterate cooly will disappear, all work will have to be done by "ladies and gentlemen." The education must, therefore, be improved so as not to decrease the educated person's efficiency or inclination for jobs requiring physical and unattractive labor; and the differences in scales of remuneration of different jobs must not be so wide as at present.

While Mashrowala obviously didn't think much of the sort of education he is describing here, the question enabled him to anticipate the practical effect of *universal* education and to show what it would mean. The main difficulty, Mashruwala suggested, lies in supposing there is some sort of inconsistency between higher education and manual work. He quotes from Kropotkin (in *Fields, Factories and Workshops*) to show how little education may count for when separated from practical work:

Men who hardly had received any education at school, who had merely picked up the crumbs of knowledge from the tables of the rich, and who made their experiments with the most primitive means—the attorney's clerk Smeaton, the instrument-maker Watt, the brakeman Stephenson, the jeweller's

apprentice Fulton, the millwright Rennie, the mason Telford, and hundreds of others whose very names remain unknown were . . . "the real makers of modern civilization" while the "professional men of science" (except in the domain of Chemistry) provided with all the means for acquiring knowledge and experimenting, have invented little in the formidable array of implements, machines, and prime motors which has shown to humanity how to utilize and to manage the forces of nature. The fact is striking, but its explanation is very simple; those men—the Wattses and the Stephensons—knew something which the savants do not know—they knew the use of their hands; their surroundings stimulated their inventive powers; they knew machines, their leading principles, and their work; they had breathed the atmosphere of the workshop and the building yard.

Even if some qualification must now be added to the claim that the "uneducated" do the most inventing, Kropotkin's meaning is sound enough. As for the question of whether industry and craft can supply sufficient scope for modern education, one might turn to *The Dynamic Environment*, a text prepared by a college professor Ed Marston, who shows how all the essentials of modern physics can be taught through study of how a modern city is serviced and works.

## *FRONTIERS* A Hill To Begin With

How do we form our convictions—the constellation of feelings which, taken together, make an integrated stance in relation to life?

This question would be less difficult to answer if there were fewer layers in us of inclination, perception, and response. The biological foundations of existence dictate one range of behavior—the things we do with little or no consciousness, which grow erratic under close examination. Nesting in the web of instinct is another system of intentions, if they can be called that, since appetites and desires are unplanned provocations to action, often governing what we do without our noticing their authority. They are not the same as instincts, although they are sometimes claimed to be "laws of nature." But we know they are different for the reason that when a desire becomes imperial, brushing aside everything else, it may ruin a life. Instincts have self-limiting balance, but uncontrolled desires bring havoc to the order on which human and bodily health depends.

Next comes the level of rational decision, of the calculation and projection of ends, resulting in what we call science, made up of theories concerning the rules, resources, and triggers of natural process. Then, above the rational, is the mysterious realm of intuitive promptings, problematic in origin, expressive of what seem metaphysical instincts, often sublimely indifferent to mundane affairs. Yet the intuitive, like the instinctive, both "givers" of human existence, is subject to distortion. Men turn their spiritual longings into drives for partisan ends, and the crimes of religion, like the excesses of passion, accept no natural boundaries. Arrogant religious certainty allows cruelty without regret. A man with God on his side feels no need of either humility or humanity.

The purpose of asking how convictions are formed is of course in order to know more about

how we and others may be helped to acquire the right convictions. In a time of growing troubles, the need to eliminate beliefs which lead to systematic mistakes becomes urgent—so urgent that it can no longer be left to psychologists and other academicians. An evident part of the problem is that our learned specialists, because they are specialists, have forgotten the fact that their labors are meant to increase the welfare of the whole. Just as the issues of war and peace cannot be left to generals, who are specialists in war, so the question of how to live lives that are good for ourselves and the world cannot be left to theorists, least of all to theorists whose protected and subsidized careers have turned modern knowledge into the pretentious lore of misdirected skills.

If we look at nature carefully, we see that even in very difficult circumstances life always finds ways to make new beginnings. So it may be with us. In a time of crisis, vision seems productive of a higher rationality. And crisis also makes necessary a higher practicality. The two go together. Vision and practicality must be aspects of each other, although frequently one side hides the other. Simplicity is therefore desirable. To be put to work, the vision must be both seen and felt.

This is doubtless the reason why present-day vision has its primary focus in agriculture and human relations to the land. It can be no accident that all through history really wise teachers have illustrated their instruction with metaphors and analogies relating to the earth, to plants and animals and the production of food. These things are close to our lives. Small wonder, then, that in recent years an increasingly potent geotropic attraction has been drawing susceptible humans back to the land. This, one could say, is an action of life itself, and we, who have also a life of the mind, are becoming conscious of it. Our consciousness includes the field of the higher rationalism, which is characterized by openness to intuitive urgings. The great and abiding virtues of a good human life have a natural place in the

higher rationalism. It is natural, then, to recognize that only right relations with the land are able to establish an environment where the virtues have opportunity to flourish. When consciously chosen, those relations stake out areas for the exercise of self-reliance, the daily application of good judgment, and to awakened mentality exemplify the normal reciprocities of holistic enterprise. Natural philosophy and natural religion arise almost spontaneously out of such a life. And there is a manifest consistency in such thinking with the wisdom of the past. Quotations from old sages sprout in the new literature about the land like flowers discovered by children on a summer's day.

The idea is to start making a world in which the seeds of wisdom and virtue can be nourished and brought to blossom. The idea is to start living according to the hierarchical principles of an economy of life. Those who, animated by an inward urge, have already begun to live in this way, soon enjoy health of mind. Their intellectual expressions are sufficient evidence of this. What was initially no more than longing acquires the muscular fibers of tested ideas. It is a knowledge that brings no one harm, but would, if widely adopted, recreate all human relations. It satisfies the categorical imperative and proves the law of synergy. It contemplates a world where there is no more waste, admits no useless thing, but sees the sense of restoring everything to its place. It knows that Nature is ever grateful for this service, rewarding her collaborators with the uniquely desirable gift of health.

Those who are now speaking truth to the people are more healers than philosophers. Healing may need to come first, since thinking deeply about the meaning of life requires some health of mind. Yet philosophy is implicit in the laws of health. No one can *give us* good or right philosophy—we have to grow it, like garden vegetables, like everything else worth having. The question, for people out of practice in growing things, is where to begin.

In *The Unsettling of America* Wendell Berry speaks of how the land of a hill farm must be used—land now increasingly abandoned and wasted in these days of mass production agriculture. Mr. Berry says:

A good hill farm, if it is located where climate and soil permit intensive use, is almost by definition a small farm; and, insofar as it benefits from long-standing knowledge and devoted care, it is almost by definition a family farm. Nothing could be more alien to healthy agriculture than a large, production- or profit-oriented hill farm whose owner or owners do not live on it. In such a situation the balance between use and care is overthrown, and waste is the result. The small differences may be the most important. A family farmer, for instance, will walk his fields out of interest; the industrial farmer or manager only out of necessity. And finally, the good use of hill land requires a technology appropriate to it in scale and cost. Here we approach what most of the agriculture specialists and all of the "agribusinessmen" would be quick to describe as nostalgia or fantasy or craziness. They would do this to protect themselves and their assumptions and to disguise their most serious error. For the true measure of agriculture is not the sophistication of its equipment, the size of its income, or even the statistics of its productivity, but the good health of its land.

This is a first principle of the higher rationality. It has application in all directions. Where is the modern man without some neglected hillside in his life?