

THE UNCHANGING QUESTION

WHAT must I do? This is the question we ask ourselves, again and again. For the most part, men take counsel from their times to obtain answers. If the times supply a living faith, well and good. For then men find ways to define what they must do, free from deep doubts or haunting feelings of uncertainty. They will provide for their families, cultivate their gardens, hearken to their spiritual preceptors, expand their businesses, fight their wars—do all these things with confidence that they know what needs to be done.

The counsels of the times change, of course, or seem to. Excellent books have been written comparing the great differences between, say, the beliefs and values of the Middle Ages and those of the modern, scientific age. In his introductory chapter to *The Heavenly City of the Eighteenth-Century Philosophers* (Yale University Press, 1932), Carl Becker showed how difficult it would be for a modern man to hold dialogue with either Thomas Aquinas or Dante. Our language is different, our goals conceived with other hopes, our conceptions of meaning based upon views they did not share. Dante and Aquinas represent peaks of past thinking and assurance, but by the middle of the fifteenth century, the outlook they represented was dying away. Ortega writes of this period in *History as a System* (Norton, 1962):

The man of that age begins to perceive that revelation does not suffice to illumine his relations to the world; once more he is conscious of being lost in the trackless forest of the universe, face to face with which he lacks alike a guide and mediator. The fifteenth and the sixteenth centuries are, therefore, two centuries of tremendous restlessness, of fierce disquiet, two centuries, as we should say today, of crisis. From this crisis Western man is saved by a new faith, a new belief: faith in reason, in the *nuove scienze*. Man, having fallen again, is born again. The Renaissance is the parturient disquiet of a new confidence based on physico-mathematical science, the new mediator between man and the world.

Ortega and Becker are splendid historians, writers who do much to help us to find orientation in the flow of history. They try not only to tell us what has happened, but make a strenuous effort to show what it *means*. They serve, therefore, as preparers for enlightenment; we need their help if we are to find an answer to the question, "What must I do?" and at the same time feel that we have protected ourselves against repeating terrible mistakes. Ortega may be more of a philosopher than Becker, but both have great mastery of their material, and both write with exceptional lucidity.

Becker points out that the new faith in Reason, born in the Renaissance, did not outlast the nineteenth century. After that, "facts" became the supreme authority, the object being to use them more or less as we please. The mood of the first half of the twentieth century is captured by Becker in a brief passage:

We start with the irreducible brute fact, and we must take it as we find it, since it is no longer permitted to coax or cajole it, hoping to fit it into some or other category of thought on the assumption that the pattern of the world is a logical one. Accepting the fact as given, we observe it, experiment with it, verify it, classify it, measure it if possible, and reason about it as little as may be. The questions we now ask are "What?" and "How?" What are the facts and how are they related? If sometimes, in a moment of absent-mindedness or idle diversion, we ask the question "Why?" the answer escapes us. Our supreme object is to measure and master the world rather than to understand it.

We might stop here, but what Becker says a little further on is too valuable to omit:

It is well known that the result of pursuing this restricted aim (the scientific method reduced to its lowest terms) has been astounding. It is needless to say that we live in a machine age, that the art of inventing is the greatest of our inventions, or that within the brief space of fifty years the outward conditions of life have been transformed. It is less

well understood that this bewildering experience has given a new slant to our minds . . . There is nothing new in heaven or earth not dreamt of in our laboratories, and we should be amazed indeed if tomorrow and tomorrow failed to offer us something new to challenge our capacity for readjustment. Science has taught us the futility of troubling to understand the "underlying agency of the things we use. We have found that we can drive a car without knowing how the carburetor works and listen to a radio without mastering the secret of radiation. We really haven't time to stand amazed, either at the starry firmament above or the Freudian complexes within us. The multiplicity of things to manipulate and make use of so fully engages our attention that we have neither the leisure nor the inclination to seek a rational explanation of the force that makes them function so efficiently.

It is no slur on the clarity of Becker's portrait of the mind of his times to point out that historical cycles and "Climates of Opinion" (his chapter heading) overlap. He gives here what can be called the Establishment or majority view in the 1930s and most of the 40s, but during this period another and more troubled outlook was in formation. Only eight years after Becker's book appeared Ortega was recording (in 1940) his sense of the inner decline of faith in science. He wrote in *History as a System*:

Science is in danger. In saying this I do not think I exaggerate. For this is not to say that Europe collectively has made a radical end of its belief in science, but only that its faith, once living, is in our day become sluggish. This is sufficient to cause science to be in danger and to make it impossible for the scientist to go on living as he has lived till now, sleepwalking at his work, believing that the society around him still supports, sustains, and venerates him. What has happened to bring about such a situation? Science today knows with incredible precision much of what is happening on remote stars and galaxies. Science is rightly proud of the fact, and because of it, although with less right, it spreads its peacock feathers at academic gatherings. But meanwhile it has come about that this same science, once a living social faith is now almost looked down upon by society in general. And although this has not happened on Sirius but only on our own planet, it is not, I conceive, bereft of importance. Science cannot be merely science about Sirius, it claims also to be science about man. What then has science, reason,

got to say today, with reasonable precision, concerning this so urgent fact that so intimately concerns it? Just nothing. Science has no clear knowledge on the matter. One perceives the enormity of the position, the shame of it. The upshot is that, where great human changes are concerned, science, strictly so called, has got nothing exact to say. . . .

Science has achieved things that irresponsible imaginings had never so much as dreamed of. This is so unquestionable that one has difficulty in understanding straightway why man is not today on his knees before science as before some magic power. The fact remains that he is not on his knees, on the contrary, he is beginning to turn his back. He does not deny, he is not unaware of, its marvelous power, its triumph over nature, but he realizes at the same time that nature is only one dimension of human life and that a resounding success with regard to nature does not preclude failure with regard to the totality of our existence.

Ortega is simply pointing out that science, for all its excellences and achievements, makes no inquiries that will supply men with answers to the question, "What must I do?" For science has been busy with the description of objective nature and the macro-processes of physical and biological existence, while the human questioner is faced with the necessity of living a life. His condition is individual and private, and scientific generalizations do not speak to it. They move majestically along, intent on completing a great show-case of facts and relationships on a planetary and cosmic scale—comprising the entire theater of life—but they do not relate to the human actors who are going through their individual parts and hours upon the stage.

Some ten or eleven years earlier, in a lecture to students in Madrid (*Mission of the University*, Princeton University Press, 1944), Ortega had made this distinction clear by contrasting science with the vital culture that men depend upon in their lives. He said:

Culture . . . borrows from science what is vitally necessary for the interpretation of our existence. There are entire portions of science which are not culture, but pure scientific technique. And vice versa, culture requires that we possess a complete concept of the world and of man; it is not for culture to stop,

with science, at the point where the methods of absolute theoretic rigor happen to end. Life cannot wait until the sciences have explained the universe scientifically. We cannot put off living until we are ready. The most salient characteristic of life is its coerciveness: it is always urgent "here and now" without any possible postponement. Life is fired at us point-blank. And culture, which is but its interpretation, cannot wait any more than can life itself. . . .

The internal conduct of science is not a *vital* concern, that of culture is. Science is indifferent to the exigencies of our life, and follows its own necessities. Accordingly, science grows constantly more diversified and specialized without limit, and is never completed. But culture is subservient to our life here and now, and is required to be, at every instant, a complete, unified, coherent system—the plan of life, the path leading through the forest of existence.

It is plain enough what Ortega means by "culture"—he means the organism of thought which has been grown and cultivated by the best thinkers and individuals of an epoch, which holds together and provides at least working answers, or reasoned options, to the question, What must I do?

Why is this view of Ortega's so unfamiliar, and perhaps not immediately acceptable? The reply must be that only a very few men have dared to challenge the popular claim or impression that Science is the only kind of knowledge there is. After fifty or a hundred years of being confident that if it isn't "scientific" it's not worth knowing, or even looking at, people, even reputedly intelligent people, are simply not able, all at once, to recognize that science gives only a partisan or one-sided view of the universe. Having a single system that promised certainty, or eventual certainty, was so reassuring, so simple, and even in a way so flattering to modern man, that he embraced the claim with neither reluctance nor doubt. After all, everyone could see all the wonders that science was performing—with new discoveries "breaking" almost every week—and who was ever able, before our time, to pile up so many miracles—practically on order, as it seemed? Science *must* be the one real truth!

What shook this faith? The answer to such questions is usually twofold. First, there are comparatively unknown individuals—persons like Ortega, like Michael Polanyi and A. H. Maslow, like Thomas Kuhn and a number of others, who anticipate the general disillusionment with impartial analysis, pursuing theoretical investigation and philosophical criticism. The views of these men slowly filter into the minds of literate people, who begin to wonder and question, too. Second comes the impact of unconcealed historical failure of the old faith, which succumbs to the blows of experience, to the rude persuasion of undeniable facts.

What shook the ordinary man's faith in science, so that now he is like the fifteenth-century man Ortega speaks of—confronted by crisis and confusion in his own life, by the fact that the "answers" are not coming through to him any more? Well, there was war—the appalling, horrifying, genocidal wars of the twentieth century that science in gear with military technology had made possible. There are the disintegrating psycho-social effects of impersonal and highly organized industrialism with its ruthless insistence on more production and ever increasing consumption—a really insane way to exhaust human energy. More and more people began to sense that something crucial was going wrong. They saw the connection of technology with science, sometimes thinking of science as a kind of "mad alchemist" who was supervising and rationalizing furious activities which made people step all over each other. Then, suddenly, came the revelations of the impassioned ecologists, the apprehensions of biologists, the warnings of geophysicists and climatologists—and of the all-around thinkers who described our economic life as a formula for self-destruction. And finally there was dreadful emptiness in the religious and feeling life of the people, to which scientists, except for practicing a little "sociology of religion," gave no attention at all.

There has been, and is, some self-reform in science, but mostly too little coming too late. The pattern of historical change, as we can easily see by inspection of history, emerges in great swings from one extreme to another, so that, along with all the variously heralded "revolutions in consciousness," we are having, at the mass level, miscellaneous zany revolutions, with wild embracings of exotic emotionalism and desperate revivals of the desperate remedies of other times.

A Washington, D.C., "underground" newspaper, the *Daily Rag* (Nov. 30, 1973), runs a tongue-in-cheek story on a fifteen-year-old savior headed "Guru Biz Blooms." The *Arizona Republic* (July 28, 1973) reports an estimate that "the nation now has 500,000 practicing members of various eastern religious groups" animated by an impatient, hurry-up psychology:

All find American society degrading and corrupt from top to bottom, and all believe man—and his world—can be vastly improved quickly. New spiritualists firmly believe humanity verges on a quantum jump forward. It is called the new age, the Aquarian age, the dawning of a new consciousness, or the coming of the Messiah.

The old, mechanistic technology is being pushed aside and replaced with the quickie psychic "technology" of instant conversion leading to instant salvation. For some believers, almost any imported faith will serve if it is wild enough and "emancipating" enough. Harvey Cox, one of the champions of a new inspiration in religion—although with more than just traces of Christian orthodoxy—is worried about the Saturnalia of "paganism" that is emerging, complete with witches, intoxicating rites, Dionysiac revels, and an occasional "black mass." (*New York Times*, Oct. 1, 1973.) Psychologists are similarly wondering about the high rate of casualties that attends encounter group sessions and various ugly symptoms that are appearing as "the phonies, fast-buck artists, incompetents and predators" move in to take advantage of the vulnerabilities which "growth centers" have helped to produce in a great many people. (See Robert Reinhold in the

New York Times for Jan. 13.) A dark climax of some of these tendencies came with the showing of *The Exorcist*, a film "reverently" based on a book by William Blatty, the story of "a twelve-year-old girl possessed by the devil and attempts by priests to free her from the devil spirit after she is treated fruitlessly by a team of psychiatrists and physicians." In the *New Yorker*, Pauline Kael said it was "in the worst possible taste—that is, an utterly unfeeling movie about miracles," and a *Time* reviewer called it "vile and brutalizing." The showing in Westwood, Calif., attracted great attention locally since every performance was marked by the fainting of members of the audience, with people stumbling out into the lobby and then to the street, sometimes to vomit from the horror of this film. Often they would go back in again to endure a little more. These reports led to numerous follow-up stories, including interviews with various theologians—mostly Catholic—several of whom welcomed the picture as a salutary reminder that the "devil" is a "real being," and contending that belief in religion needs this sort of high-powered persuasion, which may bring people back to the Church. As one priest put it, "once we truly and fully accept the existence of Satan in our lives, the reality of God becomes not only a theological necessity but a psychological one as well." Apparently, the modern publishers of *Malleus Maleficarum*, "The Hammer of Witches," the manual used by inquisitors, may expect a sudden spurt in demand for this relic of medieval witch-hunting.

What can be said about these ominous outbreaks of superstition—which are not, alas, *only* superstition, but represent also, the inverted surfacing of deep human longings for realities more firmly rooted in nature and life than the shallow, mechanistic philosophy of the immediate past could contain? The tide of reversion to old forms of profane magic may be seen as an oblique consequence of the tough-minded but blind scientism which has for centuries ignored both the phenomena and the metaphysics of occult philosophy, so that, at the popular level, there are

no familiar principles of regulation, no guides to moral discrimination, and little or no ethical evaluation to guard the susceptible and suggestion-prone against the obsessive aspects of this atavistic revival. For centuries, in the West, there have been available spiritual philosophies of nature and human life, dealing intelligibly and rationally with such dark eruptions from the psychic world. Various Spiritualistic phenomena can be explained by comparing them with the potentialities of disciplined sages who refuse to make either playthings or exhibitions of man's latent psychological powers. The works of Jamblichus are one example of this comprehensive knowledge in the past, and other writers have revealed a similar understanding of the responsibility involved in any manipulation of occult powers. Conceivably, in time, as a result of the extremity of human need, there will be a modern rebirth of this wisdom, in order that, as the wise Alexandrian, Synesius, once put it, "this terrene abode may not be left destitute of a better nature."

Meanwhile, what is happening within the scientific community itself? Are there any encouraging signs? A little earlier we spoke of reformers in science such as Polanyi and Maslow, and note might be taken, today, of the work of C. West Churchman, a scholar who works in systems analysis and operations research and teaches at the University of California in Berkeley. Mr. Churchman's most recent book, *The Design of Inquiring Systems* (Basic Books, 1971), is really a full-scale acceptance of the challenge posed by Ortega years ago, and a serious attempt to lay the foundation for fundamental reforms in the modern theory of knowledge. His work requires careful study; here we are able to suggest only its central theme.

What about our ways of acquiring knowledge? Churchman asks. Does the inquiring system we adopt generate knowledge of reality or its own form of illusion? As preparation for taking this question seriously, Churchman looks

carefully at the several modes of inquiry and conceptions of knowledge that have shaped the Western intellectual tradition. He examines critically the philosophies of Leibniz, Locke, Kant, Hegel, and, finally, E. A. Singer, finding in the latter's views a conception of knowing which does not stop with a vast inventory of facts and techniques, but recognizes what in principle Ortega was getting at in his distinction between scientific knowledge and the needs of human life.

Facts are accumulations, but a man's life is a drama, and each man is in some sense "the hero with a thousand faces" who has the meaning of his existence to fathom and his salvation to win. Churchman writes:

The myths of the hero, he [Singer] says, begin with some stable state of affairs, a comfortable house, beautiful wife and children, high respect, in short, plenty of production-science-cooperation. Then comes the impulse for the adventure or quest, sometimes in the form of a message from the gods or other heroes, but in any event the hero has no choice but to forth, to leave the comforts for a kind of cold darkness. Beasts and evil spirits keep challenging him in the dark forest. In our drama, the black forest and its challengers are the mood that progress does not exist, it is only a process at best, that the enterprise is no enterprise at all. For the hero in the midst of his journey has no assurance that anything will happen except his own death and that of his companions. At this stage the idea of progress and fulfillment seems very foolish indeed. . . . Then science and its big serious program of knowledge, control of nature, and the rest look utterly ridiculous. . . . It is very important to note that the hero's journey is not restricted to great men or to semi-gods. The hero is in every one of us, and it is impossible to say whether a Newton or a Theseus is a greater hero than the individual who risks his serenity in the quest for self-knowledge.

This is the quality of Mr. Churchman's study, which has in it the seeds of far-reaching change for modern thinking about knowledge, certainty, and truth.

REVIEW

THE NEW ECONOMICS IS HERE

PUBLICATION, last year, of *Toward a Steady-State Economy* (W. H. Freeman & Co.), edited by Herman E. Daly, is an impressive sign of the times. While the publishers shyly recommend this book "as provocative supplementary reading for courses in principles of economics," it is actually the sort of material that should replace existing courses in economics. The contributors to Mr. Daly's excellent volume, if they had their way, would throw out much that is taught in conventional economic studies. For a quick grasp of what the book is like, we might say that it represents the direction of thinking in economics pioneered by E. F. Schumacher, who has a paper in it. Mr. Daly puts the view in his Preface:

As students often realize more quickly than their professors, we absolutely must revise our economic thinking so that it will be more in conformity with the finite energy and resource limits of the earth, and with the finite limits of man's stomach. This revision will not be accomplished by a single mind, or even by a single volume containing the thoughts of many minds. The development of a steady-state economy will be the product of an unpredictable but conscious social evolution in which many ideas will be tried out. However, just as an auctioneer must begin by calling out some specific price, so it seems we must begin by calling out some specific notions about a steady-state economy, even though we know that they are no more likely to be the final solution than the auctioneer's initial price is likely to be the equilibrium price. Yet both initial actions provide starting points for a feedback process of approximation, by trial and error, to something better. That is sufficient justification for this book.

Yet the foundation thinking in this volume is far more solidly established than these modest words suggest. The change represented by this thinking is fundamental—it is a move from merely technical and independent assumptions for economics to assumptions originating in ethics, in intuitive conceptions of the nature, role, and responsibility of human beings. A change of this sort clearly constitutes, as Mr. Daly says, a *paradigmatic shift*—it is, as Thomas Kuhn's phrase suggests, a practical

revolution in the principles from which economic theory proceeds.

It would be a good idea for those who plan to read this book to obtain first Schumacher's *Small Is Beautiful* (Harper paperback), since this man's work strongly sounds the note of moral inspiration which is behind the general change in economic thinking, and he then goes on to develop the logical consequences of this change in various pertinent directions. Mr. Daly's book continues with this development, and the moral foundation is continuously emphasized by most of the contributors.

For the most part, the writers begin with forthright criticism of the conventional assumptions. For example, one contributor, Walter A. Weisskopf, who teaches at Roosevelt University in Chicago, points out that conventional economics has an almost obsessive preoccupation with growth and the rate of growth—he labels this attitude "*GNP fetishism*"—going on to remark that the other dominant idea of economic thought is the goal of *equilibrium*, and suggesting that the two conceptions are not really compatible. This is followed by critical review:

These two concepts used in economic thought are more than theoretical constructs and models. They reflect basic existential propensities as well as the value attitudes of their times. The concept of growth reflects the value-attitude system of early capitalism before and during the Industrial Revolution. The terms "acquisitive society" (Tawney) or the "*civilisation de toujours plus*" (the civilization of more and more [Bertrand de Jouvenel]) characterize this attitude. Max Weber has called it the "spirit of capitalism" and described it as a value system which elevates acquisition of riches pursued systematically through hard work, frugality, and thrift to the dignity of a way of life and of an ultimate goal. In distinction from previous societies where the pursuit of wealth and hard work were considered as inferior activities and as a curse, left to slaves, women, and inferior social groups, industrial society made the acquisition of wealth morally acceptable and considered it as a moral obligation. Economic thought justified this attitude by assuming that acquisitiveness and the propensity to truck, barter, and exchange in order to increase one's wealth is a basic human propensity. Here, a unique historical phenomenon, the acquisitive attitude, was interpreted

as a universal human inclination. Thus it made acceptable an ideal which ran counter to the traditional Christian ethics. For the individual, economic growth is identical with the acquisition of wealth; but already in the *Wealth of Nations* the idea of harmony of interests brought about by the symbolic "invisible hand" tied together the pursuit of individual and social wealth. Thus the ideas of economic growth and acquisition have become accepted values. Growth is discussed not from the ethical-psychological but from the functional point of view. The pursuit of economic growth has been rationalized by arguments that it is necessary for full employment, for the maintenance of the current economic institutions, whether it should be accepted as a basic economic value is hardly ever questioned.

After this historical analysis, Dr. Weisskopf proceeds to an examination of the consequences of these assumptions, naming one by one the numerous cultural, social, and economic distortions to which they have led, and ending with the proposal that economics must learn to gear itself to the order of needs which corresponds to health for the whole human being. Maslow's conception of higher or Being-needs should be the governing principle, since "*need satisfaction which continuously increases the supply of means along one level and neglects needs on a different level is contrary to human well-being.*"

The basic issue, says Prof. Daly in his Introduction, "is the conflict between finitude and unlimited growth." This, one could say, is an "after-the-fact" recognition that the economic doctrines we have followed do not work. The goal of infinite growth breaks down in concrete practice, bringing confirmation, in empirical terms, of the moral principles of the philosophers who have maintained that no man should seek more than a simple sufficiency of material things. One author in this volume, Nicholas Georgescu-Roegen, shows that economic thinking has been lagging far behind the general intellectual and moral progress of the times, being caught up in the belief that its "laws" are somehow independent of human development—purely "functional," as Weisskopf says. Georgescu-Roegen begins his paper:

A curious event in the history of economic thought is that, years after the mechanistic dogma has

lost its supremacy in physics and its grip on the philosophical world, the founders of the neoclassical school set out to erect an economic science after the pattern of mechanics—in the words of Jevons, as "the mechanics of utility and self-interest." And while economics has made great strides since, nothing has happened to deviate economic thought from the mechanistic epistemology of the forefathers of standard economics. A glaring proof is the standard textbook representation of the economic process by a circular diagram, a pendulum movement between production and consumption within a completely closed system. The situation is not different with the analytical pieces that adorn the standard economic literature; they, too, reduce the economic process to a self-sustained mechanical analogue. The patent fact that between the economic process and the material environment there exists a continuous mutual influence which is history-making carries no weight with the standard economist. And the same is true of Marxist economists, who swear by Marx's dogma that everything nature offers man is a spontaneous gift.

The emphasis in all the contributions to this book is on basic thinking. The book is therefore a good one for the general reader, who soon realizes that economics is far too important a matter to be left to economists. For the economists seem locked in the strait-jacket of the past, prisoners, as it now appears, of mainly naïve assumptions. Preston Cloud, a geologist, writes critically about those whom he calls "the cornucopians"—the people who assume that nature will continue to pour out her bounty on man forever. He lists the assumptions on which conventional economics has long been based, then explores their validity. He considers the claim that only "economic law" controls the availability of useful minerals and metals, that technology will find a solution to all problems, that "the ocean" holds immeasurable resources on which, as a final resort, we can always draw, and that nuclear energy will eventually solve the problem of the fuel crisis. All these assumptions, he shows, are problematic.

The impressive thing about this book is the consensus it reveals among the contributors, writers in sometimes widely differing fields who often reach essentially the same conclusions. Prof. Daly proposes the next step: "to find the moral resources necessary to overcome the vested interests and hag-ridden compulsions of growth-mania."

COMMENTARY THE SIN AND THE SAVIOR

IN his contribution to Herman Daly's *Toward a Steady-State Economy* (see Review), Walter Weisskopf begins by saying:

The main guidepost for this inquiry is the effect which economic concepts, values, and activities have on the individual and how they affect his existence. I would like to advance the hypothesis for discussion among social scientists, that there is a conflict between the idea of continuous economic growth on the one hand and certain prerequisites of human existence on the other.

To examine the effect on human beings of "economic concepts, values, and activities" is really an aspect of *pedagogy*, in the Platonic sense. In the Teachers College *Record* for January, 1969, Robert McClintock draws attention to passages in Plato's *Protagoras* which stress the importance of knowing how people are affected by what they learn. McClintock writes:

Recall how the young man, Hippocrates, was going to study with Protagoras without having considered what effects on himself such learning would have. Socrates pointed out the foolishness of such an action, and the two together decided instead to ask Protagoras to explain what sort of persons his students would become by accepting his teachings. With that, all three were launched on an inquiry into whether excellence could be taught, and the resultant discussion is still relevant to anyone who wishes to find a formative theory of man that he can use to guide his own pursuit of excellence. Present-day youth might follow Socrates and Hippocrates in asking its would-be teachers to explain how the various matters taught will form the man who studies them.

The principal content of Mr. Daly's book is thus a pedagogic treatise, since it is so largely concerned with the formative effects on people of conventional economics. In his editorial comments, Mr. Daly shows that one inevitable consequence is the spread of what he calls "growthmania." Briefly defined:

Growthmania is the attitude in economic theory that begins with the theological assumption of infinite

wants, and then with infinite hubris goes on to presume that the original sin of infinite wants has its redemption vouchsafed by the omnipotent savior of technology, and that the first commandment is to produce more and more goods for more and more people, world without end. And that this is not only possible, but desirable.

CHILDREN ... and Ourselves ANYTHING ROUND"

[Virginia and Lowell Naeve have a farm in the Province of Quebec where, every summer, they conduct a camp for children. They moved from Vermont to Canada eight years ago, and after the first year on the farm began taking children for summer stays in the country. This grew into the "Summer Art Workshop"—both Lowell and Virginia are artists—a name which was later changed to "Farm and Sea Experience" because of a trip to the seashore. Virginia wrote about the dietary habits of the campers a little over a year ago, in MANAS for Jan. 3 and 10, 1973. This week she tells about the juggling program introduced by her son Brandon.]

ABOUT a year ago our son Brandon had been hitting practice golf balls, and decided, as he picked up three, to try juggling them. That was the beginning of his juggling balls, oranges, apples, and anything round. For his own protection he finally settled on three medium-sized rubber balls. Off and on, all that fall and winter, he practiced juggling. For pointers and new ideas he'd look at a circus program on TV, hoping to see a juggler. By summer he could juggle with ease and do a number of things with three balls and sometimes four.

Brandon wondered what response he'd have to his feat of juggling when our summer campers came in July. Neither Lowell nor I thought much would happen, but something did—something no one had planned.

When they arrived Brandon told the kids that whenever one of them could juggle thirty revolutions (catches) without dropping a ball, he (or she) would get a set of three colored rubber balls of his own. Well, by the end of camp (it lasts seven weeks) there wasn't a rubber ball left in the Sherbrooke store where we purchased them. Out of twenty-two campers, twelve had learned to juggle.

Most of us are used to seeing jugglers at the circus or on TV. The performers are smooth professionals and what they do seems far beyond ordinary people. Consequently you don't give it much thought—it's just visual entertainment.

Amateurs learning how to juggle are a different thing altogether. You see the various ways an individual attempts to catch the series of balls. Our summer passed with first one, then two, and finally twelve children learning how to juggle. The ones who didn't want to try sat on the side lines and cheered to encourage the others.

Often there would be as many as ten children juggling balls. They finally contrived a rather funny game. A couple of kids would sit on the split rail fence in front of the barn, next to the road, and watch for a car to appear. When one came in view they'd yell "car," and then all eight or ten jugglers would rush over near the fence and begin juggling like mad as the car passed by. Everyone would chuckle at the amazed glances from the people in the cars. Sometimes they would slow down and crane their necks completely around to see the kids a little longer.

The summer became one of wonderment as we watched each child unfold in a different way, learning the skill of juggling. At first some kids would run to keep under the balls, while others would try to back up as the balls fell too close to their faces. The discipline and practice needed to attain a continuous movement of the balls was not easy for any of them. Some were afraid they'd look silly, but they all looked silly when they began. They all dropped countless balls before they achieved some control, so it didn't matter. Competition to be as good as Brandon was furious, but each one soon learned that it would take a lot of work to be able to do the things he took all winter to learn. It was harder for some than for others.

One of the boys we'd had at camp for three summers was named Keith. His mother had called us to ask if we were a farm camp and what the children did during the course of the day. I told her that we usually did art projects in the morning. After a shocked silence she mumbled that her son Keith was the only child she'd ever heard of that flunked art. I explained that no child was required to do art if he didn't want to. We talked for a while and ultimately she decided to send Keith to camp.

This child was the most unbelievable bundle of live wires and nerves we ever had. Both his parents were professors and the father is a real scholar. Keith's intelligence, perhaps gained by exposure, was greater than that of any of the other children we had. His mind was so developed that his arms, legs, and trunk had a hard time keeping up with his brain. His movements were jerky and spastic. All three summers he was with us Keith tried art every morning along with the rest. His first two years were so hectic that whoever was doing a particular craft in the barn with the kids would almost go round the bend with Keith in attendance. I remember going to the barn to find Keith in a chair at the end of the art gallery. I asked him what he was doing. He said Gavin had sat him there because he had too many ideas. Gavin told him the problem was not five hundred ideas for a piece of enameling, but one good one. "So sit there and don't bother anyone else until you decide which idea you want to use."

In painting, again, Keith would have either no ideas or dozens he couldn't carry out. It became clear that he was trying to intellectualize his ideas for art, and they didn't match his abilities or for that matter art. His frustration was phenomenal. He would explode every few minutes and break up the train of work of the other kids. But even with all these eruptions occurring, Keith would take home *some* art work after camp each year. Each year it was a little better . . . to the amazement of both his parents and ours.

Back to the juggling. It was all too certain that, sooner or later, Keith would want to juggle. Try he did. He was a ball-chaser. He would run faster and faster trying to catch the balls in sequence. As time went on he slowed down and caught more balls. He tried to throw thirty times without dropping a ball. Sometimes he would make it up to twenty-eight or twenty-nine. When he finally made it to thirty Brandon wasn't there, so he didn't get the balls, and when at last he did it for Brandon there were no more balls at the store. So he still had to borrow balls for juggling. Of all the children, Keith had the most uncoordinated, erratic movements, and we wondered if he'd ever get it all together. He did.

For the end of camp, the kids made up a program for their parents. Keith organized it at the beginning and thought up most of the ideas. It was named *Watergate Foulies*. They called the juggling act "Juggling the Facts." Each of the twelve kids who had learned to juggle did an individual stint of his or her personal variations. Then they did some juggling together with Brandon. It was simply great. The parents were astonished and delighted to see their children put on a circus. I think the most surprised parents were Keith's. They later said to us that their middle son was so intellectual that he couldn't use his hands or body normally at all. They were delighted to find that Keith was learning to use the other side of himself.

After camp was over, Keith—for his age the most political-minded child we had ever known—went to an international conference. His older brother, who went with him, reported that Keith had himself billed as a fill-in on the entertainment program, since an internationally known juggler was unable to appear. (This turned out to be a completely trumped-up story by Keith.) Keith came out on the stage and began tossing balls. He threw one out into the audience, expecting someone to throw it back. No one caught on, so Keith went off the stage juggling just two balls. He didn't see a chair near the wings and stumbled over it, so the last two balls also went flying out into the audience. That cracked everybody up and the people applauded wildly, thinking this "finale" was part of the act.

Brandon has a new surprise ready for this summer's campers. He has been practicing juggling on a unicycle!

North Hatley
Quebec, Canada

VIRGINIA NAEVE

FRONTIERS

The Advocates of Change

THE work of the Center for Intercultural Documentation in Cuernavaca, Mexico, founded by Ivan Illich, seems to be very largely the creation of fields of awareness for the examination of critical insights. Illich himself is a master of critical generalization, enabling his readers to look at the human and social situation in fresh ways, and there is usually a powerful leverage in the concepts he provides. While the storm created by his proposal of "deschooling"—following the charge that conventional institutional education is typically both tyrannical and fraudulent—has largely died down, multi-leveled criticism of modern society continues in the seminars at Cuernavaca, and the publication of resulting working papers is a service of manifest value.

What is the general character of the humanistic inquiry pursued at this Center? It could be called psycho-social empirical research practiced with an openly moral inspiration. The ultimate goal of this work is what Illich has named the Convivial Society, in which conditions of physical, psychic, and moral health would prevail. Since such objectives are intuitively understood and agreed upon by common consent, they are not precisely defined. The critical papers, however, strive for precise definition of what is wrong, although at the new conceptual levels established by Illich and his colleagues. The strong sense of validity achieved by this thinking derives from the dramatic contrast between what is and what might be, and from revealing demonstration that what is now claimed as "progress" is not in fact progress, but in many ways its opposite, and that the familiar remedies widely applied for various human ills are not remedies but exacerbations which worsen our condition.

Underneath these proceedings at Cuernavaca is the diffuse but strongly felt dream of a happy, wholesome, productive life in community for all human beings. But the focus of the papers, with

few exceptions, is on the fact that we do not have this life, and that we cannot reach it with the means chosen by the makers and advocates of present-day culture and social processes. The function, then, of these papers is to wear out the taken-for-granted confidence most people have in the conventional means of progress and social improvement. They amount, therefore, to preparation for acceptance of radical innovation of every sort. They are, finally, the critical application of scientific method, turned against the fallacies of what is regarded as approved or even "scientific" practice in the areas of technology, education, medicine, and virtually all other institutionalized or professional fields of endeavor.

Lately we have been going through a batch of these papers (which can be received through payment of a modest fee), the result of which was to generate the foregoing comment. One paper in particular, J. S. Grafstein's "Law and Technology" (which first appeared in the May 1973 *Canadian Bar Review*), illustrates well the approach of these investigators. After quoting a text from Albert Einstein—"Anyone who thinks that science is going to make our lives a little better is an idiot"—Mr. Grafstein begins by summarizing the numerous problems produced by technological excess and noting the resulting psycho-social confusion. He then turns to his own profession of law, to which many (including Illich) look for remedies or help. The law, he points out, embodies old norms; can it, then, "establish new norms and value systems?" Is law in any way capable of measuring the impact of technology on society? The law does not really anticipate, but rather "copes" with existing and emergent conditions. For this reason—

The legal system has been a passive bystander to structural and economic changes which the rise in technology has brought to our society. The legal system has been a co-conspirator in conserving the existing system. Law has allowed a legal-economic framework to be created by which the fruits of technology are monopolized and the invisible "costs" are disseminated. The legal system, by holding corporate rights to be co-equal with individual rights,

has influenced the evolution of technology. The legal economic surplus developed by technology at great distribution or
Technology has unfettered legal and economic

It is necessary only to read what this writer

Legal principles, therefore, flow from given thinking about different and desirable goals. . . . The the individual. Economic power distorts premises of restore any balance. Law does not operate early mechanism for control. The legal system is able only activate and impose social or economic controls. . . . allows this growth because we confuse technology between big labour and big corporations which in technology, has led to even greater economic units of system has not established any checks and balances or technology. Technology, like cancer, feeds on established for technology.

Grafstein would like to see a complete profession, which seems an appropriate view for a such far-reaching change in professional attitudes inhibit change in public institutions. Of

The legislatures have not redressed the balance economic purpose is to stimulate "growth" and to of legislative oversight persists—the courts propose of public awareness, the lag and overload of the illusion. Legislators traditionally respond to crises.

therefore, establish internal priorities to settle the crisis gets the grease, leaving invisible crises to fester. opinion advocates to educate the public towards a change in

This last sentence—
advocates to educate the public towards a change is the one to