SCIENCE
p. 1455, 26 June 1981, Volume 212, Number 4502

Charting a Course for Science

The naming of a White House science adviser has ended long months of suspense, and the appointment itself is an agreeable one. What remains to be seen is whether light will soon be shed on the course of national policies toward science, engineering, and education in the coming years.

From the sidelines, it seems safe to predict that the United States will invest heavily in science and technology throughout the 1980's. Counting both government and industry outlays, helped along by continued inflation, we will have little trouble in aggregating $1 trillion or more of expenditures on research and development over the course of this decade. When investment in productivity-building technology is added on, encouraged by tax incentives and burgeoning defense requirements, the scale in cumulative terms is numbing.

Then comes the question of what it is all to be in aid of. Current indications are that the bulk of the effort will focus on two predominant objectives, both of which have articulate constituencies: industrial productivity and the improvement of national security assets. Our science and technology "policy," if left to itself, will very likely emerge essentially in those terms. Aside from the merits of this agenda, which can be argued to a standstill, it seems to follow that the nation's policy for science and technology will be not nearly as pluralistic and eclectic as it was in the three preceding decades. What it means, should things turn out this way, is that science will travel on a narrower road, with fewer opportunities for browsing in the quiet side streets of scientific curiosity and surprise.

At least as troubling is the prospect that science as a method of inquiry into the social and cultural base of our nation and the emerging nations will be undervalued or even dismissed. Serious questions begin to arise. Will we address the meanings, the uses, and the limits of massive military and technological power? Will we assume simplistically that our political technology is advancing in wisdom and competence sufficiently to pace a national economy that will be scaled at $3 trillion to $4 trillion? Will we do enough to monitor social trends under the stress of such a superheated national economy? Will we take a different view of justice and generosity relative to the distance we are putting between ourselves and the Third World? These things matter just as much as the strength of our forces or the edge we regain in international markets.

Nor can we take for granted universal applause for the scale of scientific, technological, and economic exuberance that has been posited here. If the course we take is a thoughtless one, geared entirely to our own national preferences, it may well occur to some resentful nations that limits should be set on our power and leverage. Such limits, overt or indirect, could take the form of denial or diversion of basic resources and assets—minerals, fuel, rights of air and sea passage, exploration and extraction privileges, and the like. This is a game at which new skills are being honed, and they are not to be underestimated. What is needed on our side is not a retreat from global cooperation in science and technology as much as reorientation and fresh initiatives.

The conventional wisdom, with much evidence to support it, is that we are entering upon a stretch of conversatism in matters of both political economy and social policy. In such an abrupt turnaround, confusion of purposes is to be expected, and policies for science and technology will tend to adjust at the margins to uncertain signals, including some that are strongly ideological. The historians of science record too many dark chapters where science was captured by ideology, on the left and on the right of the political spectrum. If science ever has to stand and fight, ideology is its natural opponent.

As a new science adviser comes on the scene in the still formative months of new political leadership, he will find that he is on a fast track with too little time and few resources relative to what is on his plate. We wish him well.—WILLIAM D. CAREY

GEORGE H. QUESTER

The emperor's clothes, the Kremlin's armor

The change in American governmental and academic attitudes on defense is altogether remarkable. The hawks are of course ascendant, and to no one's surprise are sticking to their view of a substantial Soviet military threat through the rest of this century. What is perplexing is the number of analysts closer to the middle of the ideological spectrum, or even left of center, who have trimmed their sails to move to similar conclusions. Such a trimming, to stay in step with the trend, was evident in the last two years of the Carter administration, but is all the stronger now with the election of President Reagan. The trimming shows up in what gets said, and what goes uncontradicted, at seminars and conferences. It shows up in the research that gets encouraged. It shows up in a substantial bending of what had passed for conventional wisdom in the arms control and defense policy community.

What can explain such a major shift, as people again speak much more often of "unprecedented and formidable challenges" than of detente?* The hawkish interpretation would of course be that the objective picture simply has changed, as Soviet adventurist behavior has disproved the premises of detente and arms control. Soviet actions have surely pulled the rug somewhat out from under those of us who favored disarmament. If challenged to predict, as we looked ahead in 1970, who of us would have expected that the Russians, as part of detente, would move troops into Afghanistan, or fly Cuban troops into Angola and Ethiopia, or build quite so many tanks and missiles? Had the hawks offered such scenarios, many of us might have indignantly dismissed them, as altogether unlikely given the new spirit of detente.

Yet the objective evidence against policies of detente are too easily overstated. The real explanation of the change in Washington might much more be traced now to the inherent trendiness in how our national capital and our academic community come to conclusions, a trendiness which exaggerates detente in one decade and lurches to underrate it in another. Too many of us as academics are probably afraid of looking foolish or out of step, afraid of suggesting "The Emperor has no clothes" or, more topically, "The Kremlin's suit of armor is not so sturdy." An all-too-typical response to anyone who questions the real significance of the SS-20, or of Minuteman vulnerability, or of the Soviet Navy, is: "Look around you. Can't you tell, from the tone of what everyone else in Washington is saying, that something significant has happened?"

We are often told then that the ultimate erosion of American power is evident because West Europeans feel dangerously intimidated by Soviet power. When one asks any ordinary visiting European businessman or academic or politician whether he feels intimidated, however, the typical response is that he does not, though he has noted some discussion of the possibility among others. "Everyone else is showing signs of being worried, so there is probably something to worry about."

As a very special case, West European specialists on defense are of course willing to list a great many intimidating worries about the Soviets; but they have been willing to do this for the past 25 years.

Many of the statements of alarm to which we attach so much weight today are in fact duplicates of sentences first written 25 years ago, and then repeated every 5 years since.

- *NATO is in disarray.* When has this not been so? Is such disarray not inherent in the pluralistic society we aspire to maintain in the West?

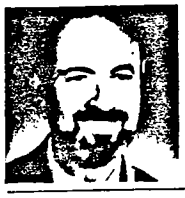
- *U.S. strategic power is declining as compared to that of the Soviet Union.* Again, this has always had to be true, for the United States began the post-World War II period with a monopoly of strategic power, a monopoly that was bound to erode.

- *The Soviets refuse to acknowledge that victory is meaningless in nuclear war. The Soviets have invested surprisingly large fractions of their GNP in military hardware.* These also are not new statements, but statements which could have been written at earlier times.

Nothing being said here should be taken to excuse such continuing Soviet conduct. Much of the blame for the intensified arms competition must indeed be directed to the Kremlin, precisely for its wasting of funds on redundant missiles and tanks, and for its provocative obtuseness in discussions of strategy. Because Soviet spokesmen publicly seem to regard victory as meaningful in the disaster of a nuclear war (a war the capitalists of course would have started), they enhance American support for systems like the MX: the only way to deter Moscow is to insure that such a disastrous "victory" would not go to the Soviets but to the West – not because we care, but because they care.

Soviet reluctance to admit that nuclear victory is not worth the candle

*For a well-done example, see Karl Kaiser, Winston Lord, Thierry de Montbrial and David Watt, *Western Security: What Has Changed?, What Should Be Done?* (New York: Council on Foreign Relations, 1981).



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is nonetheless again old stuff, just as is the tendency of the Russians to waste huge amounts on pointless weapons systems—an extensive air defense system in the past, redundant strategic missiles in the present. What is so new about all this? Why should it steer our own policies and expenditures and academic conventional wisdom so much into different directions?

One enters Washington these days with the feeling that he missed a critical briefing which established the new significance of the Soviet threat once and for all. Everyone else seems to understand why we should rise to new levels of readiness and alarm. Everyone else seems to understand what color the Emperor's clothes are, so don't ask stupid questions. Yet the stupid questions persist.

• *Are Europeans really so "Finlandized" by the shadow of Soviet military strength, that detente has mainly been a series of capitulations and concessions by the West to the Russians?* Or has detente been much more of a two-way street, as concessions and pressures flow in both directions, with a certain degree of "Finlandization" also seeping into Eastern Europe. (What better prospect could we seek for Poland, and the other satellites, than that they be allowed to become like Finland: constricted in their foreign policy so that Moscow never has to worry about a hostile alliance, but otherwise free to sort out their domestic policies unconstrained by the burdens of a failed Marxist ideology?)

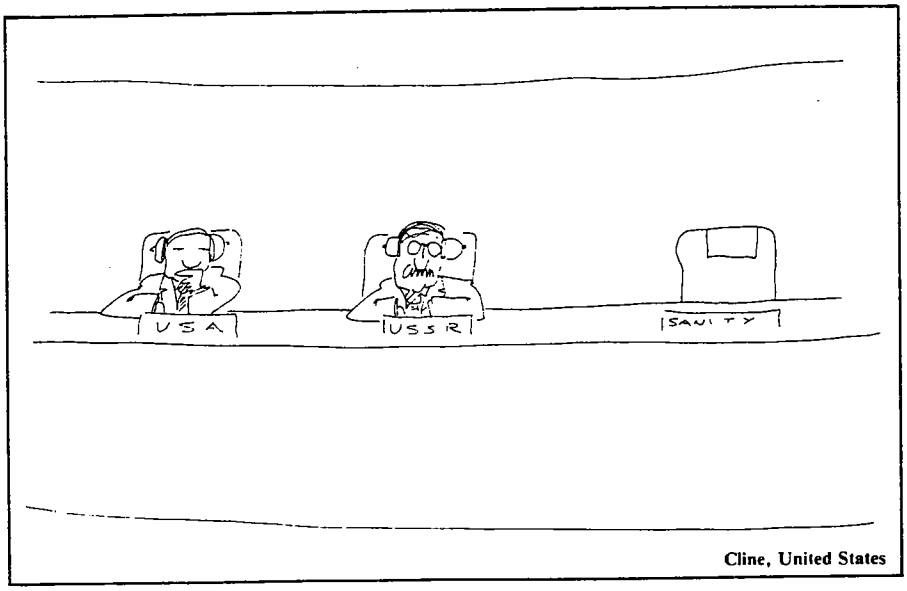
• *Is the disarray of NATO so much a source of weakness in the West, or is it more a response to weakness in the East?* All of us are quite rightly upset that Soviet troops might shoot their way into Poland, as we hope that liberalization in Poland can be pursued gradually and steadily. Yet, consider how we viewed Poland's relationship to the Soviet Union 15 years ago, when we could only have dreamed of an organization like Solidarity.

The flow of events on the world historical stage is thus hardly so much to the liking of Moscow. China has turned 180 degrees in this time, and Romania and North Korea are other Marxist entities which are no longer under control. The Soviet Union has gained friends in Angola and Mozambique and lost them in Egypt and Somalia; gained friends in Ethiopia and lost them in Iraq. The Soviet domestic scene promises to be beset by economic and social problems for the rest of this century, again belying the impression of Moscow's ascendence.

As one mentally responds to this new conventional wisdom, one feels ensnared in a series of tautological traps. If Europeans show willingness to spend money on new arms, or to offer bases for cruise missiles, this proves the Soviet threat. If they become unwilling, this shows how intimidated they are by Moscow. If Europeans make concessions to the Soviets, this is "Finlandization." If the same Europeans note concessions from the Soviets (the number of ethnic Germans allowed to go West, the slowness of the Russians to crack down on the Polish labor movement) this is labeled rationalization. That there have been Soviet advances no one can deny, advances which force us to see detente as a very complicated phenomenon. Yet no one should deny that there have also been Soviet setbacks.

The news is thus neither mainly good nor mainly bad. Soviet domestic and alliance troubles are no reassurance in and of themselves, for a different kind of pessimist now fastens on analogies to the alleged reasoning of Wilhelmine Germany in 1914, "lashing out" in the face of an unfavorable future. The news is rather mainly complicated, just as it should have been seen as mainly complicated in 1961 and 1971. Our trendiness in academic and governmental reasoning is notoriously intolerant of complication. Yet, this is an intolerance which we have a national duty to fight.

Analogies aside, the Kremlin is not as naked as the legendary Emperor. The Soviets have indeed given us genuine grounds for concern, as they have grown in objective military capability. Yet the syndrome of the Emperor's clothes is nonetheless in effect, very possibly causing us now to overrate the Soviet military threat, causing us by comparison to underrate other threats. □



Cline, United States

National Catholic Reporter
May 8, 1981

'Brave new world' needs values, not valor

How Brave A New World?
Dilemmas in Bioethics
By Richard A. McCormick, SJ
Doubleday, 429 pages, $15.95

Reviewed by JUDITH SERRIN

SCIENCE AND TECHNOLOGY, said Aldous Huxley, whose *Brave New World* has for five decades been a specter raised by those concerned about the impact of science on morality, should be used, "as though, like the sabbath, they had been made for man, not . . . as though man were to be adapted and enslaved to them."

That thought, more than the borrowed title, expresses the purpose of Richard A. McCormick's new book, a collection of writings during the last decade by this leading U.S. Catholic moral theologian, one of the few people in the country to turn his mind to the ethical questions raised by swift advances in science and medicine.

McCormick, ordained a Jesuit priest in 1953, is the Rose F. Kennedy professor of Christian ethics at Georgetown University's Center for Bioethics. Whereas many church and religious institutions admit to suffering a "Galileo complex" when faced by scientific questions, a fear that condemning the ways of science will prove them foolish and reactionary, McCormick has plunged gamely in, trying to sort right from wrong, morality from law, and both from public policy, the greater of two evils from the lesser of two evils.

"If the questions surrounding basic values are not asked, not asked seriously, not asked publicly, not asked continually, not asked in advance," he writes, with particular reference to the possibilities raised by new scientific aids to human reproduction, "the danger is that we will identify the humanly and morally good with the technologically possible."

The danger is particularly acute, McCormick says, in modern U.S. society, which he sees as "a thoroughly pampered culture," dominated by the values of efficiency, immediacy, comfort, affluence, technological progress and eugenic ambitions. The common belief, he says, is: "The best solution to the dilemmas created by technology is more technology."

McCormick is particularly good at setting out the background for the moral debate. The issue of morality is the issue of right and wrong, he explains. Everything immoral need not be illegal, and everything legal need not be moral. Public policy, he says, deals with morals as they relate to the common good of the community. A law, he says, should reflect not just morality, but also feasibility.

Thus, while he would not prohibit research into *in vitro* or "test-tube" fertilization, he would not support it with public funds either, for those who would benefit, he says, are relatively few. He also, in "Rules for Abortion Debate," calls for recognition that even arguments on the side of good can have weaknesses and that bad arguments are not necessarily made by bad people.

McCormick avoids platitudes as he presents, with arguments and rebuttals, his views on the major areas in which science impacts on human life — abortion, medical experimentation, contraception, sterilization, reproduction technology and preservation of life. He says there are circumstances in which grossly deformed infants and people reliant on extraordinary life-support systems can be allowed to die.

Abortion, he says, is a major moral tragedy, but cannot be separated from concern about "what happens to children once they are born." Contraception, he says, is not intrinsically evil, but must not be an excuse for selfishness. The artificial route to pregnancy, he says, "is a disvalue and one that needs justification." His positions leave substantial room for argument as to their application to any given case, but McCormick says such arguments are the risk and responsibility of a moral society.

The works collected here have previously appeared in publications like the *Hastings Center Report, Theological Studies* and *America*. Such publications tend to reflect a good deal of intellectual parrying among a group of regular contributors, and, because some of McCormick's essays are detailed responses to other people's positions, the reader can feel he or she has come in at the middle of an argument.

In collecting these writings McCormick has altered little, which causes some minor annoyances of repetition, but also shows how his mind has changed on some arguments.

In the final analysis, the "brave new world" is likely not to demand bravery so much as humanity, not valor so much as values. Even if one does not agree with McCormick's answers, it is somehow reassuring to know that his steadying moral gaze is looking at the questions.

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MANAS
JUNE 17, 1981
REVIEW

SO MUCH TO UNDO

THE quiet, not continuously proclaimed thesis underlying the books of Ivan Illich is that human beings are by nature capable of doing what they need to do, while education, for the most part, has been intent on reducing and even destroying that capacity. He doesn't say much about the positive values of formal teaching—whatever they are—but concentrates on the abuses of institutional authority and influence, making almost yearly reports on their increase and elaboration. His latest book, *Shadow Work* (Marion Boyars, 99 Main Street, Salem, New Hampshire 03079, $5.95), is essentially concerned with the loss of human capacity for self-reliant subsistence and with the growth of institutions and unavoidable patterns of behavior which make it almost impossible for us to recover the ability to take care of ourselves—outside, that is, of the niches and roles prescribed for people by the technological society.

While Illich's generalizations are abstractly lucid, his categories are always "new," so that he must be read two or three times to grasp his meaning. The terms of his analysis need effort to be understood, but the effort is worth making by reason of the freshness of perception which results. This perception is almost always critical, however. He seems to have a tender, but almost secret regard for the ordinary folk in behalf of whom he writes, as though they should not be talked about too much, except as victims. Perhaps, some day, he will write about them as the salt of the earth, having native capacity to give form and substance to a society which is neither humdrum and dull nor dramatically "ideal," but simply functional to the purpose for which souls with both moral and practical intelligence are born on earth. One would like to know a little more of what he thinks about this. (Illich, however, might suggest a reading of the second chapter of his *Tools for Conviviality* (Harper, 1973) for an answer to such questions.)

Meanwhile, his books are helping to clear away the rubbish of misconception and presumption. He applies the scientific method to the delusions so produced. He piles up evidence to show that science has supplied the engineering skill facilitating human self-defeat. He does this sector by sector, layer by layer.

Where, in the history of the West, did the demoralization begin? In a chapter in *Shadow Work* called "The War Against Subsistence," he says:

> The idea that humans are born in such fashion that they need institutional service from professional agents in order to reach that humanity for which by birth all people are destined can be traced down to Carolingian times. It was then that, for the first time in history, it was discovered that there are certain basic needs, needs that are universal to mankind and that cry out for satisfaction in a standard fashion that cannot be met in a vernacular [uninstitutionalized] way. . . . from the eighth century on, the classical priest rooted in Roman and Hellenistic models began to be transmogrified into the precursor of the service professional: the teacher, social worker, or educator. Church ministers began to cater to the personal needs of parishioners and to equip themselves with a sacramental and pastoral theology that defined and established these needs for their regular service. The institutionally defined care of the individual, the family, the village community, acquires unprecedented prominence. The term "holy mother the church" ceases almost totally to mean the actual assembly of the faithful whose love, under the impulse of the Holy Spirit, engenders new life in the very act of meeting. The term *mother* henceforth refers to an invisible, mystical reality from which alone those services absolutely necessary for salvation can be obtained. Henceforth, access to the good graces of this mother on whom universally necessary salvation depends is entirely controlled by a hierarchy of ordained males. . . . From the ninth to the eleventh century, the idea took shape that there are some needs common to all human beings that can be satisfied only through service from professional agents. Thus the definition of needs in terms of professionally defined commodities in the service sector precedes by a millennium the industrial production of universally needed basic goods.

This is Illich, not Martin Luther, speaking. Interestingly, he remarks that, many years ago, he came across this idea in something by Lewis Mumford, but considered it only an "intuition." Then, from his studies, he found "a host of converging arguments—most of which Mumford does not seem to suspect—for rooting the ideologies of the industrial age in the earlier Carolingian Renaissance."

A summarizing passage on the impact of this inheritance comes in the section of Notes and Bibliographies:

> The modern age can be understood as that of an unrelenting 500-year war waged to destroy the environmental conditions for subsistence and to replace them by commodities produced within the framework of the new nation state. In this war against popular cultures and their framework, the State was at first assisted by the clergies of the various churches, and later by the professionals and their institutional procedures. During this war, popular cultures and vernacular domains—areas of subsistence—were devastated on all levels. Modern history, from the point of view of the losers in this war, still remains to be written.

Needless to say, chapters in this history are what Illich contributes. He does not write as a rabble-rouser, eager to stir the masses to revolt, but as an incisive critic who addresses the "clerks" who need to recognize and cease from their treason. He exhibits the consequences of their faithfulness to the rules, if not to the ruling intentions, of the institutions of the time.

On his first page he borrows from economics some terms to assist his analysis. "External costs" are those which don't get into the formal accounting. "Internal costs" do. He speaks, first, of the goals of "development" as conceived a few years ago, and why they are now being challenged:

> The immediate goal of . . . social engineering was the installation of a balanced set of equipment in a society not yet so instrumented: the building of more schools, more

modern hospitals, more extensive highways, new factories, power grids, together with the creation of a population trained to staff and need them.

Today, the moral imperative of ten years ago appears naive; today, few critical thinkers would take such an instrumentalist view of the desirable society. Two reasons have changed many minds: first, undesired externalities exceed benefits—the tax burden of the schools and hospitals is more than any economy can support; the ghost towns produced by highways impoverish the urban and rural landscape. Plastic buckets from Sao Paulo are lighter and cheaper than those made of scrap by the local tinsmith in Western Brazil. But first cheap plastic puts the tinsmith out of existence, and then fumes of plastic leave a special trace on the environment—a new kind of ghost. The destruction of age-old competence as well as these poisons are inevitable byproducts and will resist all exorcisms for a long time. Cemeteries for industrial waste simply cost too much, more than the buckets are worth. In economic jargon, the "external costs" exceed not only the profit made from plastic bucket production, but also the very salaries paid in the manufacturing process.

Meanwhile, the imposing structures of "development" give visible support to the idea that the requirements of Progress leave no alternative and that people must learn to adjust. Persons who know how and are able to walk must now ride. People once well equipped to make things must now buy them instead. Their lives are endlessly complicated by technological pseudo-simplicities which have been turned into necessities. Illich continues:

These *rising externalities*, however, are only one side of the bill which development has exacted. *Counterproductivity is its reverse side*. Externalities represent costs that are "outside" the price paid by the consumer—costs that he, or others of future generations will at some point be charged. Counterproductivity, however, is a new kind of disappointment which arises "within" the very use of the good purchased. This internal counterproductivity, an inevitable component of modern institutions, has become the constant frustration of the poorer majority of each institution's clients: intensely experienced but rarely defined.

What does he mean by this?

For most people, schooling twists genetic differences into certified degradation; the medicalization of health increases demand for services far beyond the possible and the useful, and undermines that organic coping ability which commonsense calls health; transportation, for the great majority bound to the rush hour, increases the time spent in servitude to traffic, reducing both freely chosen mobility and mutual access. . . . This institutionalized frustration, resulting from compulsory consumption, combined with new externalities, totally discredit the description of the desirable society in terms of installed production capacity. As a result, slowly, the full impact of industrialization on the environment becomes visible: while only some forms of growth threaten the biosphere, all economic growth threatens the "commons." All economic growth inevitably degrades the utilization value of the environment.

Illich is not of course against the development of better tools and the means of noncoercive arrangements for the common good. The growth he condemns is growth which by its nature reduces both the capacities and the opportunities of the individual for self-development and self-reliance.

"Shadow Work," which gives the book its title, means work that is not paid for, yet exacted from those who live in a technological society—housework, mainly, but also "the activities connected with shopping, most of the homework of students cramming for exams, the toil expended commuting to and from the job." As a further burden there is "the stress of forced consumption, the tedious and regimented surrender to therapists, compliance with bureaucrats, the preparation for work to which one is compelled, and many of the activities usually labelled 'family life'."

What is Illich's conception of a good society—called "a subsistence-oriented way of life"? He says:

There, the inversion of development, the replacement of consumer goods by personal action, of industrial tools by convivial tools is the goal. There, both wage labor and shadow work will decline since their product, goods or services, is valued primarily over the record, the library over the schoolroom, the backyard garden over the supermarket selection. There the personal control of each worker over his means of production determines the small horizon of each enterprise, a horizon which is a necessary condition for social production and the unfolding of each worker's individuality.

This is an ideal toward which some are already working. Illich speaks of them briefly, but without excess of enthusiasm. There is so much to do—and undo.

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Issued weekly, except during July and August, by the

MANAS PUBLISHING COMPANY

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MANAS

VOLUME XXXIV, No. 25-34 Thirty Cents JUNE 24, 1981

A MORAL OR TWO

WE live in an age when the multiplying products designed to save us time and effort have become the enemy of the versatility and resourcefulness of human beings. To be "social"—that is, to take part in conventional activities such as having a job or a business, sharing common recreations, seeking the familiar "securities"—is virtual submission to the enemy. Two writers in particular have been pointing this out for years. Wendell Berry has shown what happened to farmers by reason of the "efficiencies" of factories in the field. Ivan Illich has described the dehumanization of peasants and ordinary folk, all over the world, because economists and businessmen, who deal in buying and selling, accept as real only what can be counted in money. Ours is a world in which buying is better than making, paying is better than sharing, and owning is better than living lightly. It is a world where transactions have been made to replace the spontaneities of friendliness and cooperation. Its stage management automatically casts many of the people we meet as salesmen on the make. The mood of having to be "on guard" eventually overtakes us all, even if watching, however covertly, for the shy decencies one longs for.

The decencies do not submit to accounting. They are not a marketable item and fade into frauds when marked with a price. Even the words which stand for the decencies have been corrupted. "Service" is a lubricant of selling, banks are said to be "friendly," and "counsel" is obtained only from consultants or therapists, who are of course well paid. In *The American Condition* (Doubleday), Richard Goodwin, tracing the loss of what he calls the "organic unities" which were once the moral foundation of pre-industrial life, summarizes the transformation of human relations:

> As money took on independent value, personal obligations could be fulfilled through payment—cash instead of services, gold instead of horses and bowmen. Deeply personal ties, which had extruded the consciousness of the age, a mode of thought, and a structure of values and perceptions, metamorphosed into commercial bonds. You no longer owed yourself; you owed money. The spirit of commerce gradually infiltrated extensive regions of social life which had not received the benefits of increasing wealth; ascendant beliefs overtook those who were still excluded from the new possibilities—who were still captive in the feudal relationships. This invasion came armed with the powerful, liberating idea of value. Once obligations had [monetary] value, once they could be priced, then the fact of payment overshadowed, and ultimately displaced, the identity of the debtor. The new kind of debt was impersonal, even transferable. Lordship over the land was no longer one of mingled strands in a web of personal obligations but something of calculable value whose earning, in short, could be used to pay taxes rather than homage. The lord who held the land became the owner. The earth was transmuted into capital, its produce into income, and income into goods—not only to maintain life but to bring comfort, pleasure, luxury, beauty. The powerful sought ownership in addition to power and, finally, as a source of added power.

In such a society, everything you want or need has a money value. It even costs money to visit your friends—you have to have a car and buy gas. We don't live in villages any more, where practically everything important was within walking distance, and going to the city, involving a long trip, was an adventure instead of a job requirement. The good life of a century ago is now a life of penury and want. Look at a modern kitchen, count the things you have to have just to cook a meal. Everyone except a few hermits is locked into the system of dependence on elaborate devices with which you can do only one thing, and these, if powered, as most gadgets are these days, link you to the economic fortunes and power plays of the Middle East, to say nothing of the strip miners and the argument about nuclear energy. Think of all the plumbing involved in getting a drink of water! (And in Los Angeles having water in the pipes required burglary from Owens Valley farmers.) Some of us can remember a childhood when all you did for a drink was take a pail and walk to the well, and let the bucket down.

Well, we probably wouldn't even think of such things if our present arrangements weren't becoming more and more difficult to bear. The fact is that our efficiencies have tied us hand and foot. Not all of them are bad, of course; it is the choice and the management of what we choose that makes the trouble. The comparison shows up best, perhaps, in agriculture. According to current figures, the wet-rice-growing Chinese peasant spends one calorie of human energy to harvest fifty calories of energy in food, while the big farmer on his tractor has to use six calories (six to twenty) of motive power to produce one calorie in his crop.

. . . Yet we are not really impressed. The trouble is, the Chinese peasant lives the life of a peasant and we can't imagine doing that. So the comparison remains ecological campaign rhetoric, handy for quoting but not for acting on.

Or is this still so?

Well, we say, the Chinese peasant had better stay in China, where he can survive and even thrive. Transport him to the American Middle West and his superlative gardening skills would hardly keep him alive. One-man production operations have little survival value in Kansas. There is something profoundly wrong with this. But we're not Chinese, someone might say; perhaps we were made for better things.

Yet even medium-sized American farms are suffering describable loss, and the farmers aren't surviving as farm-

ers, but as something else. Telling about a family in the Corn Belt in Iowa, Mark Kramer says in *Three Farms* (Atlantic-Little, Brown):

> If laborsaving technology and the world of big business have removed from Mary Jane the possibility of filling an urgent on-farm position, they threaten to do the same with Joe. More and more of his farming time is taken in managing costly inputs. Unlike farmers, managers are made, not born. They are interchangeable. They substitute regularity for wit, usual procedure for adventurousness, dutifulness for competitiveness, and obedience to policy for independence. They replace skill with system and accept corporate goals in place of goals that express personal spirit. In short, what farmers do, and what managers can't do by definition, is exercise craft.
>
> Loss of craft in farming is serious, not just to farmers, but to the nation. It is the step before loss of pride, loss of personal ethics in trade, loss of stewardship of the land, loss of concern for quality of product. The loss reverberates all the way down the food supply chain. It can be felt at McDonald's, and in the aisles of supermarkets. It is part of a grander loss yet, the dying of a system of people making money doing things well. Supplanting the old system is a new one with slots for people to do what is prescribed. If farm women face a world that is sexist, farm people in general also face a world that is increasingly anti-individualist. If women count for little, so do we all, and the fights that Joe and Mary in particular face are struggles against the same corporate and technological forces that trouble us all.

They trouble us, but not enough. Loss of craft may be an inner privation but it's not the bottom line. Joe and Mary Jane are still making a fair living. And what else can they do but "adapt"? That, really, is the question we set out to raise in this discussion—not to answer but to present.

The hard reality of the situation is that you have to be—or try to be—some kind of Spartan hero in order not to "adapt." You have to look for a particular place—or trade or profession—where survival and usefulness are both possible with a minimum of compromise. People who do this sometimes succeed through sheer ingenuity and combining two or three things they know how to do. It is possible to beat the system, never completely, but enough to keep the decencies alive. One thinks of Scott Nearing, still farming in Harborside, Maine, at the age of ninety-seven. He does about as well at it, now, as he did years ago when no one except a handful of radicals had ever heard of him. Today his functional asceticism is a legend, his practice—his and his wife Helen's—an example to the world. In short, life *is* possible without adapting to what you don't believe in, even if it is difficult. Of course, it wasn't so difficult for Scott Nearing, but the only thing to do. Difficulty is largely, not entirely, a matter of definition. Some of our difficulties might seem opulent grandeur to an Eskimo—a nineteenth-century Eskimo.

Sometimes refusing to adapt involves you in curious mixtures. Louis Bromfield, who became a model farmer during the first half of this century, combined organic farming with writing novels—very successful ones. He had the money to go into farming—which he loved—in the right way. (See his books, *Malabar Farm* and *Pleasant Valley*.) He would sell the film rights on one of his stories to Hollywood and build a new barn with the money, naming the barn after the picture or, maybe, MGM. Wendell Berry, who began life as a college professor teaching English, became—or remained—a farmer in Port Royal, Kentucky, combining the culture of the soil with the culture of words—words explaining why it's better not to adapt and about the decencies which are salvaged by this refusal. He writes poetry and books, and articles about many things—about potatoes grown in the mountains of Peru, about the virtues of native grasses, and about the circumstances in which it's better to farm with horses than a tractor. He also writes about literature and the writer's art, as in "Standing by Words" in the Winter 1980-81 *Hudson Review*.

There is quite plainly a law of diminishing returns in the application of technical efficiencies. A point is reached where you have to work night and day to afford all the efficiencies which give you the time to earn night and day. As time passes, efficiencies which began as semi-luxuries become practical necessities. Then the price for them starts going up. And how many, these days, are able to walk or ride a bicycle to work?

Of course, in an article like this we should be talking more about the people who manage—like the Marines?—to do the impossible. There are those who figure out a way to make a living at home. Fine craftsmen sometimes develop a mail-order business, writers, too—Scott Nearing is one example, John Holt another. But if postal rates keep going up, only the caterers to the mass market will be able to afford mail-order costs. Obviously, more and more ingenuity will be required. Honorable failure may be inevitable for some. (The odds are for failure.) Eventually the costs of mass marketing may equal and then exceed a selling price that ordinary people can afford. First the little companies will go out of business, then the medium-sized ones, and finally the big ones. This process is already on the way, as statistics-watchers know. Inflation only hurries the process, making us realize sooner what is happening.

We can take the Manas Publishing Company as an example, because it is handy and we know how it works. MANAS is a *very* small enterprise with just three subsistence paid employees, the rest volunteers. As a result of the last postal rate increase, about three months ago, it now costs the price of a single issue for postage to mail one sample copy of the paper. "Promotion" of the familiar sort—supposing we wanted to attempt it, which the publishers don't—is out of the question. And they learned more than thirty years ago that the readers we have are the best source of names of prospective readers. So we ask for names, and then send people samples. We can't "talk" like salesmen about what MANAS tries to do—say, to preserve and enlarge the "decencies"—but we don't mind showing around a product that is meant to be read. We don't buy mailing lists because we don't permit ours to be used for any purpose except sending out the magazine—on the theory that having the names and addresses of subscribers is a trust, not a resource to sell or use as we like. We are now limiting sample copies to one to a prospect, instead of the three we've been sending out since the beginning. Maybe that will be enough to invite a subscription from those who enjoy or value a paper of this sort.

Another example of the squeeze affecting small enterprise comes under the heading of the cost of equipment. Apart from printing, which MANAS buys at the market price—and which naturally keeps going up—the Manas Publishing Company owns three power-run machines: an electric typewriter, a plate-making machine, and an addressing machine. The copies are wrapped by hand (machinery for this would cost many thousands of dollars) and then run through the addresser, which prints the names and addresses on the wrappers. This year, our thirty-fourth of publishing, the little old addressing machine wore out and we had to buy another one (rebuilt, but good) of a "more efficient" sort. It helps our volunteers a lot to have it, although it cost nearly a quarter of the annual gross income of the paper from subscriptions. The man who installed and got it going for us—a friendly craftsman who has been doing this work for decades—mused about his services in years past. He could remember when the company charged $3.40 an hour for his time. "Now," he said, "they get $70." It made him—and us—a bit miserable.

Is there any way out? Not that we know of. If you want to reach people with what you have to say you have to use the mails. For addressing, a machine is necessary. The moral: Get big or bust. The moral: Going bust may be better than getting big. More moral: Going bust may be a way of starting afresh in another area where subsistence and self-support and convivial relationships are still possible or coming into being.

Well, this is not an urgent cry for help. MANAS is not in deep trouble (just the ordinary kind), but as part of the society whose tendencies affect us all, it will be, some day. Our little problems make handy illustrations of the squeezing process affecting small, autonomous enterprise, especially non-profit enterprise which by definition and intention cannot substitute "obedience to policy for independence." Moreover, a third of a century may be a long enough life for a paper which works for the ends MANAS works for. (See box on page 4.) With the broad decentralization of population, economic processes, and power that the future is bound to require, other modes of communication will certainly appear, with numerous local centers of dreaming and thinking, and a greater variety of expression. So much for that.

There is another moral: Manage to get big and you'll have a bigger bust, a little later. That kind is a bust without dignity. You change your ways, but only because you must. For the world, you could name it Survival for a little while longer; or, if you wanted to sing it, Waiting for the Bottom Line.

However prematurely, our society is getting old. This is nothing to be sad about, unless you think that getting old is something to be sad about. The need to get old is inscribed in every structure in the universe, so that *not* getting old would be something to worry about. The Wandering Jew did not have a very good time.

In the economy of Life, getting born and being young supply the natural balances to getting old. The one encouraging thing about the present is the prosperity we have in new beginnings. But, someone will say, they are all so small, so weak, so inconspicuous! Well, in the last century, the story goes, Michael Faraday showed his dynamo to the Prime Minister of England, who looked at it, saw it work, and then said to the inventor, "Very interesting, but what good is it?" Faraday replied, "What good is a new-born baby?"

So with the innovations—communitarian, cultural, metaphysical—of the present. Their presence is not announced in any of the graphs. Being about ninety-five per cent imagination and inspiration, they are practically weightless and will continue to be until the ideas now proving out in practice are more widely adopted and acquire "statistical significance." If you want to know something about the future, don't consult the actuaries of the status quo. Jules Verne and Edward Bellamy, both romancers of sorts, were far better prophets than the economists of their time. Let the statisticians define the problems, but don't go to them for solutions. They are not in the solution business, and furthermore it is not, and will never be, a business. The right solution is often in some sense going out of business, and you wouldn't apply to businessmen for help in that.

The people who are now playing a part in generating the future do not measure either their efforts or their possibilities by looking at statistics. They are more like artists than entrepreneurs. Their motivation is simple enough. They couldn't stand the way things were going and decided to do something else. Bits of biography about John Todd, Wendell Berry, and E. F. Schumacher would make fascinating reading for youngsters with the same dissatisfactions and a hunger to be a useful part of change. Such enterprises begin with an inside feeling about the fitness of things. Then, because the end of thought is an act, the feeling takes on form, and the form, being visible, inspires delight and respect. Then the writers—journalists and essayists—get busy. A few philosophers become engaged. Papers like *Rain, CoEvolution, Resurgence, Self-Reliance,* and *New Roots* are started and gain circulation. Myth mingles with reality, which is inevitable, and even good and necessary. No real historical rebirth ever took place without the animation of myth, even though the pain of immature interpretations is a heavy burden for enthusiasts weak in reality-testing. This is not an avoidable cost of innovation but a natural cost of all living, as we are presently constituted. Shattered illusions make compost for the growing of common sense, and the art of recycling is already one of the promising skills of our time.

The day of pioneers and trail-breakers is not over, but just beginning, for the age which lies ahead. To say that what the modern world needs is a few good funerals is not a macabre joke but an expression of uncommon sense. The nation-state needs a funeral. Anyone can see that its life is now confined to spasmodic twitching, its mentality good only for bemoaning its wounds and numbering its foes. What else do you read in the paper these days? The acquisitive society needs a funeral, too, but that can't come for a while—until, that is, not enough goods are left for people to survive in their accustomed way.

A great many humans are ready in their minds to read about other things—the good things happening and the experiments on the way. Others are ready in their backs and arms to make new beginnings. Those are the human figures we can count on. They have nothing to do with the bottom line.

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