

FACT INTO VALUE, VALUE INTO FACT

CERTAIN of our contemporaries are likely to be remembered for a long, long time. Two of them—contemporaries until quite recently—are A. H. Maslow and E. F. Schumacher. Maslow accomplished a fundamental rebirth in theoretical psychology—what we think about how we think—and Schumacher showed why economics must be subordinated to ethics. Both were major steps of change or reform. And little by little those steps are being taken. Maslow and Schumacher, we may say, were both scientists—one a psychologist the other an economist—but both, unlike most of their colleagues, were first of all philosophers who reshaped their sciences for ethical reasons.

Here we have in mind to look at a basic question which they both asked and dealt with—the philosophic question of fact versus value, or fact in relation to value. Rather than begin with definitions—Maslow has something interesting to say about the impossibility of defining values successfully—we plan to quote from these thinkers and then to look at the implications of what they say. We'll start with Schumacher.

The tenth chapter of *A Guide for the Perplexed* is titled "Two Types of Problems." In it Schumacher says:

Our civilization is uniquely expert in problem-solving. There are more scientists and people applying the "scientific" method at work in the world today than there have been in all previous generations added together, and they are not wasting their time contemplating the marvels of the Universe or trying to acquire self-knowledge: they are *solving problems*.

...

First, let us look at solved problems. Take a design problem—say, how to make a two-wheeled man-powered means of transportation. Various solutions are offered which gradually and increasingly *converge* until, finally, a design emerges which is "the answer"—a bicycle—an answer that

turns out to be amazingly stable over time. Why is this answer so stable? Simply because it complies with the laws of the Universe—laws at the level of inanimate nature.

Of the two types of problems, this is the one Schumacher names "convergent problems." It becomes very important to distinguish convergent problems from others whose solutions do not "converge." He speaks of these next:

It also happens, however, that a number of highly able people may set out to study a problem and come up with answers which contradict one another. They do *not converge*. On the contrary, the more they are clarified and logically developed, the more they *diverge*, until some of them appear to be the exact *opposites* of the others. For example, life presents us with a very big problem—not the technical problem of two-wheeled transport, but the human problem of how to educate our children. We cannot escape it, we have to face it, and we ask a number of equally intelligent people to advise us.

Some of the advisers will speak of the importance of discipline and order, to be maintained by authority, so that the fruits of past experience can be transmitted to the next generation. But others say that educators are like gardeners who are responsible only for healthy soil and watchful care of the plants, not trying to control or manipulate growing things, but maintaining the conditions under which their natural potentialities are able to flower.

If our first group of advisers is right, discipline and obedience are "a good thing," and it can be argued with perfect logic that if something is "a good thing," more of it would be a better thing, and perfect discipline and obedience would be a perfect thing . . . and the school would become a prison house.

Our second group of advisers, on the other hand, argues that in education freedom is "a good thing." If so, more freedom would be an even better thing, and perfect freedom would produce perfect education.

The school would become a jungle, even a kind of lunatic asylum.

Here ordinary logic becomes impotent. And if you compromise the logic, then everything goes wild because you no longer have rules to go by. Is good education, then, some sort of "working contradiction" that can't be defined? It seems so.

There is no solution. And yet some educators are better than others. How does this come about? One way to find out is to ask them. If we explained to them our philosophical difficulties, they might show signs of irritation with this intellectual approach. "Look here," they might say, "all this is far too clever for me. The point is: You must *love* the little horrors." Love, empathy, *participation mystique*, understanding, compassion—these are faculties of a *higher order* than those required for the implementation of any policy of discipline or of freedom. To mobilize these higher faculties or forces, to have them available not simply as occasional impulses but permanently, requires a high level of self-awareness, and that is what makes a great educator.

Convergent problems—the kind we are good at solving—do not require the faculties which must come into play with divergent problems. And when a convergent problem is solved it is, so to speak, dead. "Whoever makes use of the solution can remain relatively passive; he is a recipient, getting something for nothing, as it were."

Convergent problems relate to the dead aspect of the Universe, where manipulation can proceed without let or hindrance and where man can make himself "master and possessor," because the subtle, higher forces—which we have labeled life, consciousness, and self-awareness—are not present to complicate matters. Wherever these higher forces intervene to a significant extent, the problem ceases to be convergent. . . . The moment we deal with problems involving the higher Levels of Being, we must expect *divergence*, for there enters, to however modest a degree, the element of freedom and inner experience. In them we see the most universal pair of opposites, the very hallmark of Life: growth and decay. Growth thrives on freedom (I mean healthy growth; pathological growth is really a form of decay), while the forces of decay and dissolution can be contained only through some kind of order. These

basic pairs of opposites—Growth *versus* Decay and Freedom *versus* Order—are encountered wherever there is life, consciousness, self-awareness. As we have seen, it is pairs of opposites that make a problem divergent, while the absence of pairs of opposites (of this basic character) ensures convergence.

Schumacher speaks of convergent problem-solving as the "laboratory approach":

It consists of eliminating all factors which cannot be strictly controlled or, at least, accurately measured or "allowed for." What remains is no longer a part of real life with all its unpredictabilities, but an isolated system posing convergent, and therefore in principle *soluble*, problems. At the same time, the solution of a convergent problem *proves* something about the isolated system, but nothing at all about matters outside and beyond it.

I have said that to solve a problem is to kill it. There is nothing wrong with "killing" a divergent problem, for it relates to what remains after life, consciousness, and self-awareness have already been eliminated. But can—or should—divergent problems be killed? . . .

Divergent problems cannot be killed, they cannot be solved in the sense of establishing a "correct formula"; they can, however, be transcended. A pair of opposites—like freedom and order—are opposites at the level of ordinary life, but they cease to be opposites at the higher level, the really *human* level, where self-awareness plays its proper role. It is then that such higher forces as love and compassion, understanding and empathy, become available, not simply as occasional impulses (which they are at the lower level) but as a regular and reliable resource.

This seems a way of saying that the vital, divergent problems are all concerned with human purpose, human meaning, human fulfillment. The convergent problems do not involve any aspect of human development. They have to do only with our outside equipment. They have to do with things completed in the past, which are "finished," and therefore definable and manageable. But human beings are not complete, not finished; they belong to the present and the future, not the past, so that incommensurable elements are always present—things we have to grow up to, not just measure and cut to fit to suit ourselves.

Maslow got at the same question in another way—by distinguishing between fact and value. It is commonly held that facts have no intrinsic relation to value. Maslow thought about this claim and wrote a paper, "Fusions of Facts and Values," which is a chapter in his *Farther Reaches of Human Nature*. His basic point is that Values are commonly represented by some kind of "fact," but not recognized as such.

Most of the philosophical writers about values have tried to find a simple formula or definition which would tie together everything in the container, even though many of the things inside were there by accident. They ask—"What does the word *really* mean?"—forgetting that it doesn't really mean anything, that it's just a label. Only pluralist description can serve, that is, a catalogue of all the different ways in which the word "value" is actually used by different people.

After some discussion he makes an approach to definition: Our knowledge of facts is made up of answers to "is" questions, while values are answers to "ought" questions. The two, he points out, are in absolute need of each other. How we deal with facts—what we do with them, how we select them as important enough to be entitled *facts*—depends upon our values, while values would hardly exist except in relation to some field of action filled with facts to which they need to be applied.

Experience may be defined as the encounter with facts. The importance of the peak experience is that it brings the full gamut of values—the things we think *ought to be*, which under ordinary circumstances are still unrealized—into a range of perception where they appear as *facts*.

Maslow tells what he means by peak experience:

When I asked my subjects, after they had described their peak experiences, how the world looked different to them during these times, I received answers which also could be schematized and generalized. Actually, it is almost necessary to do this for there is no other way of encompassing the thousands of words or descriptions which have been given to me. My own boiling-down and condensation

of this multitude of words, and these many descriptions of the way the world looks to them, from perhaps a hundred people, during and after peak experiences would be: truth, beauty, wholeness, dichotomy-transcendence, aliveness-process, uniqueness, perfection, necessity, completion, justice, order, simplicity, richness, effortlessness, playfulness, and self-sufficiency.

These are the ideas and feelings which come to the mind of the peak-experiencer as "facts" about the world. Maslow comments:

Now we make our big jump: This same list of described characteristics of reality, of the world, seen at certain times, is just about the same as what have been called the eternal values, the eternal verities. We see here the old familiar trinity of truth, beauty, and goodness. That is to say, this list of described characteristics is also simultaneously a list of values. These characteristics are what the great religionists and philosophers have valued, and this is practically the same list that most serious thinkers of mankind have agreed upon as the ultimate or highest value of life.

What is he saying? He is saying that behind the imperfect there is the perfect; within the child is hidden the mature and wise human being. In the peak experience what is and what might be are fused. In some part of ourselves, the promise is not promise but reality, and the becoming is felt to be the goal. Maslow sums up:

These are the most inspiring values of life; these are the ones that people are willing to die for; these are the ones they are willing to pay for with effort, pain, and torture. These are also the "highest" values in the sense that they come most often to the best people, in their best moments, under the best conditions. These are the definitions of the higher life, of the good life, of the spiritual life, and, I may also add, these are the far goals of psychotherapy, and the far goals of education in the broadest sense. These are qualities for which we admire the great men of human history, that characterize our heroes, our saints, even our Gods.

Therefore, this cognitive statement is the same as this valuing statement. *Is* becomes the same as *ought*. *Fact* becomes the same as *value*. The world which is the case which is described and perceived becomes the same as the world which *is* valued and wished for. The world which *is* becomes the world

which *ought* to be. That which ought to be has come to pass, in other words, facts have here fused with values.

Maslow is suggesting that in fully developed human beings (self-actualizers), facts are always enveloped in value, to the point that no distinction need to be made between the two.

What we have learned is that ultimately the best way for a person to discover what he ought to do is to find out who and what he is, because the path to ethical and value decisions, to wiser choices, to oughtness, is via "isness," via the discovery of facts, truth, reality, the nature of the particular person. The more he knows about his own nature, his deep wishes, his temperament, his constitution, what he seeks and yearns for and what really satisfies him, the more effortless, automatic, and epiphenomenal become his value choices.

Apparently, the person who has achieved all this doesn't have to "try" any more—he is what he has been trying for, and he doesn't need to talk about it, think about it, or pursue it. The peak experience is a kind of rainbow promise of this lovely on-going finality.

But it is also evidence that being "on the way" has a gloriousness of its own, since, ultimately, there is no final end. For this reason, being on the way is better than any kind of end, because man, as a realizing being, needs always to be "on the way" to something else or something more. The peak experience, then, is some kind of fusion of time and eternity as well as of what is and what ought to be. It is an insight into the full meaning of the self as both eternal being and eternal becoming. Maslow says:

Here "value," in the sense of *telos*, of the end toward which you are striving, the terminus, the Heaven, exists right now. The self, toward which one is struggling, exists right now in a very real sense, just as real education, rather than being the diploma that one gets at the end of a four-year road, is the moment-to-moment process of learning, perceiving, thinking. Religion's Heaven, which one is supposed to enter after life is over—life itself being meaningless—is actually available in principle all through life. It is available to us now, and is all around us.

Being and Becoming are, so to speak, side by side, simultaneously existing, now. Traveling can give end-pleasure; it need not be only a means to an end. Many people discover too late that the retirement made possible by the years of work doesn't taste as sweet as the years of work did.

Something has been said about the ground of meaning behind "values," but what of "facts"? Alfred North Whitehead has pointed out that there are really no isolated objects, no unrelated facts. For us they are thought-objects or idea-facts. Who but human beings are concerned with the contrast between subject and object, and how can the idea of fact or object be separated from the thought which gives it identity? Facts, then, are inhabited by ideas, exist for us through ideas, and ideas have their moral coloring from the humans who garb them with facts. However remotely, that is, they have a reflex connection with value. Etymology gives ample evidence of this.

The world as a going concern results from the cosmic separation of fact from value—the objective from the subjective. We can conceive of their reunion only by an imaginative or symbolic return to the One, which the ancient Indians called Nirvana, the Christians the Beatific Vision, and Maslow, the Peak Experience. There is in human beings that capacity, through the mind, to go beyond the distinguishing and opposing categories of the mind, to the feeling of radical unity, in which diversity is not lost but reconciled and made into a magnificent harmony—a marriage of the absolute with the relative, a magical synthesis of the One and the Many, of Time and Duration.

Maslow's idea of the fusion of fact and value depends upon the potentiality of this momentary synthesis which reveals to us the paradox of a goal which is ever present through time in the timeless attitude of the peak experience. One sees one's own limitations, unfinished business, undeveloped capacities, and is in no way disheartened, no more than one need be depressed by the morning of another day, which simply presents the prospect of a lot of work to do.

Schumacher spoke of the flow of the higher faculties into the situation of a divergent problem, making possible the resolution or balance of opposites. Maslow wrote of the same balance in other terms:

To perceive unitively we must be able to perceive both the sacred and profane aspects of a person: Not perceiving these universal, eternal, infinite, essential symbolic qualities is certainly a kind of reduction to the concrete and to the *sachlich*, the thinglike. It is therefore a kind of partial blindness. . . .

Practically any means-activity (a means-value) can be transformed into an end-activity (an end-value) if one is wise enough to want to do this. A job entered into for the sake of earning a living, can be loved for its own sake. Even the dullest, dreariest job, as long as it is worthwhile in principle, can be sanctified, sacralized (ontified, changed from a mere means into an end, a value in itself). The Japanese movie *Ikuri* makes this point very well. The dreariest kind of bureaucratic job is ontified when death by cancer approaches, and life must become meaningful and worthwhile, what it ought to be. This is still another way of fusing fact and value; one can transform the fact into an end-value simply by seeing it as such and, therefore, making it so.

Who can do this successfully? Heroes can do it, and by doing it they seem to transform themselves into gods, inhabitants of both time and eternity. This was the question that Maslow set out to answer by his study of self-actualization and the contrast between deficiency-needs and being-needs, for which the peak experience became the major clue. And for Schumacher's wise and devoted man, the divergent problems take on the solvable simplicity of convergent problems, because their moral meanings have become universal facts.

REVIEW

LEARNING FROM WORK

THE loveliest passage we know of about work is by Richard Hertz, in a now forgotten book, *Man on a Rock*. It begins with a reference to Karl Buecher, who collected songs that people sing "during the ceremony we call work." Hertz then says:

Chinese peasants, moving into the mountains every morning to gather tea, sang a hymn in honor of their enterprise which they compared to a pilgrimage to the Western paradise. The Volga boatmen "accepted the universe," and the women of Madagascar acted, when they cultivated the rice-fields, like bayaderes trying to please a god.

Miguel Covarrubias, in his book on Bali, describes the bandjars, or cooperative societies as we would call them in our dry idiom; they watched the magic of work unfold with proper art and majesty in their Indonesian eden; when night fell they sent the arpeggios of their tireless orchestras through fragrant vales. . . .

The medieval fraternities of workers in Flanders and Lyons, toiling in the frozen music of crepuscular cities, rolled the stone from the tomb of their narrow space; their triumph over the refractory material of the world was not routine, but was understood by them in its vast metaphysical connotations. Work interpreted as spiritual discipline gave these people a superhuman patience, detachment from results.

The alchemists understood this parallel between work done on earth and the inner processes of transmutation in human beings, as Jung pointed out in a book on alchemy. They were, you could say, philosophical psychologists who added the deliberation of self-consciousness to this correspondence. Is there, one wonders, any possibility of recovering in our own time this feeling and awareness of the significance of work?

The best mode for such restorations is probably not scholarly research, but spontaneous discoveries by people who find out the meaning of work for themselves. Take for example *The Joys of Beekeeping* (St. Martin's Press, 1974) by Richard Taylor, who raises bees which produce honey, and teaches philosophy on the side—or perhaps it is the other way around. This is not a "practical" book, and it says so on the first page. The author explains at the beginning:

My bees have not made me rich. Had it been otherwise, had this way of life been a source of wealth, as business and speculation sometimes are, then I would have had my reward, but that reward would not have been happiness. Yet the knowledge that I could have depended upon my bees for at least a meager livelihood has given me a sense of independence, which is itself a joy.

His remarks on Happiness are worth repeating:

The basic reason for any pursuit is to find happiness. Many persons seek it through wealth, power or prestige, and while some of them do find these things, it is doubtful whether they ever find more than the most specious happiness. The ancients, who thought more deeply about happiness than we do, were unanimous in rejecting these goals as sources of it. They thought that happiness consisted of having a good demon, so they called it eudaemonia. There is no doubt that the honey bee has been my demon, and an immeasurably good one for as long as I can remember. Happiness cannot depend upon the gifts of our fellows, nor upon their approval, for what they bestow today they can as easily withdraw tomorrow.

Keeping bees is a calling that seems to have a beneficent effect on the people who do it. Not all jobs are like that. It would certainly be interesting to have a list of the "good" ways of making a living—ways that are in some sense contrapuntal to a good life.

Despite this book's claim not to be practical, you learn a great deal about bees from reading it—things you will remember and enjoy even if you have no intention of keeping bees. But at the end, Mr. Taylor gives some reasons for doing it:

Many men and women have a deep, instinctive pull to the land and husbandry. It is no longer satisfied by modern methods of commercial farming, and not many persons in touch with reality are tempted to try earning a livelihood in gardening, however satisfying this may be in other ways. For some people, however, beekeeping can fill this need completely. With only a minimum of tools and investment, augmented by resourcefulness in the use of what comes to hand, a beekeeper can play his part in the great cycles of nature, find a satisfaction that few pursuits offer, augment his livelihood or even gain the whole of it from his bees.

A more deliberately self-conscious study of work, much as the alchemists pursued it, is available in Carla Needleman's *The Work of Craft: An Inquiry into the Nature of Crafts and Craftsmanship*

(Knopf, 1979, \$7.95). Carla Needleman is the wife of Jacob Needleman, author of *The New Religions* and *A Sense of the Cosmos*, but we mention this only to take note of what seems a happy association of independent minds, active in different areas, having in common the questing spirit. *The Work of Craft* is, then, an alchemical treatise by a writer who uses her craft of pottery and experience of making pots as the raw material of self-examination. The book has in it passages like the following:

Our search for meaning seems to have led us to a standstill. Or has it? Am I not still trying to solve the problem, trying to understand it, pin it down, am I not impatient, tapping my feet with the impatience of wanting to get on with it, wondering how this lengthy philosophical dead end is going to lead back to the question of crafts? I don't stand still. I *can't* stand still. I even make a virtue out of restlessness, calling it the energy of life, or some such foolish phrase. The best definition of hellfire I ever heard called hellfire just that, starting a movement and not being able to stop it. What does it take to stop me? I begin to recognize the magnitude of the problem.

I am all the time overshooting the mark. When I go out, I go too far. When I am making a circular pot, I think of completing the circle while my hands are working on the base. I'm always pointing at things and getting lost in the things, not staying with the finger pointing. When I see a person I could simply take in that impression, but I begin to think about the person and so on. I am never where I am. It is a shock to realize this. I need to let that shock in, to allow it to really shock me. And then, when I let the shock in, there is a sense of danger. The sense of danger bolts me to my spot. I feel myself in danger because what I am in essence is threatened. My essential meaning is threatened. And here, in danger, I return to myself. . . .

The meaning of this may seem obscure, but it goes with the sensibility of the craftsman who feels and sees without, what is going on within.

Crafts are a perilous sort of bridge between action and contemplation and nowhere is this more apparent than in the confusion with which we face our results. The desire to be free from the effects of our results upon us can lead to the assertion that I am free. It can lead me to assert that only self-awareness matters, and that the product is unimportant. And while it is in many ways a true statement, it isn't true for me. The self that I lay claim to in speaking of self-awareness is partial, restricted; it doesn't, for example, include the product and all my reactions to it. The self that I refer to is like

looking through a peephole—the field of vision is very narrow. This pot, this weaving, this carving, exist not only in the mind but outside it as well. The product is our koan.

Passages like this one are part of Mrs. Needleman's dialogue with herself, which we overhear. But we get the symmetry of what is being said and some of the meaning comes through, as in the following:

A craft appeals at one and the same time to the various parts that make up my disharmonious self, to mind as well as to body, demanding such extraordinary care in the service of craftsmanship that the customary self-involvement of the mind, for example, is shaken and begins to call into question its custodianship of the whole of me. Very soon in the study of pottery I realize my thinking just gets in the way. The beginning potter, or weaver, or glassblower, then tries to leave thought out of it, to work mindlessly with the body alone. But it quickly becomes evident that when I try to "let go" in this way I am reaching "down" into the body—that is, into the animal body—not "up" toward the intelligent body. (Many craftsmen, not all of them young, persist in working this downward way, producing, not surprisingly, work that is determinedly ugly in the name of naturalness.) Of course, the thought has not gone away and is in some peculiar way responsible for the results of the idea that I can just shut off all discrimination and "allow" pure creation to take place. It's an atheistic thought, as a matter of fact, as if creation could exist in the absence of a Creator, or I could throw pots with my lower jaw slack and a foggy look in my eyes!

Mrs. Needleman ranges in many directions, thinking, so-to-speak, out loud. The wheel and the kiln are her home base, which she goes back to now and then.

Other people really complicate life for us but it's better to have real complications than imaginary simplicities. So I continue to work with others and I continue to suspect that—in the long run—it will make me better as a potter and as a person.

It isn't really that I have to learn to put up with others but that I need to learn to put up with myself, my reactions to other people. The unconscious assumption that my own ways are the standard by which every person must needs be judged is at every turn hooted down by my peers. It brings me to a wish to see more clearly how things are, not to make things easier or better or different, but to understand.

COMMENTARY WORKING METHODS

THERE seems some kind of parallel—how much of a parallel it would be risky to say—between Schumacher's convergent and divergent problems, Maslow's fact and value distinction, and the differing functions of the two sides of the brain, according to recent research. Briefly, the work of Roger Sperry and a group at Cal Tech shows that the left side of the brain "analyzes, abstracts, counts, marks time, plans step-by-step procedures, verbalizes, makes rational statements based on logic." The right side of the brain works holistically.

The quotation is from *Drawing on the Right Side of the Brain* (Tarcher, Los Angeles, \$8.95) by Betty Edwards, a drawing teacher. Her book seemed a good choice for reading something about the brain research, since the author studied this work at Cal Tech and elsewhere in order to improve her way of teaching. A passage early in the book justified reading an artist on such matters. She says:

The magical mystery of drawing ability seems to be, in part at least, an ability to make a shift in brain state to a different mode of seeing/perceiving. *When you see in the special way in which experienced artists see, then you can draw.* This is not to say that the drawings of great artists such as Leonardo da Vinci or Rembrandt are not still wondrous because we may know something about the cerebral process that went into their creation. Indeed, scientific research makes master drawings seem even more remarkable because they seem to cause a viewer to shift to the artist's mode of perceiving.

All through the book—which is filled with lovely and instructive drawings—are scattered quotations from eminent thinkers and artists who understood what great work involves, yet used other language to speak of it. As for example the mathematician Poincaré, who has told about how, working on a difficult problem, he drank some black coffee and could not sleep:

Ideas rose in crowds; I felt them collide until pairs interlocked, so to speak, making a stable

combination. . . . It seems, in such cases, that one is present at his own unconscious work, made partially perceptible to the overexcited consciousness, yet without having changed its nature. Then we vaguely comprehend what distinguishes the two mechanisms or, if you wish, the working methods of two egos.

This spontaneous flow of imagery, quite involuntary yet somehow directed to the problem's solution, illustrates the qualities attributed to the right side of the brain. As Betty Edwards says:

. . . we have a second way of knowing: the right-hemisphere mode. We "see" things in this mode that may be imaginary—existing only in the mind's eye—or recall things that may be real (can you image your front door, for example?). We see how things exist in space and how the parts go together to make up the whole. Using the right hemisphere, we understand metaphors, we dream, we create new combinations of ideas. When something is too complex to describe, we can make gestures that communicate.

Her object in this book is to help people to release the potentialities represented by the right side of the brain. We say "represented" because it seems likely or at least possible that the two sides of the brain are really two kinds of tools that are constituted for use in different ways. In present-day education, Betty Edwards points out, the left brain gets practically all the attention: "The right brain—the dreamer, the artificer, the artist—is lost in our school system and goes largely untaught."

Well, this may not be quite so serious an omission as the writer suggests. Teachers may be able to help students to free their minds for creative activity, but the actual use of the imagination depends upon a daring of the heart, a capacity for wonder, and sometimes the conscious training of the mind in drawing on the resources of memory. Control is required also, the kind of control one needs for riding a spirited horse or taking a canoe through rapids. "Teaching" people to imagine is probably as difficult as teaching "virtue," which Socrates found to be . . . not quite impossible. Yet good teachers seem able to create the conditions under which these subtler capacities of mind are able to flower. Betty Edwards is almost certainly such a teacher.

CHILDREN
. . . and Ourselves
 SOME VARIETY

THE trouble with having mostly "departments" in a paper is that often there is good stuff that doesn't obviously fit into any one of them, yet is not quite material for major attention. Contemporary Russian humor, for example.

The following are extracts from an article by Nicola Zand in the *Manchester Guardian Weekly* for July 8:

Here is a typical joke:

"What nationality were Adam and Eve?"

"Soviet. Because they lived an unclothed existence, had only an apple to share between them, and thought they were in Paradise."

The writer comments:

The first thing to be noticed about this kind of joke is that it is not necessarily designed to make you laugh. Secondly, the only way to comment on real life without running any serious risks is to do so indirectly, via a joke or an anecdote. . . .

The stories (in a book under review) are themselves slices of life. Arranged by theme (the economy, competition, East-West relations, propaganda, anti-semitism, emigration, and so on), they give us a far more accurate picture of people's daily lives and aspirations than most learned studies of the subject.

An example:

"What is a deviationist?"

"Somebody who continues to go straight on when the party veers to the right or to the left."

Finally, a "fairy story":

Two writers meet.

"I've just written a new book," says one of them.

"Really? What about?"

"Young man meets young woman."

"Ah, a short story."

"They fall in love."

"Ah, a love story."

"They get married and find an apartment."

"Oh, I *see*, a fairy story!"

We ought not to have any trouble getting along with people like that. If the governments—both of them—would just get out of the way . . .

The case for reading Emerson—over and over again—has often been made, but never more effectively (if briefly) than in what Earl Rovit said in the *Nation* for last March 31, in review of a new book about Emerson by Joel Porte. Some paragraphs from the review:

. . . American culture can no more avoid or define Emerson than a mind can avoid or define its own self-consciousness. Emerson codified the rules of our national game, as it were the game we had been playing for more than a 100 years before he came on the scene, and the game we have been playing since. More eloquently, more comprehensively, and more scrupulously than anyone else, and in our most intimately formal language, he propounded the operative definitions of what we are, of what we might dream ourselves to be, of what we must hold ourselves responsible for, and what we could with impunity ignore. Like one of the well-worn tropes in his deliberate rhetoric, he was our Adam. And he named each of us by that name also and enjoined us to redeem our irretrievable innocence, persuading us in intermittent flashes of ecstatic authority that being and doing are not mutually exclusive; that man can be both fully responsive and responsible at the same time; and that there turns a steady morality beyond mere badness and goodness that makes the distant stars blaze and invests the winter apple with its russet glow.

. . . returning to Emerson—reading him again—draws us back to the real drama of the American experience. We cannot stand aloof from his words; he will not permit us the luxury of detached distance. Again and again we are implicated, magnetized, drawn into a tight circle of personal decision. What he presents us with is the excitement of a man in the very process of thought. He offers little advice or guidance on how we should act or in what way we should respond; he only insists that we must act and we must respond and he makes us believe that to feel less than a superabundance of the electric moment is to be unworthy of it ourselves. His thought is

eventually unimportant; the act of thinking which he assaults us with and makes us strive to emulate—this is essential. Struggling to do justice to our encounter with him, we may—if we are lucky enough—gain a small purchase on ourselves. It is this act of appropriation that is his major gift to us and our culture.

We have from the Hesperian Foundation (Box 1692, Palo Alto, Calif. 94302) a remarkably good report on how children can be helped to teach health care to other children. The drawings are needed to tell how it works, so we'll review instead a little of the general activity of Project Piaxtla, "a villager-run health care network in the mountains of Western Mexico." A mark of success is that the program has become increasingly independent of help from the foundation which got the project going.

Today the entire program is organized and run by a team of campesino health workers based at the training and referral center in Ajoya, a small village at the foot of the Sierra Madre Occidental. No longer are any Gringos—or Mexicans who are not campesinos from the immediate mountain area—continually active in the work. Yet the village team continues to welcome, *on its own terms*, short visits by outsiders with special skills—medical, dental, veterinary, laboratory, and appropriate technologies. Such visitors are usually requested *not to practice but only to teach* their respective skills, thereby upgrading the capabilities of the local workers who provide the continuity of care.

The village health team has learned the hard way that visiting professionals have a tendency to try to take charge. This not only obstructs the growing responsibility of the local team, but also undermines the campesinos' increasing confidence in their own health workers (and therefore in themselves). For this reason, the village team has learned to carefully select the professionals it permits to visit. To avoid the growth of dependency, it also limits the length of their visits and requests that they stay in the background as much as possible. Thus, the visiting doctor becomes an auxiliary to the village health workers, helping out with advice and specialized knowledge when asked. He is also encouraged to pitch in with the agricultural and janitorial work, as do all members of the village health team. In this

way, the village workers help the doctor to demystify his role; education becomes a two-way process.

This story is told by David Werner, an initiator of the Project, who remarks in passing: "To become an effective leader is difficult, but to cease being an effective leader is far more difficult—and in the long run far more important. I'm just beginning to learn."

Some of the present health team at Ajoya began working in the Project as children, and have now been with it for twelve to thirteen years. They take pride in running things.

Not only has the group become self-reliant in terms of local personnel, but it is also determined to become financially self-sufficient. To do this, the team has had to look for ways to produce subsistence income. This includes modest fees for service. . . . People are asked to pay for services either with money or with work. However, to keep the cost of services low, all the members of the health team spend a part of their time working at various "self-sufficiency projects," which include hog and chicken raising, vegetable farming, and a cooperative corn bank. By loaning corn at planting time to poor campesinos at low interest rates, the corn bank actively opposes the usurious interest (250-300% in six months) charged by the local land barons. Thus, the corn bank helps the poor of the village in their struggle for self-reliance—and social justice.

A good foundation is like a good administrator—both succeed by working themselves out of their jobs. The Hesperian Foundation sounds like an activity people should know more about.

FRONTIERS

Anon Save, Anon Damn

LAST July Joseph Weizenbaum, professor of computer science at M.I.T., gave a talk before a meeting of the World Council of Churches. The meeting was on Faith, Science, and the Future, and Prof. Weizenbaum's subject was "Technological Detoxification." He maintained that American society and culture are intoxicated by science and technology, and not only intoxicated but addicted as well:

I say this because the signs of addiction are everywhere around us: Massively distorted perceptions of reality abound; we euphorically embrace every technological fix proffered as a "solution" to every human "problem" which we have, of course, first converted into a technological problem. The most visible monuments to our worldview are our preoccupation with speed, with power, with quantity, and above all the enormous, gigantic, colossal *hubris* of much of our scientific community. (Just recall that the "blame" for the recent misadventures of the Skylab satellite was pinned on the misbehavior of the—sun too many flares—not on any miscalculation on the part of scientists and engineers!) These conditions reflect organic lesions in our society—they are too deep and they have been with us too long to permit us to dismiss them as merely temporary aberrations.

Prof. Weizenbaum spoke to his audience as an information scientist, choosing the categories of scientific thought as illustrations of the way modern man mistakes abstractions for reality. Our intoxication, he says, is due to a particular toxin, which he identifies as the process of abstraction, explaining how it works:

To abstract means to draw away from. Science, in order to function at all, must practice abstraction in that it must *necessarily* simplify, deal with idealized models, in other words, draw away from reality. And science, idealization, abstraction are good and useful, as I have already said, in proper doses, that is, and even then only when compounded by wisdom gained from many other perspectives.

But, beginning roughly at the time of Bacon's observation that knowledge is power, we at first locally, and then with ever increasing universality,

began to confuse the abstract with the real and then to forget how to make the distinction at all. Our increasing loss of contact with reality is illustrated by, for example, the march of abstraction with respect to the products of human labor and of human labor itself: People once traded their labor directly for goods. Then money became an abstract quantification of human labor. Then checks and other financial instruments became abstractions for money. Now we approach the so-called "cashless society" in which electrons racing around computers out of reach of human senses become abstractions for financial instruments. An observer from another planet will see people laboring in order to optimize the paths of electron streams flowing on their behalf in computers unseen and incomprehensible.

This habit of mind which prevails in so many areas of our lives—the habit of taking the part for the whole, because the part is measurable and manipulatable, as the whole very likely is not—results in the misuse of language. Science-based metaphors, Weizenbaum says, are elevated to the status of common-sense truths:

It is, for example, now commonplace to hear of people being programmed. In this way does the notion of an abstract machine—and one that fascinates the general public almost to the point of hypnotism—in this way does that abstract notion *become* that of a human being. And once we accept that human beings are machines, merely symbol-manipulators and information processors, then the final step, namely the deliberate initiation of a program to alter the course of biological evolution in such a way that the human species is replaced by "silicon based intelligence," then that final step can be announced by the most eminent scientists—for example Dr. Jastrow, head of NASA's Goddard Space Flight Center—without alerting anyone that what is being talked about is not merely the death of the human species, in short literally genocide, not merely the death of God, but the murder of God!

Going along with this analysis—seeing the point of the last judgment—that treating human beings like mere "parts" is indeed moral genocide—one question becomes paramount: How do we immunize ourselves against the misuse of abstractions? We can't of course manage without them. Every scientific law is a form of abstraction. Every generalization about

the nature of things is an abstraction. All definitions—and what would *homo faber* do without *them?*—are abstractions. You could even say that the germ cell is a sort of abstraction of the complete organism. Germ cells are, as biologists say, or used to say, *totipotent*—they have in them the magical capacity to make wholes. Such abstractions do not fragment into parts, and they may be the most useful, or the least harmful, of all.

It is both interesting and instructive to read Gandhi with this question in mind. He never in speech or writing discounted the high potentialities of all human beings. He wouldn't use a word like "consumers" in the place of human beings. It is unimaginable that he would find the expression "turned on" of any use in what he wanted to say. There is no "we/they" division in his appeals.

Gandhi, then, had achieved the immunization we spoke of above. How did he do it? He didn't really have to think much about it, except, perhaps, during his early youth. He had a positive conception of the human being and what each one could become. He never lost sight of this—no more than a man with a collection of seeds on the one hand, and a collection of pebbles on the other, could forget the difference between the two.

Of course, there are dozens of grandiloquent ways of talking about the great potentialities of human beings. The point is that, for Gandhi, this high-flown language was not important. He stuck by his conception of human possibility even in the presence of weakness, contradiction, and outright evil. He *lived* by his convictions, and immunity to bad abstractions was the result.

How do people come to live their convictions? If we knew the answer to this there would be no problems in either religion or life. But two things seems clear enough. Gandhi's convictions—to take him for illustration—have the support of the best minds of our time, and Gandhi's example, has had immeasurable influence

on other human beings. We do in fact tend to become what we admire.