

RUSKIN: A BRIEF EXPLORATION

THERE is a quality in the social thinking of men like William Morris and Eric Gill that is completely lost by criticism which depends on statistical comparisons. Morris, for example, was impressed by the contrast between "the ugly inequality of Victorian England and the still poorer, yet somehow more wholesome, society which he found in Iceland." While judgments of this sort are implicit in the thought of Erich Fromm and Jayaprakash Narayan, they have only lip service from most present-day social critics, who seem wholly occupied with what Maslow called the Deficiency-needs of mankind. It is necessary, of course, that these bodily requirements be met, but if social philosophy is constructed on the basis of material welfare alone, decisions are increasingly made in terms of a functional materialism, until the higher qualities and needs of human beings are virtually forgotten.

The entire society is vulgarized as a result, with a gradual devitalization and impoverishment of the language used to speak of intangible or "higher" values. One cannot now, for example, use the expression "quality of life" as meaning the level of intellectual and moral interests, since this expression is commonly taken to represent the degree of material well-being and purchased amenities that has been achieved. In this scheme of things, only the quantifiable and the objectively measurable are recognized as "real," which cannot help but bring a debasement of the currency of humane speech, rendering mute a wide range of feeling and imagination.

What to do? Wondering about antidotes for such tendencies, we recalled that John Ruskin had given much nourishment to both Morris and Gill. Who reads or knows much about Ruskin, these days? Does anyone "look him up"? What has been lost to us by neglect of Ruskin and certain other great Victorians? If you ask a modern

history professor—somebody with a Ph.D.—what he thinks of W. E. H. Lecky, Henry T. Buckle, and John W. Draper, all English historians of the nineteenth century, adding Andrew D. White as an American who came a little later, he is likely not to have read them. These men were "generalists," of course, rather than scholarly specialists, and generalists are hardly acceptable in today's academic circles. A friend who teaches in a California state college remarked that while he didn't think highly of "survey" courses, using them proved to be the only way he could get certain fine books into the curriculum. He also said that teachers in other departments of his college sometimes asked to take part in his program, simply for the opportunity to do an "essay" sort of lecture something usually frowned upon in the form of a paper, since it wouldn't involve any "original research" or be spotted with numerous footnotes.

So we decided to look up Ruskin, knowing little or nothing about him to begin with. He was born in 1819 and died in 1900. He wrote some fifty works and his influence is beyond measure. Our project will have to be selective, probably limited to looking at *The Stones of Venice*, *Sesame and Lilies*, *The Crown of Wild Olive*, and *Unto this Last* (which Gandhi translated for Indian consumption). So far we have been working on the chapter on "The Nature of Gothic" in *The Stones of Venice* (three volumes, the first of which came out when Ruskin was thirty-two).

First a note for collectors of accounts of distinguished autodidacts. Ruskin's schooling, the *Britannica* says, was "irregular and not successful." His stay as a student at Oxford—where, years later, he became professor of art—was "an interruption and hindrance to his real education—the study of nature, of art and of literature." He apparently had plenty of money all

his life. He inherited about 200,000 pounds and, in the course of his life, spent or gave it all away, in later years living on the earnings of his books. In 1876 he decided it was wrong to enjoy interest on his funds, so he lived on capital and "gave freely to friends, dependants, public societies, charitable and social objects." He began his career as a critic of architecture and art, but stopped writing specifically in these areas in 1860: "The last forty years of his life were devoted to expounding his views, or rather his doctrines, on social and industrial problems, on education, morals and religion, wherein art becomes an incidental and instrumental means to a higher and more spiritual life." Some later writings "contain a vehement repudiation of the orthodox formulas of the economists; and they are for the most part written in a trenchant but simple style, in striking contrast to the florid and discursive form of his works of art."

His mother, interestingly, was a "stern, able, devoted woman of the old Puritan school." She trained John in reading the Bible, while his father read him Shakespeare, Scott, Don Quixote, Pope, and Byron, and most of the English classics. He began writing as a child. (Puritan or Fundamentalist mothers seem to stir good qualities in their sons. Bellamy had such a mother, and a theme in his life was continual war on the idea of guilt and original sin, as one result. But the integrities of these women were communicated, too. Arthur Morgan also had such a mother, and years later he drew a dramatic comparison between her qualities and the moral weaknesses of the freethinking "liberals" he had encountered in his life. Morgan, although basically agnostic, has always had an eye for such contrasts and contradictions.)

Turning to Ruskin on the nature of the gothic—this essay seems especially informing and provocative. He believed that "the buildings and art of a people are the expression of their religion, their morality, their national aspirations and social habits." Study of the gothic, therefore, becomes a

kind of moral psychoanalysis for Ruskin. The reader can take only what he wants of Ruskin's opinions and still get a feeling for gothic architecture that would probably be hard to acquire otherwise. The *Britannica* article says Ruskin's writing on art is discursive—and it is, but in ways profitable to the reader. We have a long passage for illustration of how Ruskin explores the implications of works of art, although here "the gothic" isn't even mentioned:

But the modern English mind has this much in common with that of the Greek, that it intensely desires, in all things, the utmost completion or perfection compatible with their nature. This is a noble character in the abstract, but becomes ignoble when it causes us to forget the relative dignities of the nature itself, and to prefer the perfectness of the lower nature to the imperfection of the higher; not considering that as, judged by such a rule, all the brute animals would be preferable to man, because more perfect in their functions and kind, and yet are always held inferior to him, so also in the works of man, those which are more perfect in their kind are always inferior to those which are, in their nature, liable to more faults and shortcomings. For the finer the nature, the more flaws it will show through the dearness of it; and it is a law of this universe, that the best things shall be seldomest seen in their best form. The wild grass grows well and strongly, one year with another, but the wheat is, according to the greater nobleness of its nature, liable to the bitterer blight. And therefore, while in all things that we see, or do, we are to desire perfection, and strive for it, we are nevertheless not to set the meaner thing, in its narrow accomplishment, above the nobler thing, in its mighty progress; not to esteem smooth minuteness above shattered majesty; not to prefer mean victory to honorable defeat; not to lower the level of our aim, that we may the more surely enjoy the complacency of success. But, above all, in our dealings with the souls of other men, we are to take care how we check, by severe requirement or narrow caution, efforts which might otherwise lead to a noble issue; and, still more, how we withhold our admiration from great excellences, because they are mingled with rough faults. Now, in the make and nature of every man, however rude or simple, whom we employ in manual labor, there are some powers for better things: some tardy imagination, torpid capacity of emotion, tottering steps of thought, there are, even at the worst; and in most cases it is all our own fault that they *are*

tardy or torpid. But they cannot be strengthened, unless we are content to take them in their feebleness, and unless we prize and honor them in their imperfection above the best and most perfect manual skill. And this is what we have to do with all our laborers; to look for the *thoughtful* part of them, and get that out of them, whatever we lose for it, whatever faults and errors we are obliged to take with it. For the best that is in them cannot manifest itself, but in company with much error. Understand this clearly: You can teach a man to draw a straight line, and to cut one; to strike a curved line, and to carve it; and to copy and carve any number of given lines and forms, with admirable speed and perfect precision, and you find his work perfect of its kind: but if you ask him to think about any of those forms, to consider if he cannot find any better in his own head, he stops; his execution becomes hesitating; he thinks, and ten to one he thinks wrong, ten to one he makes a mistake in the first touch he gives to his work as a thinking being. But you have made a man of him for all that. He was only a machine before, an animated tool.

And, observe, you are put to a stern choice in this matter. You must either make a tool of the creature, or a man of him. You cannot make both. . .

There are likely to be things, here, that are familiar to us in other terms, and ways of thinking to which we have built-in objection; but there may also be ideas we've never thought of, and which, when considered, open up new territories for reflection. Ruskin may seem a bit humorless, perhaps self-assured; but he was young and confident when he wrote this chapter, yet exhibits an astonishing power to generate a number of delicate and important considerations—that is, he gives reality and dimensions to values that are commonly ignored in the twentieth century—as in his comparison of difficult with easy perfections and his discussion of the qualitative difference between them. The flattened-out standards we are used to know nothing of such distinctions.

Ruskin is obviously "to the manner born." His way of talking about laborers causes a vague moral irritation. But if he had been writing today, using the familiar language of people who expound on "creativity," we wouldn't object at all. The democratic dogma doesn't allow ordinary

prose to reflect even a faint acceptance of class distinctions; however, if you were to sit in on a discussion of positive and negative reinforcement by a group of behaviorists, there would probably be far greater pose of "caste" superiority revealed by the evident assumption that these psychologists really "know" how to condition people for their own good. So long as the forbidden words are not used, and no one claims "aristocratic" prerogatives, but only psychological know-how, practically anything can be said about how to manage the masses in the interests of the common welfare. We ought to find it easy to forgive Ruskin his nineteenth-century ways, especially in view of the changes he worked for during most of his life. Actually, when he says that we ought "to look for the *thoughtful* part" in our laborers, and to help it to develop, he is stating the essentials of the quite modern "Y" theory of management, taught by McGregor in *The Human Side of Management*, and identified by Maslow as the Eupsychian point of view.

Even Ruskin's analogies seem prophetic. In *Environment* for October, 1979, H. Garrison Wilkes and Susan Wilkes, biologists, show that the Green Revolution's high-yield varieties of wheat, corn, and rice are seriously vulnerable to parasites or plant diseases, which have been known to destroy as much as 75 per cent of an entire crop in the United States (this happened to Durum wheat in 1954). Low-yield strains are usually hardier and ought to be preserved, the Wilkes say, as insurance against famines like the Irish potato famine, which was fatal to millions because the Irish had only one high-yield variety of potato which lacked resistance to fungus infection. As Ruskin said, remarking the hazards of high achievement: contrasted with hardy grasses, the wheat is "liable to the bitterer blight."

Ruskin's distinction between the physical and animal world and the world of man, and his view that what is only now "becoming" may have far more value, even in its imperfections, than lesser things which can be made complete, are of the

essence of humanist philosophy. He writes in the spirit of the rare teacher who can discern flashes of true originality in work that lacks finish, and who is able to give such promise play in a student, until his work gains its own maturity and appropriate form.

Ruskin puts his humanist propositions so clearly that we easily find them paralleled in related thinking by others. Ortega, for example, wrote as the first paragraph of *History as a System*:

Scientific truth is characterized by its exactness and the certainty of its predictions. But these admirable qualities are contrived by science at the cost of remaining on a plane of secondary problems, leaving intact the ultimate and decisive questions. Of this renunciation it makes its essential virtue, and for it, if for nought else, it deserves praise. Yet science is but a small part of the human mind and organism. Where it stops, man does not stop. If the physicist detains, at the point where his method ends, the hand with which he delineates the facts, the human being behind each physicist prolongs the line thus begun and carries it on to its termination, as an eye beholding an arch in ruins will of itself complete the missing airy curve.

The quantitative facts, the sums that can be added up, the rock we can walk and build upon—all these things we know, can use, are necessary to our lives, yet do not *make* our lives. They are Ruskin's meaner perfections, Ortega's lesser certainties—not where we are going, but where we begin. Outside every finite competence, beyond completed history and any record of "the facts," are the questions which relate to the meaning of our lives; and how, asks Ortega, "can we live turning a deaf ear to the last dramatic questions?"

Where does the world come from, and whither is it going? Which the supreme power of the cosmos, what the essential meaning of life? We cannot breathe confined to a realm of secondary and intermediate themes. We need a comprehensive perspective, foreground and background, not a maimed scenery, a horizon stripped of infinite distances. Without the aid of the cardinal points we are liable to lose our bearings. The assurance that we

have found no means of answering last questions is no valid excuse for callousness toward them. The more deeply should we feel, down to the roots of our being, their pressure and their sting.

This is the uniquely human universe of discourse, revealing the texture and fabric of civilization. Where there is no inquiry in this spirit, there are no free men, and no cooperative enterprise struggling to produce them. And as the writer of the *Britannica* sketch of Ruskin's life remarked, art is one of the instruments or tools essential to civilization. Here we may recall ideas expressed by Bachelard in *The Poetics of Space*, to amplify on both Ruskin and Ortega. Wylie Sypher made a remarkably effective use of Bachelard's ideas in the *American Scholar* for the Winter of 1967-68, dramatizing the French thinker's comparison:

The scientist must repeat his observation if it is to be verified. In scientific experience "the first time doesn't count." By the time the observation is again confirmed, it is no longer new. In a marvelously poetic vein Bachelard remarks, "In scientific work we have first to digest our surprise." The poet, not the scientist, is one who can trust his first vision, before the recognition is endorsed by duplicating it, before it is first codified into ideas, theories, laws.

As Bachelard says, the poet is always living on "the threshold of being"—"he has no past." The images of art are unpredictable and unrepeatable, and thus liberating. They validate the instant. The artistic response is an unexpected increase of life, a surprise that keeps consciousness from becoming somnolent or routine. The poet, then, has a privilege which the scientist, as scientist, must forego: the poet's world is forever new. His recognitions may be disturbing, for they are not yet crystallized into explanations. We hardly need be reminded of Keats's spatial experience in first reading Chapman's Homer:

Then felt I like some watcher of the skies
When a new planet swims into his ken

This first time the astronomer feels his wild surmise he is a poet, and the poetry in science is this instant of revelation or epiphany. Then his discovery must be *reduced* before it is reliable science. Knowledge in scientific form is coherent disillusion, a sacrifice of discoveries to concepts and systems, a loss of an epiphany.

The analysis can be further pursued in another way by means of the reflections of J. Bronowski in the Spring 1966 *American Scholar*, where this mathematician and scientist uses the work of Kurt Gödel and A. M. Turing to show that the closed-system finalities of scientific truth can never be more than temporary: such admirable exactitudes will eventually give way to others, for the reason that "nature as a whole can never be so presented because no such machine can ever be complete." The scientist now *knows* that he is not producing final truth, and when a particular system no longer works he must change it. How? By adding new axioms. Where does he get them? By means of what Bronowski calls acts of "self-reference." Science, then, is a system which temporarily resolves ambiguities, for the duration of the cycle of its authority. When the authority breaks down upon the presentation of additional data, a new system has to be evolved on the basis of new assumptions. This is called a scientific revolution, such as Copernicus achieved, replacing the Ptolemaic astronomy; and another was made by Einstein. The poet or the artist has no ready-made system, so where demonstrable or repeatable certainties are required, and are possible, he has little or no role, but where vision and invention are the thing, he is prophet and creator—even becoming, as Solzhenitsyn has said, "a second government." The ambiguities of the human world are the raw material of the mind's creations. And, somehow, there may be closer parallels with aspects of life and nature in the works of poets and other great imaginers than in any established system of science. There are paradoxes here that our age is unable to deal with, but can only acknowledge and wonder at.

Ruskin would find himself at home with such thinking, since he was parent to some of these themes. And we should not leave the impression that he has no admirers today. Wylie Sypher pays him much respect in *Literature and Technology* (Random House, 1968), and there are a few others for whom the idea of moral responsibility is

as important as it was for Ruskin. We end with a little more from Ruskin:

. . . if you will make a man of the working creature, you cannot make a tool. Let him but begin to imagine, to think, to try to do anything worth doing; and the engine-turned precision is lost at once. Out comes all his roughness, all his dullness, all his incapability; shame upon shame, failure upon failure, pause after pause: but out comes the whole majesty of him also; and we know the height of it only, when we see the clouds settling upon him. And, whether the clouds be bright or dark, there will be transfiguration behind and within him.

REVIEW

TWO WAR STORIES

A GREAT many of the war stories now coming out have a subordinate theme of pacifist rejection of war and war resistance, sometimes treated as a kind of moral vision which is overwhelmed by the pressures and madness of the hour, yet remaining quietly present, haunting some of the characters, and irritating or even enraging others. And the more convincing the story, the more effectively does the anti-war theme play its part in the development. Sometimes the struggle between distorted martial virtues and the feeling that there *must* be a better way, creating conflict among the characters, or within one man, becomes the major drama. This seems a part of what happens in two of the books we have read recently. One, *The Ravi Lancers* (Doubleday and Pocket Books), by John Masters, is a splendid adventure story, like all Masters' books, which usually deal with the English in India. In this one, Masters brings a regiment of Indian lancers—cavalry of Ravi, an Indian State, part of the maharajah's private army—to Europe to fight in the first world war against the Germans.

In command is Warren Bateman, an English officer who embodies all the army's traditions and is enormously admired by the heir to the throne of the state of Ravi, who is second in command of the regiment. This young prince, Krishna Ram, thinks of the expedition as an opportunity to demonstrate to the British the courage and fighting abilities of a Rajput regiment. His grandfather, the rajah, permits the regiment to go to the European war because he believes that his grandson has too easily embraced foreign ways, and that fighting in Europe, in a conflict which is not India's war, will awaken him to an appreciation of the ancient ways, worth, and beliefs of his own people.

Before Bateman leaves for England with the regiment, a British civilian Commissioner warns him that while an Indian State force has had little

experience of British ways, there are deeper considerations:

". . . a more subtle danger than that. A danger to the Indians. In exposing them to the power of alien gods, if you like. The gods of Europe do not speak Hindi. They have nothing in common with the gods of the Mahabharata. The right sacrifices and mantras may not work there. The men will feel isolated, out of their depth, alone. They will need comforting more than disciplining. . . . If I may venture a word of advice, Bateman, I would go slowly, go cautiously. . . ."

These apprehensions are shown to be justified. The lancers have to give up their horses, since there is no place for cavalry in trench warfare. They fight bravely, but their customs suffer. They are unable to collect and cremate their dead, as they and their ancestors have done for thousands of years. They are forbidden to wear caste marks, which seems unreasonable to them. Durbars, the general meetings in which privates can ask the commanding officer questions and request occasional privileges or rights, are suspended. Meanwhile the war, which was to last only "a few months," drags on and on. The Indian troops are taught to "hate" the Germans, which does not seem natural to them; and learning to hate has a dehumanizing effect. Tensions develop between the young prince and Bateman. Krishna sides with his people and their needs, while the English officer grows fanatically loyal to British tradition and correct army practice, despite the fact that he is a fine soldier and leader, respected by them all. Indian customs are eroded and abandoned, and the men show increasing nervous strain, although they continue to be reliable and often heroic troops.

Bateman's half-brother, his father's illegitimate child, remains at home in England, becoming a conscientious objector, sheltered and helped by Bateman's mother, who is patient and kind. Bateman's wife shares this half-brother's beliefs, and leave spent at home becomes for the regiment's commander a painful ordeal. The prince, Krishna, who as a friend takes his leave with Bateman's family, sees this conflict, tries to

understand it, meanwhile playing cricket when he can, and enjoying the friendship of Bateman's sister, wife, and mother. After Bateman is wounded and has convalescent leave, he returns to the front months later to find that the prince has given the men much latitude by restoring the Indian customs, and there is a bitter showdown between the two officers. Bateman allows some of the privileges to continue, but only to prevent Krishna from asking his grandfather to request the return of his troops to India.

This arrangement lasts for a while, but finally, Krishna decides that it is wrong for the Indian troops to fight any longer in a European war. He tells Bateman:

"The war is becoming more inhuman every day. Our gods are human, and allow for war, but not for mechanical destruction. They are not themselves mechanical and cannot tolerate mechanization. But every day the war forces us to become more machine-like, less human and so—according to our belief—less divine, for the gods that humans worship are themselves, really, human too. . . .

"It isn't only the war . . . it is Europe. In trying to learn the European way of making war we have learned European ways of thought. The ties that bind us to our own principles, our own ways of thought, have been weakened or destroyed. There have been rapes and petty thefts, all entirely foreign to our men. Absence without leave, desertions even . . . unheard of before we came here. Lying to escape punishment. Deliberate waste. We have caught a disease, just as my grandfather warned me. . . ."

"You call Western civilization a disease?" Warren said. . . .

"Yes," Krishna said, his face sad. "It has symptoms . . . what that young sowar [trooper] brought up in durbar—the false Christianity that preaches love, and kills . . . that teaches poverty, but takes . . . that preaches tolerance . . . and rejects . . . the fever that enabled Europe to conquer Asia, and believe there was nothing to be learned from the conquered. . . . If we don't go back now, it will be too late. It may be too late already. We, all the Indian troops here, will take this disease back with us. Instead of believing that a man's inner posture, his relationship with his soul, is more important than his position on earth many will believe that only victory,

self-fulfillment matters . . . which is the same as saying, getting your own way regardless of what outrages on the body and the soul you have to commit. . . . This will spread in India, which will not help either India or England. The sowars and sepoys are not political themselves, and never will be, for the most part. But the disease will infect all India. The politicians will not act like Indians any more, but like Europeans. There will be political crimes, that India never knew . . . murders, assassinations, poisonings, the killings of women and children . . . I beg you, sir, let us go now."

Masters has an honorable solution, and it completes his story with full dignity to the several heroes of this tale. Yet the book seems to make it plain that when "just wars"—or wars that an honest man can regard as just—are no longer possible, the hour of pacifism and war resistance has come. The balances of this changing equation are well developed and the story is all the better for Masters' over-arching historical sense.

The other war story we've been reading is *The Silver Lady* by James Facos (Atheneum, Pocket Books), which deals with the small, tight universe of the crew of a bombing plane—a Flying Fortress with first twenty-five, then thirty, missions, most of them over Berlin, to complete before the men can feel safe. The time is the spring of 1944. The plot is not complicated, and while the anti-war theme is subdued, it colors the story throughout. The bomber has a crew of ten men, and the pilot skipper, Starrett, begins to feel toward them what he has been warned to avoid—that they are his "family." The missions continue, day after day, and sometimes the *Lady* is one of three planes which survive a flight on which ten "Forts" were sent—seven being shot down by German fighters or flak. A terrible tension builds up in the men, and a longing to stay together as a crew, since they feel that they protect one another, while Starrett seems "lucky," a good man to trust with your life.

At the beginning, Starrett has doubts or at least wonderings about two members of the crew—the ball turret gunner and a waist gunner. Wyatt, in the ball turret, is a silent man—too

silent. And Hagen, the waist gunner, cares only about Hagen. He ridicules any other view. What would he do in a tight situation, act only for himself? The order that the bomber is operational puts such questions aside, and the story of the bombing war unfolds, while the characters of Wyatt and Hagen take shape as the main line of development. Wyatt was quiet because he came of a pacifist Quaker family, now sadly alienated because of his decision to go into the service. Of necessity, he felt the war as a test of the principle on which he had chosen to be a gunner, and the feelings of his loved ones were always with him, obliging him to try to act on principle in all that he did. In this way he was able to feel right, inside.

The war and the bombing flights seem endless. The men count the missions that remain for them to make. They wonder how long they can last. On nearly every flight, they see a Fortress go down. Sometimes some of the crew survive and are heard from later. Sometimes a badly damaged bomber manages to limp back to England for a crash landing. As they fly together, Wyatt and Hagen become friends. Wyatt seems to understand Hagen, but Hagen remains puzzled by Wyatt. He can't figure a man who doesn't respond by reflex to self-interest. On leave in London, Wyatt meets a girl and they fall in love. Service men are not supposed to marry without permission, but after a month or so Wyatt and the girl perform a private Quaker ceremony for themselves, exchanging rings. A sister-in-law of the girl—her war-killed brother's widow—joins them with Hagen to make a double date, but this mature woman's perceptive honesty is too much for Hagen, who is uncomfortable at being seen through so easily. Toward the end of the story Hagen can't stand even his own crew, mainly because he is beginning to hate himself. He has a fight and is about to be fired from the crew by Starrett when they are called to go on an emergency mission. On this flight the *Lady* has a very bad time, and Wyatt is killed by flak. Hagen calls the sister-in-law with the news that Wyatt is dead, only to learn that Wyatt's girl-wife had died

of leukemia three weeks earlier. Wyatt had known—knew of her fatal illness when they had their Quaker marriage—but told no one. They had an understanding about both love and death.

At last something happens to Hagen. Wyatt had talked so strangely, believed such unbelievable things—

Had Wyatt been right? Because if he had been, then all *his* life he, Hagen, had been wrong. If reality was more than physical, death more than an end, then all his life—*all his life*—had been wrong. . . .

Watch the crew, Wyatt had said, *when things get tight. Really tight. It isn't each man for himself. It's each one for the other . . .* as it had been today; and even he himself, side by side with Swacey and Golden, had been one with them, one spirit.

In this book the anti-war theme has a curious part to play. The spirit of a conscientious objector who found he could not in conscience object exerts a rare influence on the other men—an influence which, after he dies, works a great change in one of them.

It's all too neat, of course. Such transformations are probably much more difficult. They take longer, even when framed and accelerated by the agony of war. Well, the book is only popular reading. Yet there is something good and fine about it, just the same.

COMMENTARY RUSKIN'S ECONOMICS

RUSKIN'S writings on economics were simplicity itself. He regarded economics as derivative from the principles of morality. The directness of this approach doubtless appealed to Gandhi, who read *Unto This Last* (1862), Ruskin's denunciation of conventional economics, on a long train ride in South Africa from Johannesburg to Durban. Greatly impressed, Gandhi got no sleep that night, later saying: "I determined to change my life in accordance with the ideals of the book." He eventually put *Unto This Last* into Gujarati, adapting it for Indian readers, calling it *Sarvodaya*. In 1956 the Navajivan Press issued an English version of Gandhi's rendition, using Ruskin's words as much as possible. The following extract will show both the simplicity and the prophetic insight of Ruskin's criticism:

Economics do not take the conduct of men into account but hold that the accumulation of wealth is the sign of prosperity, and that the happiness of nations depends upon their wealth alone. The more factories, the merrier. Thus men leave village farms with their spring winds and coming to cities, live diminished lives in the midst of noise, of darkness, and of deadly exhalation. This leads to deterioration of the national physique, and to increasing avarice and immorality. If someone talks of steps to be taken to eradicate vice, so-called wise men will say that it is of no use at all that the poor should receive education and that it is best to leave things alone. They however forget that the rich are responsible for the immorality of the poor who work like slaves in order to supply them with their luxuries, and have not a moment which they can call their own for self-betterment. Envy the rich, the poor also try to be rich, and when they fail in this effort, they are angry. They then lose their senses, and try to make money by force or fraud. Thus both wealth and labour are barren of all fruit or else are utilized for chicanery.

Labor in the real sense of the term is that which produces useful articles. Useful articles are those which support human life, such as food, clothes or houses, and enable men to perform the functions of their own lives to the utmost and also to exercise a helpful influence over the lives of others. . . . Accumulated wealth which leads to the destruction of

a nation is of no earthly use. The capitalists of modern times are responsible for widespread and unjust wars which originate from the covetousness of mankind.

Today, many of these ideas have effective reiteration in the writings of E. F. Schumacher, whose book, *Small Is Beautiful*, is scheduled for publication by Harper & Row later this month.

CHILDREN ... and Ourselves TEACHING IDEAS

NEW DIRECTIONS IN TEACHING, a quarterly published by the Office of Experimental Studies at Bowling Green State University, Bowling Green, Ohio 43403, calls itself "A non-journal committed to the improvement of undergraduate teaching." We have found it a good source of teaching ideas. There is not much jargon in the articles, although now and then a non-academic reader may feel that a contributor takes for granted that his abstractions will be understood, when this is hardly possible except for teachers who work in similar situations. But the percentages are on the side of the general reader.

The current issue Summer-Fall, 1973—ends with a good article by Conrad Borovski, of California State University, San Diego. He has an idea which recalls the "core" program used with some success at Franconia College years ago. In the Franconia program, a basic question was asked, such as, Why was Socrates tried and ordered to drink hemlock by the Athenians? and what happened afterward as a result? Another research project focused on the beheading of Thomas More by Henry VIII. To understand such crucial events requires a search of history, customs, thought, beliefs, prejudices, and values which leads to *remembered* discoveries because of the associations connecting them in a common web. Mr. Borovski's proposal is somewhat similar:

Let us suppose that first year students are interested in "revolution," get together and suggest it as a topic for investigation to the college. Immediately, scholars from all affected disciplines go to work for there is much to be done. Social and economic factors and prerequisites, historical precedents, psychological aspects, the class struggle, the role of each class, the effects of technology (e.g. in weaponry), the impact on the arts and on language, the plight of innocent victims, counter-revolutionary trends among revolutionaries, etc., etc. The findings are presented in public where they are then discussed

by all participating scholars *and* the students until finally all contradictions are resolved. Results that are considered sound and scientifically valid can then be published by the institution.

Projects of this kind would be exciting and engrossing. All participants and observers would learn a great deal. And last, but not least, it would return the "community spirit" to the now almost mythical "community of scholars." It would also oblige teachers to keep their work up to date. And the students would see that each field of human knowledge can and does have fruitful and rewarding functions if in a wider context than is generally recognized.

It would probably be wise to let the students themselves suggest the majority of the problems to be studied. They are closer to the future, hence more aware of what they are liable to need.

Just in case someone decides to try "Revolution" as the basis for such a project, we suggest the inclusion of Everett Dean Martin's *Farewell to Revolution* (Norton, 1935) in the reading list.

An interesting book which illustrates this sort of research by a single writer is Marchette Chute's *Shakespeare of London* (Dutton paperback). In developing for the reader a picture of English life in Shakespeare's time, Miss Chute assembles a lot of fascinating material which becomes unforgettable by reason of its association with a man of immeasurable genius. The impact of epidemic disease on Londoners becomes pertinent because Shakespeare and his company went on tour away from London while the plague lasted. You learn that Shakespeare, along with other solid citizens of Stratford, hoarded corn and malt (wheat and barley) during the years of bad harvests at the end of the sixteenth century, and that the high prices and food shortages of the time were accounted for by both clergy and government officials as divine punishment for the "sins" of the people, who were invited to eat less in atonement. The harsh morality of the London Council led the officials to oppose theatrical performances within the city limits, with the result that theaters were built on the other side of the

Thames, eventually creating the profession of watermen who ferried the naughty playgoers back and forth across the river. There were eventually 2,000 such boats which carried three or four thousand people across the Thames every day to the Globe, the Rose, and the Swan theaters. In 1601 the Earl of Essex hired Shakespeare's company to perform his unpopular play, *Richard II*, a foolish affair which led Essex, already in disgrace, straight to trial, condemnation, and death. The play dealt with an English ruler who was deposed and killed—its special performance apparently being intended as a crude hint to Elizabeth by Essex, who imagined that he could intimidate and "manage" his Queen.

Here, the point is simply that historical material which has relation to a core subject of research is likely to stick in the mind, because associated events are part of some kind of "whole," and not a string of isolated facts. There is a natural tendency to remember only what you can use.

Mr. Borovski has another suggestion:

Let us suppose that there are a considerable number of students interested in tapestry. Either they or one of their professors then propose to conduct a thorough survey of "Medieval Tapestry in France." A great number of disciplines are affected by the problems a study in depth gives rise to. (1) Origins of the industry, (2) choice of location, (3) development of tools, (4) economic setting, (5) the clientele, (6) prerequisites for commercial success, (7) mythological, religious and literary subjects treated in the presentations, (8) materials and dyes employed, (9) provenance of raw materials, (10) effect of the trade on the community and society as a whole, (11) factors determining prices and wages, (12) interaction between language and taste, (13) psychological aspects in the choice of form, color, and medium, (14) life styles and social prestige of the people involved (artists, designers, weavers, traders, furnishers, etc.) , (15) the power of guilds and the communal organization, (16) original purposes of the craft and the evolution in the uses of the finished product. It is surprising that the concerted efforts by scholars from different fields is extremely rare. A topic of this kind is usually treated by a single historian who gathers and evaluates all the material he considers important

or interesting. It is obvious that no one man can do full justice to so many facets of a field of investigation. Many books therefore remain incomplete. Much scholarly work is lacking in substance. The specialist naturally disregards factors that fall outside of his own realm. But what he ignores may be critically significant.

We see that this becomes an argument for the importance of the contributions of specialists, although putting together the work of a number of researchers on a single area, such as the tapestry, adds to general investigation the diverse perspectives of many specialties. It is proposed that this approach ought to replace "all so-called general education courses," but this, we think, would depend more on what is assumed to be the content of a general education course. A general course which can accomplish only superficially what a collection of specialists might do together well, could not have been much of a general education course to begin with. The value of an "essay" approach to some broad area, presented by a single man, might have more ultimate value and stimulation in it than the sum of what many specialists could contribute, simply as specialists.

FRONTIERS Of Dolphins and Windmills

AN article in *Survival Times* (Santa Barbara) for last July adds to what was said here in the Oct. 31 issue about the exploits of the tuna fishing boats that harbor in San Diego. Kathleen Sullivan writes on whales and dolphins, and after noting Navy attempts to train dolphins "as underwater watchdogs to guard naval installations," and to teach these extraordinarily intelligent creatures "to attach bombs to enemy ships," she says:

This is minor damage compared to the slaughter of the dolphin by the tuna industry. Each year, an estimated 200,000 to 400,000 dolphins and porpoises are killed in the purse seine nets of the tuna industry. The nets have enabled tuna fishermen to increase the speed and amount of their catch. Unfortunately, tuna and dolphin swim together, and the dolphins become caught in the tuna net, which holds the air-breathing mammals under water and drowns them.

A San Francisco man, Stan Miniasin, who started an organization, "Save the Dolphins," says there is no effective government regulation of such practices. Miss Sullivan writes:

There are about 200 U.S. purse seine tuna boats. One fisherman reported to Miniasin that in his 56 days on a tuna boat his crew was responsible for an estimated 8,000 dolphin deaths, all of which were discarded into the ocean. Many of the animals killed are female, often expectant mothers. This makes it difficult, if not impossible, for a dolphin herd to replenish its numbers as fast as they are destroyed.

She suggests that people concerned about this useless slaughter get in touch with an organization called "Project Jonah—a non-profit, tax-exempt international society devoted to the protection and understanding of all species of cetacea: whales, dolphins, and porpoises." Address: Box 476, Bolinas, Calif. 94924.

In a curious labor of love, a booklet titled *Did the Dolphins Give Us Acupuncture?*, Tony Mallin (635 I N. Oakley Ave., Chicago, Ill. 60659) gives an account of dolphin wonders he has read about in works by Felix Mann and Richard Perry. When an apparently dead dolphin is thrown into the sea

from the deck of a tuna boat, he says, the dolphin may be torn to pieces by sharks; but sometimes the flaccid body is surrounded by other dolphins who raise it to the surface so that its blow-hole has access to air, then probe the limp form with their beaks to stimulate vital processes into action. If this fails one dolphin may back away and then lunge at the inert body, scraping a tender area with a stroke of its dorsal fin. This sometimes arouses the unconscious dolphin to life. Then they all swim off, "a floating recuperation ward," staying with their recovering companion until his return to normal buoyancy is assured. Mallin thinks dolphins know the right "pressure points" to nudge in order to stimulate the benumbed organism's recovery, and he likens this "treatment" to acupuncture. In any event, the dolphins know how to use their beaks in various ways, since they kill sharks by stunning them with repeated blows delivered by ramming at high speed. It has been widely rumored and occasionally verified that dolphins have saved human swimmers' lives by preventing them from sinking. A former Zuma Beach lifeguard once described how he had been attacked by a moray eel, deep in a tank at Marineland where he was being photographed for an underwater movie scene, and how some dolphins drove away the eel and pressed him to the surface. This man did not feel kindly toward people who destroy dolphins.

The first issue of *The Journal of the New Alchemists*, published by the New Alchemy Institute, P.O. Box 432, Woods Hole, Mass. 02543, is now available, and the editors plan quarterly publication. The *Journal* will take the place of the Institute's previously published *Bulletins*, and will deal with the activities of the Institute and four general topics: Energy, Land Use, Aquaculture, and Explorations (reports on ways of living in harmony with the earth). This first issue of the *Journal* provides a bibliography of available New Alchemy publications and lists other works of value on organic farming and related subjects. Earle Barnhart contributes an article on the three windmills at the Woods Hole

farm of the Institute. These collectors of windpower are described and illustrated with drawings to indicate construction.

One is a wind turbine-generator mounted on a 42-foot telephone pole, the main pivot being the bearing and axle from the front wheel of a Rambler automobile. A Rambler rear differential and drive shaft make the body of the windmill, which is still under construction. Golf-cart batteries will be used for storage "because of their ability to take complete charge-discharge cycles and their relatively long life."

There is also a small bicycle wheel generator with eight blades instead of spokes. A small generator with 6-volt output is built into the hub. Source of the design and circuit is given as *Proceedings* of the U.N. Conference of New Sources of Energy (Vol. 7, pp. 340-45). The third windmill is a Savonius rotor which has the advantage of spinning on a stationary vertical axis regardless of wind direction, although it is only half as efficient as a multi-bladed windmill having the same wind-sweep area. The rotor is coupled to "a reciprocating wire power transmission, originally used by the Pennsylvania Amish to transfer power from a water wheel, in order to pump water from our hand-dug well." Each horizontal wire stroke is converted into a vertical pump stroke, and the entire system, set to start in an 8-mph wind and operate between windspeeds of 6 and 30 mph, "pumps water into a storage pond at a head of 17 feet."

There is also description by Marcus Sherman of a windmill in use on a nine-acre peanut farm in Tamilnadu, South India.

This eight-meter diameter windmill lifts three hundred pounds to a height of twenty feet in one minute in a ten mph wind. This is accomplished by a rope passing over a six-inch pulley on the main drive shaft. This lift is now being used to raise rock and soil from the 20-foot deep well which is being dug below the windmill.

Later the windmill will be used to pump water from the well, providing irrigation for a one-acre

vegetable garden and water for man and beast. Power shortages in South India are expected to continue for some time, and bullock-operated pumps are now commonly used, with water for domestic consumption hand-lifted from open wells. A windpower laboratory at Bangalore has demonstrated the practicability of using windpower to pump water from South Indian wells, but it has not been widely adopted. The pump built by Marcus Sherman for his peanut-farming friend is similar to those once used to drain mines in England, years ago—a chain pump that is easily and cheaply constructed and operates efficiently with low-speed variable power. The windmill tower was made of five ox-foot-long teak poles set in concrete, and the blades consist of sail cloth covering bamboo frames. When the blades rotate, they turn a bullock cart wheel which is connected with an automobile axle shaft. The chain of the pump goes around the "squirrel cage" mounted at the center of the shaft.

Articles in the other sections of the *Journal*, dealing at length with land use and aquaculture in Costa Rica, are equally informing.