

WITHOUT TECHNOLOGY

IN the September issue of *Harper's*, Wendell Berry explains why he is not going to buy a computer. What he says is so well put and so persuasive (to us) that it seems worth quoting for the general good. Some of his reasons are personal and some of them are social and cultural. Close to the beginning he says:

As a farmer, I do almost all of my work with horses. As a writer, I work with a pencil or a pen and a piece of paper.

My wife types my work on a Royal standard typewriter bought new in 1956, and as good now as it was then. As she types, she sees things that are wrong, and marks them with small checks in the margins. She is my best critic because she is the one most familiar with my habitual errors and weaknesses. She also understands, sometimes better than I do, what *ought* to be said. We have, I think, a literary cottage industry that works well and pleasantly. I do not see anything wrong with it.

People tell him that he could improve things by buying a computer. They mean, we suppose, a word processor. He says: "My answer is that I am not going to do it. I have several reasons, and they are good ones." He now enlarges the range of his response:

I would hate to think that my work as a writer could not be done without a direct dependence on strip-mined coal. How could I write conscientiously against the rape of nature if I were, in the act of writing, implicated in the rape? For the same reason, it matters to me that my writing is done in the daytime, without electric light.

He doesn't say whether or not he uses a pick-up on the farm—he doesn't say he's perfect and satisfied with himself—but he does use horses for any plowing he has to do. As for computers, maybe, somewhere along the line, they require strip-mined coal for their manufacture. At any rate, what is evident is that he thinks about these things and makes some choices most other people neglect. He goes on:

I do not admire the computer manufacturers a great deal more than I admire the energy industries. I have seen their advertisements, attempting to seduce struggling farmers or failing farmers into the belief that they can solve their problems by buying yet another piece of expensive equipment. I am familiar with their propaganda campaigns that have put computers into public schools that are in need of books. That computers are expected to become as common as TV sets in "the future" does not impress me or matter to me. I do not own a TV set. I do not see that computers are bringing us one step nearer to anything that does matter to me: peace, economic justice, ecological health, political honesty, family and community stability, good work.

What, he asks, would a computer cost me? "More money, for one thing, than I can afford, and more than I wish to pay to people whom I do not admire."

But the cost would not be just monetary. It is well understood that technological innovation always requires the discarding of the "old model"—the "old model" in this case being not just our old Royal standard, but my wife, my critic, my closest reader, my fellow worker. Thus (and I think this is typical of present-day technological innovation), what would be superseded would be not only some thing, but some body. In order to be technologically up-to-date as a writer, I would have to sacrifice an association that I am dependent upon and that I treasure.

There is another side to this question. For example, sometimes a writer will have occasion to need to copy out a long quotation and be tempted to have a typist duplicate it. Why should a *writer* bother with the drudgery of mere copying when a typist is available to do this work? But there is a value in doing the copying yourself. While your fingers are carrying out the task, your mind is free to skip around, sometimes acquiring rich associations. After all, the quotation is becoming part of your work and what you think about while copying it may add substantially to what you have to say. In preparing MANAS copy for the printer,

we never delegate the copying to someone else, since we want to experience the associations that may come during the copying. Doing it yourself makes the quotation less like a paste-pot job. Other simplifications of the task of writing may have a similar effect.

Berry makes a point something like this one:

My final and perhaps my best reason for not owning a computer is that I do not wish to fool myself. I disbelieve, and therefore strongly resent, the assertion that I or anybody else could write better or more easily with a computer than with a pencil. I do not see why I should not be as scientific about this as the next fellow: When somebody has used a computer to write work that is demonstrably better than Dante's, and when this better is demonstrably attributable to the use of a computer, then I will speak of computers with a more respectful tone of voice, though I still will not buy one.

Gadgetry, in short, has nothing to do with ability, and with some few exceptions, technology has nothing to do with either refinement or culture. Consider, for example, what John Adams said in a letter to Thomas Jefferson, December 3, 1813:

The proverbs of the old Greek poets are as short and pithy as any of Solomon or Franklin. Hesiod has several. *Honor the gods established by law.* I know not how we can escape martyrdom without a discreet attention to this precept. You have suffered, and I have suffered more than you, for want of a strict observance of this rule.

There is another oracle of this Hesiod, which requires a kind of dance upon a tight rope and a slack rope too, in philosophy and theology: If believing too little or too much is so fatal to mankind, what will become of us all?

In studying the perfectibility of human nature and its progress towards perfection in this world, on this earth, remember that I have met many curious and interesting characters.

About three hundred years ago, there appeared a number of men of letters, who appeared to endeavor to believe neither too little or too much. They labored to imitate the Hebrew archers, who could shoot to an hair's breadth. The Pope and his church believed too much. Luther and his church believed too little. This little band was headed by three great scholars:

Erasmus, Vives and Budaeus. This triumvirate is said to have been at the head of the republic of letters in that age. Had Condorcet been master of his subject, I fancy he would have taken more notice, in his *History of the Progress of Mind*, of these characters. Have you their writings? I wish I had. I shall confine myself at present to Vives. He wrote commentaries on the *City of God* of Augustine, some parts of which were censured by the Doctors of the Louvain, as too bold and too free. I know not whether the following passage of the learned Spaniard was among the sentiments condemned or not:

"I have been much afflicted," says Vives, "when I have seriously considered how diligently, and with what exact care, the actions of Alexander, Hannibal, Scipio, Pompey, Caesar and other commanders, and the lives of Socrates, Plato, Aristotle, and other philosophers, have been written and fixed in an everlasting remembrance, so that there is not the least danger they can ever be lost; but then the acts of the Apostles and martyrs and saints of our religion, and of the affairs of the rising and established church, being involved in much darkness, are almost totally unknown, though they are of so much greater advantage than the lives of the philosophers or great generals, both as to the improvement of our knowledge and practice. For what is written of these holy men, except a very few things, is very much corrupted and defaced with the mixture of many fables, while the writer, indulging his own humor, cloth not tell us what the saint did, but what the historian would have had him do. And the fancy of the writer dictates the life and not the truth of things." And again Vives says: "There have been men who have thought it a great piece of piety, to invent lies for the sake of religion."

In Norman Cousins' book, *The Republic of Reason*, this correspondence between Adams and Jefferson occupies 76 pages. The exchange lasted for more than fifteen years and, the editor says, "restored and reinforced the old friendship between the two." The passages chosen for inclusion deal mainly with "philosophical or religious matters." They both died, on July 4, 1896, the fiftieth anniversary of the Declaration of Independence.

We have quoted from Adams to illustrate the quality of mind that existed among the founding fathers of our republic considerably more than a

hundred and fifty years ago, when technology as we know it today hardly existed. Two paragraphs by Cousins on these men will add color to their portraits. He begins by quoting a letter by Adams to his cousin, Samuel Adams:

"It is a fixed principle with me that all good government is and must be republican." This was another way of saying that John Adams believed in a free society, but he insisted on believing it in his own inimitable and inimical way. This often unpredictable and always independent manner brought him into open conflict with most of the principal figures of the Revolutionary and constitutional period of American history. He was in opposition to Jefferson, and vice versa, during much of the period from 1789 through 1808, though he voted for Jefferson in 1804. While he was one of Hamilton's most powerful supporters through some of the early ordeals of the Federalist party, he eventually broke with Hamilton, too.

As for Thomas Jefferson, though he may have mellowed in his later years, he never lost his revolutionary flame; his philosophy was consistent and moved forward in a straight line. But in a manner Jefferson was the most gracious of men. He was a delight to know, expressed his opinions in a way to arouse no resentment, and was a genius in drawing other men out. Adams no doubt viewed Jefferson as proof of his theory of the natural aristocrat; Jefferson was propertied, he was esteemed for his judgments, he was a born leader, he could read Greek and Latin and quote passages from memory, he could give or take a poetical allusion, he could work with blueprints, he knew Blackstone, and he could play the violin. What more could anyone ask, especially a man who had as much respect for natural and acquired endowments as John Adams? And when the political struggle receded, and the issues that once separated them could be viewed with relief if not with total detachment, the two men were drawn to each other again. Their reconciliation is one of the pleasanter episodes in American history, for it produced a sustained exchange of correspondence that is on a plane by itself.

While he was in Paris in 1785 John Adams wrote to Richard Price, champion of the American Revolution, saying:

I think it may be said in praise of the citizens of the United States, that they are sincere inquirers after truth in matters of government and commerce; at

least that there are among them as many in proportion, of this liberal character, as any other country possesses. They cannot, therefore, but be obliged to you, and any other writers capable of throwing light upon these objects, who will take the pains to give them advice.

I am happy to find myself perfectly agreed with you, that we should begin by setting conscience free. When all men of all religions consistent with morals and property, shall enjoy equal liberty, property or rather security of property, and an equal chance for honors and power, and when government shall be considered as having in it nothing more mysterious or divine than other arts or sciences, we may expect that improvements will be made in the human character and the state of society. But what an immense distance is that period! Notwithstanding all that has been written from Sidney and Locke down to Dr. Price and the Abbé de Mably, all Europe still believes in sovereignty to be divine right, except a few men of letters.

During the summer of 1796, John Adams, the man who would soon succeed Washington to the presidency, stayed far from the political tumult, reading Homer and Tacitus. The following is a note in his diary for August 14, 1796:

One great advantage of the Christian religion is that it brings the great principle of the law of nature and nations—Love your neighbor as yourself, and do unto others as you would that others should do to you—to the knowledge, belief, and veneration of the whole people. Children, servants, women, and men, are all professors in the science of public and private morality. No other institution for education, no kind of political discipline, could diffuse this kind of necessary information, so universally among all ranks and descriptions of citizens. The duties and rights of the man and the citizen are thus taught from early infancy to every creature. The sanctions of a future life are thus added to the observance of civil and political, as well as domestic and private duties. Prudence, justice, temperance, and fortitude, are thus taught to be the means and conditions of future as well as present happiness.

In 1821 he wrote to David Sewall:

A kind Providence has preserved and supported me for eighty-five years and seven months, through many dangers and difficulties, though in great weakness, and I am not afraid to trust in its goodness to all eternity. I have a numerous posterity, to whom

my continuance may be of some importance, and I am willing to await the order of the Supreme Power. We shall leave the world with many consolations. It is better than we found it. Superstition, persecution, and bigotry are somewhat abated, governments are a little ameliorated; science and literature are greatly improved, and more widely spread. Our country has brilliant and exhilarating prospects before it, instead of that solemn gloom in which many of the former parts of our lives have been obscured. The condition of your State, I hope, has been improved by its separation from ours, though we scarcely know how to get along without you.

Information of your health and welfare will be a gratification to your sincere friend and humble servant.

In February, 1775, Alexander Hamilton was eighteen years old, an undergraduate student at King's College, now Columbia University. He then issued a pamphlet, "The Farmer Refuted," the content of which becomes immediately evident in his reply, which began:

I shall, for the present, pass over that part of your pamphlet in which you endeavor to establish the supremacy of the British Parliament over America. After a proper *éclaircissement* of this point, I shall draw such inferences as will sap the foundation of everything you have offered.

The first thing that presents itself is a wish, that "I had, explicitly, declared to the public my ideas of the *natural rights* of mankind. Man, in a state of nature (you say), may be considered as perfectly free from all restraint of *law* and *government*; and then, the weak must submit to the strong."

I shall, henceforth, begin to make some allowance for that enmity you have discovered to the *natural kinds* of mankind. For, though ignorance of them, in this enlightened age, cannot be admitted as a sufficient excuse for you, yet it ought, in some measure, to extenuate your guilt. If you will follow my advice, there still may be hopes of your reformation. Apply yourself, without delay, to the study of the law of nature. I would recommend to your perusal, Grotius, Puffendorf, Locke, Montesquieu, and Burlamaqui. I might mention other excellent writers on this subject; but if you attend diligently to these, you will not require any others.

There is so strong a similitude between your political principles and those maintained by Mr. Hobbes, that, in judging from them, a person might very easily mistake you for a disciple of his. His opinion was exactly coincident with yours, relative to man in a state of nature. He held, as you do, that he was then perfectly free from all restraint of *law* and *government*. Moral obligation, according to him, is derived from the introduction of civil society; and there is no virtue but what is purely artificial, the mere contrivance of politicians for the maintenance of social intercourse. But the reason he ran into this absurd and impious doctrine was, that he disbelieved the existence of an intelligent, superintending principle, who is the governor, and will be the final judge, of the universe.

As you sometimes swear by *Him that made you*, I conclude your sentiments do not correspond with his in that which is the basis of the doctrine you both agree in, and this makes it possible to imagine whence this congruity between you arises. To grant that there is a Supreme Intelligence who rules the world and has established laws to regulate the actions of His creatures, and still to assert that man, in a state of nature, may be considered as perfectly free from all restraints of *law* and *government*, appears, to a common understanding, altogether irreconcilable.

Good and wise men, in all ages, have embraced a very dissimilar theory. They have supposed that the Deity, from the relations we stand in to Himself and to each other, has constituted an eternal and immutable law, which is indispensably obligatory upon all mankind, prior to any human institution whatever.

This is what is called the law of nature, "which, being coeval with mankind, and dictated by God himself, is, of course, superior in obligations to any other. It is binding over all the globe, in all countries, and at all times. No human laws are of any validity, if contrary to this; and such of them as are valid derive all their authority, mediately or immediately, from this original."—Blackstone.

Hence the origin of civil government, which Hamilton was defending. Defending, we should point out, more than two hundred years ago.

REVIEW

TOMORROW'S SCIENCE

THE book, *The Reenchantment of Science*, edited—or more than edited, even designed—by David Ray Griffin, professor of philosophy of religion at the School of Theology at Claremont and Claremont Graduate School, and founding president of the Center for a Postmodern World in Santa Barbara, Calif., and published this year (at \$10.95 in paperback) by the State University of New York Press, Albany, New York 12246, is something of a watershed volume, marking the passage of modern thought from the past to a still undefined future, yet suggesting the parameters of the change. In his Introduction Prof. Griffin sets the keynote of the book by saying:

In disenchanting nature, the modern science of nature led to its own disenchantment. This happened because the mechanistic, disenchanted philosophy of nature, which was originally part of a dualistic and theistic vision of reality as a whole, eventually led to the disenchantment of the whole world. . . .

What does the "disenchantment of nature" mean? Most fundamentally, it means the denial to nature of all subjectivity, all experience, all feeling. Because of this denial, nature is disqualified—it is denied all qualities that are not thinkable apart from experience.

These qualities are legion. Without experience, no aims or purposes can exist in natural entities, no creativity in the sense of self-determination or final causation. With no final causation toward some ideal possibility, no role exists for ideals, possibilities, norms, or values to play: causation is strictly a matter of efficient causation from the past. With no self-determination aimed at the realization of ideals, no value can be achieved.

This is an elaborate way of asserting that the normal way of thinking of the normal human being is filled with self-deception and fraud. He (or she) thinks himself to be free, that he makes choices, has genuine goals which are his own and works toward them, and believes that this activity constitutes the meaning of his life. The scientific materialist denies all this. As B.F. Skinner put it: "The hypothesis that man is not free is essential to

the application of scientific method to the study of human behavior."

We turn now to the contribution of David Bohm, author of *Wholeness and the Implicate Order*, and professor emeritus of theoretical physics, Birkbeck College, University of London. He says:

Clearly, during the twentieth century the basis of the modern mind has been dissolving, even in the midst of its greatest technological triumphs. The whole foundation is dissolving while the thing is flowering, as it were. The dissolution is characterized by a general sense of loss of a common meaning of life as a whole. This loss of meaning is very serious, as meaning in the sense intended here is the basis of *value*. Without that, what is left to move people to work together toward great common aims sensed as having high value? Merely to operate at the level of solving problems in science and technology, or even of extending them into new domains, is a very narrow and limited goal which cannot really captivate the majority of the people. It cannot liberate humanity's highest and most comprehensive creative energies. Without such liberation, humanity is sinking into a vast mass of petty and transitory concerns. This leads, in the short run, to meaningless activity that is often counterproductive; in the long run, it is bringing human-kind ever closer to the brink of self-destruction. . . .

Even though physics is by now a rather specialized profession and even though the question of metaphysics or worldview is discussed seriously by only a few people within this profession, the worldview that physics provides is clearly still playing a crucial role as a foundation for the general mode of thinking which prevails throughout society. That is the worldview that physics provided from the sixteenth through the nineteenth centuries. It is therefore important to ask whether twentieth-century physics actually implies a universe that is beyond intuitive and imaginative comprehension, as well as whether this universe is without any deep meaning, being only something to be computed mathematically and manipulated technically. For example, one of the leading physicists at this time, Steven Weinberg, has said that the more he looks at the universe the less it seems to have any meaning, that we have to invent our own meaning if any is to exist. But, if we find that that is the wrong conclusion to be drawn from recent physics, this discovery may help open the way to the truly original and creative step that is now

required of mankind. We *cannot* go on as we are; we must have something really new and creative. . . .

Then he says:

The possibility of a postmodern physics, extended also to postmodern science in general, may be of crucial significance for this sort of insight. A postmodern science should not separate matter and consciousness and should therefore not separate facts, meaning, and value. Science would then be inseparable from a kind of intrinsic morality, and truth and virtue would not be kept apart as they currently are in science. . . .

Of course, this proposal runs entirely contrary to the prevailing view of what science should be, which is a morally neutral way of manipulating nature, either for good or evil, according to the choices of the people who apply it. . . . If a man comes into a group, the consciousness of the whole group may change, depending on what he does. He does not push people's consciousnesses around as if they were parts of a machine. In the mechanistic view, this sort of organismic behavior is admitted, but it is explained eventually by analyzing everything into still smaller particles out of which the organs of the body are made, such as DNA molecules, ordinary molecules, atoms, and so on. This view says that eventually everything is reducible to something mechanical.

The next step for Bohm is to show the changes in modern physics which weaken the mechanistic position. Instead of separate little particles as constituting matter or "reality," Albert Einstein introduced the conception of field spread through all space, with particles no more than forms in a field of movement. "The universe is one seamless, unbroken whole, and all the forms we see in it are abstracted by our way of looking and thinking," Bohm suggests. Then, with quantum theory, matter and energy manifest like either particles or waves, depending upon the experimenter. In this case the quality of the thing depends upon the context. "This idea," Bohm says, "is utterly opposed to mechanism, because in mechanism the particle is just what it is no matter what the context." This means, he says, that the ultimate units of nature "begin to look more like something organic than like something mechanical." He then adds:

Now one may ask: if there has been such a disproof of mechanism, why is it that most scientists are still mechanistic? The first reason is that this disproof takes place only in a very esoteric part of modern physics, called *quantum mechanical field theories*, which only a few people understand, and most of those only deal with it mathematically, being committed to the idea they could never understand it beyond that level. Second, most other physicists have only the vaguest idea of what quantum mechanical theorists are doing, and scientists in other fields have still less knowledge about it. Science has become so specialized that people in one branch can apply another branch without really understanding what it means. In a way this is humorous, but it has some very serious consequences.

Finally, Bohm describes the holographic picture which, with the aid of a laser, focuses light so that the waves, rather than the image of the object, are photographed. In this picture, each part can produce an image of the whole object. "The holograph hence suggests a new kind of knowledge and a new understanding of the universe in which information about the whole is enfolded in each part and in which the various objects of the world result from the unfolding of this information.

In my technical writings, I have sought to show that the mathematical laws of quantum theory can be understood as describing the holomovement, in which the whole is enfolded in each region, and the region is unfolded into the whole. Whereas modern physics has tried to understand the whole reductively by beginning with the most elementary parts, I am proposing a postmodern physics which begins with the whole.

In his conclusion Prof. Bohm says:

The general way we think of this world will thus be a crucially important factor of our consciousness, and thus of our whole being. If we think of the world as separate from us, and constituted of disjointed parts to be manipulated with the aid of calculations, we will tend to try to become separate people, whose main motivation with regard to each other and to nature is also manipulation and calculation. But if we can obtain an intuitive and imaginative feeling of the whole world as constituting an implicate order that is also enfolded in us, we will sense ourselves to be one with this world. We will no longer be satisfied

merely to manipulate it technically to our supposed advantage, but we will feel genuine love for it. We will want to care for it, as we would for anyone who is close to us and therefore enfolded in us as an inseparable part.

Vice Versa, however, the idea of implicate order means that we are enfolded in the world—not only in other people, but in nature as a whole. . . . This can obviously happen in the world of society. But even the world of nature will cease to respond with degeneration, due to pollution, destruction of forests, and so on, and will begin to act in a more orderly and favorable way. . . . *meaning and value are as much integral aspects of the world as they are of us.* If science is carried out with an amoral attitude, the world will ultimately respond to science in a destructive way. Postmodern science must therefore overcome the separation between truth and virtue, value and fact, ethics and practical necessity. To call for this nonseparation is, of course, to ask for a tremendous revolution in our whole attitude to knowledge. But such a change is now necessary and indeed long overdue. Can humanity meet in time the challenge of what is required? The coming years will be crucial in revealing the answer to this question.

We have selected what seem important passages to quote from this book. There are other useful contributions but these quotations seem to convey most clearly the impact of what the book is about.

COMMENTARY

MYSTERIOUS AWAKENINGS

NEEDLESS to say, the thing that struck us most about this issue was the contrast between the lack of moral perception in those who, in making decisions, do nothing but calculate and manipulate to get what they want, and the warm enthusiasm of Dr. Goddard's students who wrote to him earlier. It is as though they belonged to a different species of man. How could human beings be so different?

Prof. Bohm suggests that there is an intellectual limitation in the amoral mechanisms, at least among the physicists. The field theory of quantum mechanics, he says, is understood by only a few of these; most of them deal with it only mathematically. What was it in Prof. Bohm which led him to recognize in quantum field theory the radical unity of all life and being, and to see in this principle the ethical implication that transformed his outlook? For him, science had become a moral allegory, an aspect of a spiritual teaching which was apparently invisible to the great majority of physicists.

Yet in this they may change. Just as those students of English literature found themselves changing under the influence of Harold Goddard. Why do some teachers have an effect of this sort? And why do some parents seem only morally heavy-handed to their children, while others are inspiring to their young?

There is no clear answer to these questions, but serious readings in Shakespeare and Dostoevsky and a few other writers might bring the beginning of an understanding. As Bohm says:

But if we can obtain an intuitive and imaginative feeling of the whole world as constituting an implicate order that is also enfolded in us, we will sense ourselves to be one with this world. We will no longer be satisfied merely to manipulate it technically to our supposed advantage, but we will feel genuine love for it. We will want to care for it, as we would

for anyone who is close to us and therefore enfolded in us as an inseparable part. . . .

To call for this nonseparation is, of course, to ask for a tremendous revolution in our whole attitude to knowledge. But such a change is now necessary and indeed long overdue. Can humanity meet in time the challenge of what is required? The coming years will be crucial in revealing the answer to this question.

Bohm writes as a physicist. But English teachers also have their part to play. There are various ways in which the movement of the spirit is made to begin. As one reader put it:

I think that *The Brothers Karamazov* is one of the finest things I have ever read or ever will have read. And only with the help of your guiding hand was I able to understand it in its true sense.

Somehow these students learned what was happening to them. Somehow they conveyed it to Dr. Goddard. Can we learn from them?

CHILDREN ... and Ourselves REPORTS TO A TEACHER

IN 1946 Harold C. Goddard retired from a lifetime of teaching English at Swarthmore College. In that year Swarthmore published a volume of essays honoring Dr. Goddard, including comments by those who had been his students. These letters show how a teacher can have a multiplier effect on the mental capacities of others. Goddard, we may recall, was author of *The Meaning of Shakespeare*; published a little after his death in 1951 (and later issued as a two-volume paperback by the University of Chicago Press), a Pendle Hill pamphlet, *Blake's Fourfold Vision*, and other books. A review of what these students said about him came out in MANAS during 1968 and was also included in the MANAS READER. Many years later we had the good fortune to acquire a collection of letters written to Dr. Goddard at the time of his retirement or earlier. We now present extracts from those letters.

The first letter in our collection, addressed to him in 1944, included the following:

It seemed to me I learned a lot in your seminar. I didn't think it was possible to learn so many important and eternal things in such a short time. It is a strange kind of learning—I mean, it seems the most solid and dependable of all I have ever learned; and yet it is also the most ungraspable and indeterminate for it is the kind of learning that I shall never get to the end of; I know it better than I know anything else, and yet I shall never stop learning it anew for the rest of my life.

It is a wonderful feeling, to feel you have so much, and still to have it all ahead of you. I have a most peculiar method of judging seminars and books and things I am learning: I judge it by the amount of quivering I feel in the pit of my stomach—and just about the best thing I can say about your seminar is that I quivered practically all the way through. Perhaps that sounds foolish, but as far as I am concerned, it is infallible. I quivered a lot when I was learning important truths in Social Philosophy (although I doubt whether Dr. Blanchard would

approve my method), and every once in a while when I thought I had an inkling of what Plato meant by his Idea of the Good, and during Chaucer, and Mrs. Wright's poetry a great deal, but never so consistently as during Modern Literature. . . .

I remember an essay we read by William James, which consisted mostly of quotations from other writers, and you asked us if that could possibly be considered an original piece of work on the part of James. Of course it could. He tied it all together and gave it a point and a thesis, he gave it original thought and a spirit that was all his own. Well, that is what you have done in your seminar with the great writers we had to deal with, and that surely makes you an artist in your own right. It is simply marvelous how the way you live and teach *proves* what you teach; you don't just teach, you live what you teach.

This letter is by a woman. Somehow the women students seem better at getting across what they are feeling. Here is another such letter:

After last Wednesday's class I felt that I just must write to you and tell you how I feel about having Shakespeare from you this year. I sat down, but I couldn't seem to write all that I felt. But I want you to know that this year has meant more to me than I can express. My love for Swarthmore has two meanings—one is Shakespeare and the other is you. I have learned more in this one year than I've learned in all the rest of my life. I have been higher and lower in spirit than I've ever been before, but at each extreme I have gotten a spark of understanding that you and Shakespeare have given me. When you told about Othello's love for Desdemona I didn't think I could bear the beauty of it. You and Shakespeare have become part of me. I think I understand now what love and friendship, and forgiveness, and grief, and hope really mean. Reading about King Lear made me understand my family and many families, as I told you after class that day. It made me know that there must be some higher force than humankind can ever be, which draws us together and which makes friendship so beautiful.

I don't feel I've said what I really mean yet, but I do want to tell you that no matter what anyone does or says, or whatever happens to me, I shall always keep you and Shakespeare—for one needs the complement of the other—held in the real part of me that lives in everything I do and which is the sacred gift that mothers give their children.

And now a man in 1942:

Was it Butler who said he never wrote anything until he felt he *had* to write it? Perhaps I am misquoting Butler, but this is the way I feel—I *have* to write you because I have a very important problem.

The one thing that impresses me most about the Modern Literature seminar is the way it has become part of my life. This is especially true of Chekhov and Dostoevsky. I find it impossible to close their books and forget about them. At present Dostoevsky haunts me almost every minute of my life. I find it impossible to forget him. Of all the authors I have ever read he speaks most directly to me. He has made me re-evaluate my entire life. He is the one author who seems in harmony with the eternal values—the one author who knows the soul of man. In fact, I am trying to build my life around him. This is a secret I have told to no one. You are the only person who knows it—you and Dostoevsky himself.

Last night I read the chapters on the recollections and conversations of Father Zossima. I have never had any passage affect me like this. You once told us in seminar to stop reading *Crime and Punishment* if we found it unbearable—strange to say I found these chapters about Father Zossima almost unbearable. Of course they aroused no feeling of horror; but they were so simple, yet so beautiful, that I found I was too "choked up" with emotions to continue reading. While reading them I was keenly conscious of how much I had failed in my life to live up to what the old monk said; I was conscious of the poverty of my spiritual life and of all my failures. It was this feeling of guilt that was almost unbearable. Yet, with it, there was a feeling of joy and exaltation. It was as if I had an insight into the soul of man, with all its power and love and nobility. This feeling of intense faith and joyousness was almost unbearable. It was a strange "double feeling" of guilt and exaltation, of humility and triumph, and I will always regard that double feeling as one of the most sacred moments of my life.

I said in the first paragraph that I have a problem, and you are probably impatient to hear it by now. As I said before, I am trying to realize Dostoevsky's ideals in my life. Coupled with this is the fact that I am going into the army soon, and, within a year, will be killing. This seems a pretty poor way to live up to Dostoevsky's ideals. How can I believe in the chapter "Of prayer, of Love" and especially "Can a man judge his fellow creatures" and still go to murder Germans and Japanese? "Kiss the

earth and love it with an unceasing, consuming love. Love all men, love everything"—I want to know if you regard me as a hypocrite, I value your opinion on this matter more than anyone else. Perhaps I am unfair to you in troubling you with this problem of mine. If you think I am, I will understand if you do not answer it.

Give my regards to Mrs. Goddard, and a Happy New Year to you both.

Another man wrote in 1936:

Dr. Goddard: . . . I want to let you know just how I feel about this course. I can say in all sincerity that I have gained more of real, true value from this course than I have from any other since I have been here. I know that many of these books would have passed unnoticed by me if I had not taken the course. And I know, further, that even if I had read them at some time, I never could have received as much by that reading as you have made possible.

I think that *The Brothers Karamazov* is one of the finest things I have or ever will have read. And only with the help of your guiding hand was I able to understand it in its true sense!

These are the things that to me mean more than anything else in the world. Appreciation, worth, values, friends, and such are the basic things. It is such things that cause one to hesitate at some time before it's too late, and realize that there are other things beside money and wealth that count! It is from such things that we are able to derive true pleasure and satisfaction. And it is this course that has given me this pleasure and satisfaction!

A woman wrote in 1947:

. . . I still think fondly of Swarthmore. You taught me to find the beauty in life. . . . You taught me to see beyond what was just in front of me. I have never earned a cent by my education at Swarthmore, but I wouldn't have missed it for worlds. In fact I would have missed a whole lot of worlds if I hadn't come to Swarthmore and been taught by some very able men. It is easier to talk face to face than to write a letter, but I did want you to know how grateful I was, and this kind of letter usually gets put off until it never is written.

In conclusion we suggest reading Goddard on Shakespeare and Blake.

FRONTIERS

A Model Nation

THE country of Kuwait, which has an area of 1,950 square miles, is located at the northern end of the Arabian Gulf. It is the subject of an informing article in the July/August *Environment* by Hamid A. Shuaib, president of the Kuwait Environment Protection Society. While practically all desert, the country has a good rainy season (October to April) which gives life to various forms of flora and fauna. There are now about a million and a half people in Kuwait, ten times the population of the 1930s and early 40s. What happened to produce this result? Mr. Shuaib says:

The discovery and exploitation in the late 1940s of oil in Kuwait thrust the nation into the world economy and provided it with vast new wealth. Since the early days of oil production Kuwait has shown a commitment to using that wealth for controlled development. The government has created master plans for new industrial, residential, and commercial areas and has attempted to structure an economy that will be sustainable even when the oil runs out. . . . At present the production of oil averages 750,000 barrels per day; gas production averages 500 million cubic feet per day. Forty per cent of the oil is exported as crude oil, 60 per cent as refined. Surplus gas from nearby Iraqi fields is also being piped to Kuwait to be used for power production and will meet 30 per cent of the local demand.

We should note that Kuwait is bounded by Iraq to the north and west, Saudi Arabia to the south, and the Arabian Gulf to the east. Before the discovery of oil, the majority of Kuwaitis lived in Kuwait City, with the rest scattered in coastal villages and the oasis of Jahra. Nomadic Bedouins herded their sheep and camels to wherever grazing land and rainwater could be found. Seafaring dhows and a pearling fleet made Kuwait City a booming trading port in the gulf. Shuaib says:

Because of the limited number of people and their limited means of existence, one could say there was a sustainable use of resources at that time. Nature was able to survive and restock each season.

There was no overfishing, no overgrazing, and no damage to the environment by automobiles or other sources of pollution. Until the late 1940s gazelles, rabbits, and migratory birds were in abundance. During the spring season wildflowers and shrubs transformed the desert into a natural garden that lasted until the heat of the summer and dust storms arrived.

But with the discovery of oil and subsequent development, all this was changed.

One of the most difficult problems resulting from development was how to supply adequate water to support the needs of the increased population. Much of the supply depended on the rainy season and very primitive methods of collection and storage. The rainwater that was collected from the roofs of the houses and stored in underground tanks was insufficient to last all year. All of the known shallow water wells were exploited, and in some places earth dams were built as catchments to collect as much water as possible from every rainfall. Transporting the water to town was also a big problem, since only camels or donkeys were available. The seafaring Kuwaitis initially overcame the problem by transporting fresh water from the mouth of the Shatt-al-Arab river in Basra, Iraq, using wind-powered chows. However, even with favorable winds both ways, this journey took a minimum of three days.

Kuwait eventually found a technological solution to its water shortages and commissioned in 1953 its first seawater distillation and power plant, with a capacity of 1 million imperial gallons per day (MGD). Since then Kuwait has steadily increased its seawater distillation facilities to the point where in 1986 they produced an average of 160 MGD, out of an installed capacity of 215 MGD.

With the advent of oil, Kuwait, under the rule of Sheikh Abdulla Al-Salim Al-Sabah, decided to use the oil revenues to develop "much needed housing, health services, education, and infrastructure." An advisory body was created to guide and approve development plans.

Development control in Kuwait has since evolved through three phases. The first began with the establishment in 1952 of the Development Board, comprised of various department heads (education, health, finance, and others) in addition to experts brought in from abroad. . . . In 1960 a law was passed to establish another planning organization, the Board for Physical and Economic Development. . . .

The second phase of planned development began with the establishment in 1962 of the Planning Board, which had much wider powers and more public participation than its predecessors. Following a 1970 amendment providing for even more public participation, the private sector had gained a role in planning almost equal to that of government.

Since the 1952 Master Plan, Kuwait, Shuaib says, "has been a pioneer in the gulf region in controlling development to protect the environment."

In terms of environmental issues and damage, whether physical or visual, the oil industry is responsible for the most severe pollution of the land, air, and sea, and the industry presents an ever-increasing challenge to the authorities. There is a great deal of environmental control still to be done, and the increase in the cost of addressing issues like industrial waste and emissions is delaying effective control measures. One of the most important issues in this connection is pollution and seawater and coastal areas. . . .

The first United Nations Conference on the Human Environment, held in Stockholm in 1972, planted the seeds of environmental awareness in Kuwait. A group of interested citizens, including ministers, doctors, planners, architects, engineers, and scientists, realized that government agencies and institutions needed the support of the private sector to help implement environmental policies. To initiate this cooperation the group established the Kuwait Environment Protection Society, which was legally recognized by the government in 1974.

The society's goals include promoting public awareness of environmental protection and encouraging collective efforts to solve present and future environmental problems; encouraging the development of scientific thinking, legislation, and administrative measures on the safety of the environment; and protecting Kuwait's natural resources for the welfare of present and future generations. Stressing our responsibility to preserve the natural environment and wisely manage the heritage of wildlife and its habitats, the society holds that environmental protection is the responsibility of every citizen.

The spirit and activity of the people of Kuwait has not gone unnoticed. While readers in the United States may wonder why this tiny country gets so much attention, and have trouble

finding it on the map, those who are working to preserve the environment have been much impressed by what has been possible for a small country. For example:

In 1987 the United Nations Environment Programme (UNEP) chose the society to be a member of the Global 500, an honor for outstanding work in helping to protect and improve the environment. In the same year the society was also awarded the Prize of the Year from the Regional Organization for the Protection of the Marine Environment. The society, which now has over 600 members including 60 governmental and nongovernmental organizations, organizes seminars, lectures, and exhibitions on topical environmental issues. In 1981 it began publishing a monthly magazine to highlight its activities and a bimonthly booklet on environmental issues; since 1985 it has also produced a series of five children's booklets.