The Future Is Worse Than It Was

Optimists and pessimists from a 'Simple Simon' economist

BY EZRA MISHAN

Editor's Note

Professor E. J. Mishan has long been a leading critic of the popular dogma of "economic growth." We publish here remarks he made during an earlier economic downturn which are relevant today. The fall 2006 issue of *The Social Contract* included an interview with Dr. Mishan by Derek Turner (see the archives at www.thesocialcontract.com).

Let me begin with some gentle ridicule directed against those economists, technocrats and scientists who, in contemplating the future, err fatally on the optimist side, putting their faith in the evolving power of science and technology, and sometimes—incredibly—in the ultimate wisdom of men. Pessimists, such as I, come in for a deal of good-natured banter. Often enough I am accused of shouting wolf, of being a Jeremiah or a Cassandra; these accusations I never challenge. For the wolf in the fable eventually came. Jeremiah was a true prophet; as he foretold, so it came to pass. And Cassandra was invariably right, and because she was destined to be ignored, catastrophe befell the people.

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Again, the optimists rejoice in reminding audiences that many instances of woeful tidings have been belied by history. True, but cheerful tidings have also gone the same way. I remind you that American President Hoover in 1931 assured his countrymen that prosperity was "just around the corner"—it took nine years to turn that particular corner, and it would have taken longer had not war broken out in Europe in 1939. More than a century earlier in Britain, Chancellor of the Exchequer Robinson foretold an era of unprecedented prosperity. After his announcement there followed an era of unprecedented depression, lasting until the 1840s. During this time the poor man suffered much embarrassment, being nick-named "Prosperity Robinson" by the public. In a desperate attempt to escape ridicule (if I may add a footnote to this episode) he managed to get himself elevated to the peerage as Lord Goderich. Alas, the public promptly switched to calling him "Goody Goderich."

And, while on this subject, let us recall that a little earlier, on the eve of the French Revolution, the mood of all progressive elements in Europe concurred with Wordsworth's ecstatic exclamation: "Bliss was it in that dawn to be alive, but to be young was very heaven!" Soon after, Madame Guillotine was working overtime, Paris became a shambles, Robespierre perished in the Terror he had organized, and for two decades more, in the name of liberation, the armies of Napoleon looted, pillaged, and spread carnage throughout Europe.

On the other hand, I admit that more than once, especially before the eighteenth century, the end

of the world was prophesized, though for reasons, incidentally, that would be regarded as far less rational than a similar forecast of calamity today. But there is little comfort to be had from the optimists' unnecessary observation that it didn't happen. It has only to happen once!

In parentheses, and surrendering to an honest impulse, I ought to add that in assuming the mantle of a doomsayer I am "batting on a strong wicket." The public does not readily forgive a man for arousing joyful expectations that are subsequently foiled by events. But if my gloomy prognosis turns out to be wrong, nobody, I am sure, will bear me a grudge. At any rate, fortified by this reflection, I shall journey with firmer tread through the shadow of the valley of death.

The Simple-Simon Economist

But at the outset, I am obliged to make a short digression. I have to address myself to those persistent and consoling messages that emanate from the type of economist I shall unkindly refer to as Simple Simon. Simple Simon has about him the quiet strut of the confident hard-nosed realist. He keeps his eyes on the figures, on the economic data; and, indeed, on little else. I do not exaggerate when I say that Simple Simon bids us ignore current estimates of the global reserves of scarce resources, and to look instead at the record of economic developments, and especially at the recent trend of prices. Accepting conventional methods of estimation, the "real" prices[1] of nearly all the important raw materials have been declining over the last century. They have continued to do so though less markedly over the last ten or twenty years. From this glance at the figures we are expected to deduce that there is a strong presumption that the decline in these prices will continue in consequence of man's resourcefulness and innovation. Ergo, we are not to worry; we may continue to ransack the earth's limited resources with impunity. It may be that, at some time in the future, prices of raw materials will sound a warning knell, and if so, the market will come into its own, using the higher prices to ration the scarce resources.

The argument invites comparison with the method of determining whether Vesuvius will erupt by taking the temperature of the soil in a strategic cave half way up the volcano. Simple Simon, we may imagine, trudges up there once a week every Saturday, and each time he returns to the citizens of Pompeii with the reassuring news that, if anything, the temperature of the soil is falling.

One dark day, a Wednesday, flame and smoke belch from the crater. The earth shudders and groans, and lava is seen bubbling around the crater rim. Simple Simon rushes up the mountain, reads his thermometer, and returns in triumph to the citizens of the now-doomed city of Pompeii to confirm that the temperature of the soil is now indeed at record height. He has proved to them that his instrument is an infallible indicator.

I am saying that it is something like this which can, today, so easily happen. Bearing in mind that the world's consumption of many important raw materials is doubling over relatively short periods—short periods varying from ten to thirty years—we shall one day notice that prices are shooting up, and that they show no sign of leveling off. Like that infallible thermometer, however, prices can tell us only that the worst is happening: they can do nothing to remedy the situation. We may be faced with an acute global shortage, possibly an irreversible one. Should crops fail badly in two or three successive years, through soil exhaustion, through some baffling disease, or from the ravages of a new unconquerable pest (the mutant product of decades of chemical pesticides), famine and plague could rack the world's population. Even the optimists among us would agree that such a prospect is not inconceivable and, if they were honest, that it is also far from being implausible.

Simple Simon, however, continues to argue, that since environmentalists cannot offer satisfactory evidence of an impending shortage, while the economic record has been, and still is, that of falling prices, the world's economies should continue their efforts to expand without restraint.

But the responsible citizen will demur at this conclusion. Unless we have good economic reasons (based on expected changes in relevant magnitudes) to believe that price trends will continue, the existence of a trend tells us virtually nothing about the level, or the direction, of future prices—as so many stock-market speculators have sadly discovered.

> **"The peril in which we stand is wholly without precedent, even when considered by reference to biological time. To compare the present with the dangers that threatened earlier civilizations would be false to history, false to sensibility, false to proportion."**

What is at issue, in such circumstances, is the methodological one about the burden of proof.

Let us, therefore, forgo the satisfaction of presenting evidence that would go some way to dispelling complacency about future resources. Let us suppose that we do not know whether or not usable resources, plus technological progress, will suffice to allow the modern economy to continue growing for an indefinite period.

Let us, if you like, suppose that prices of raw materials are declining and, for the foreseeable future—in this context for the next two or three years—will continue to decline; how does a prudent decision-maker act?

Consider the two alternatives: lf governments and industry heeded the alarmist views of the environmentalists, and events proved they were wrong, the consequence could hardly be called painful. We should come to realize, after the event, that we consumed less voraciously than we might have done—and, therefore, we have left for the future more capital than we need have done.

If, instead, governments and industry were guided in their policies by Simple Simon's conclusions, and events proved that Simple Simon was wrong, the consequences could be extremely painful and possibly disastrous. Technology might be quite unable to cope in so short a period with a simultaneous shortage of a large number of important raw materials: with soil erosion, with seemingly indestructible pests, or with a critical level of poisons accumulated in the biosphere from the spread of new chemicals and synthetics. The consequence, that is, could be global and irreversible disaster.

To take such a chance, even if the chance were small, would be more than folly; it would be the betrayal of a trust, a trust assumed by each generation to leave to the generation yet unborn not only the heritage of a once-beautiful earth—this is perhaps no longer possible—but to leave them at least the means of survival. And yet, under the institutional compulsion of the modern economy, government and industry and citizen are, indeed, taking just such a chance, electing to play dice with the lives of future generations.

A General Thesis

As prolegomenon, a statement of simple fact: Any year now, any day, any moment, some lunatic, some fanatic, some desperado, is going to give the signal, turn the handle, push the button, pull the lever... and the holocaust will have started, with a good chance of exterminating life on earth. The chances of our civilization surviving the end of this century are small. On any sober assessment of the peril in which we stand, we should have to concede the point. Yet, since we somehow contrive to disbelieve it, it is necessary to be emphatic.

The peril in which we stand is wholly without precedent, even when considered by reference

to biological time. To compare the present with the dangers that threatened earlier civilizations would be false to history, false to sensibility, false to proportion.

Over the last 6,000 years, civilizations have risen and fallen; fallen from internal corruption or external conquest. Christendom in the West has more than once come close to extinction, almost overwhelmed by the warrior hordes led by Attila the Hun in the fifth century, and again in the eighth when the sword of Islam was at the throat of Europe. Less than half a century ago, Europe lay prostrate under the heel of new barbarism. Over those 6,000 years, the world has, from time to time, been ravaged by plagues, by pestilence, and by famines.

But never, ever, by a threat so imminent, so grisly, so ghastly, so absolute, as the one we face today. Once the so-called balance of terror is upset—and in truth its equilibrium is unstable (and will become more so as additional countries, often led by fanatics, come to possess the means of nuclear destruction over the next two or three years)—millions, hundreds of millions of people, may perish within minutes. All the higher forms of life can be destroyed or irreversibly damaged. After hostilities the planet may be covered with radioactive dust and ash from which life, as it has evolved over millions of years, may never rise again.

I interject these remarks early, in order to unsettle you a little; because, for a short time, we have to unblur the imagination in order to think dispassionately, if we can, about the unthinkable—as if we were intelligent beings on a distant planet gazing with incredulity through some prodigious telescope at the behavior of homo sapiens on the small planet earth.

But observation alone is of limited value unless we have already formed some broad explanatory thesis enabling us to interpret all the endless scurrying about that we observe through the telescope. So let me present you with a general thesis.

I speak with imperfect recollection of the details of a true story (told by an American physician) about a man who, having a spot of arthritis in his finger joints, was given some tablets by his doctor as a result of which he developed a stomach ulcer. The doctor operated on the ulcer and injected the patient with strong antibiotics which so interfered with his cardio-vascular system that the doctor felt obliged to perform a number of minor operations. The patient became weaker and was referred to a heart specialist. In his weakened condition he contracted a lung infection and, nothwithstanding the continual attention of three doctors and the intensive care of the hospital staff, expired within two weeks of the heart operation. As it transpired, then, after the high-powered medical treatment had ail but destroyed the patient, the doctors, using more high-powered medicine, prolonged his life for those two weeks.

This case, I am assured, is not atypical. But no indictment of the methods of modern medicine is to be developed here. I have bigger fish to fry. For the true story you have just heard is illustrative of modern technology, taken as a whole, for which the ordinary man is the victim. Western civilization today is in the position of our hapless patient during his final two weeks. If there were a withdrawal of modern technology—if, for example, there were a universal breakdown of the electricity supply—our civilization would probably not survive above a few weeks. At the same time, the course of technological progress looks destined to destroy us, and should we, inexplicably, survive, looks to destroy any hope of the good life.

Just as the medical treatment to which our patient was subjected wrecked his natural system and rendered him wholly dependent from day to day upon artificial means of sustenance, so does mod-

ern technology act to destroy the natural systems of human organization which embody institutions that generate cohesion, stability, and resiliency. In more immediate terms, any current technology which is designed to meet a problem, real or imagined, is more likely than not to create new problems, as a result of which new technologies and new institutions come into being which directly or indirectly produce further problems, and so on.

These new problems arise not so much from economic growth as conceived and measured by economists, but from scientific and technological progress itself, which continues irrespective of the movements of GNP and related indices. I have argued in earlier works that such progress has exacted a heavy toll in terms of human fulfillment,[2] especially since the Second World War, and I believe that this toll is likely to become heavier in the immediate future; indeed, that the danger of rupturing the fabric of our civilization is real and imminent.

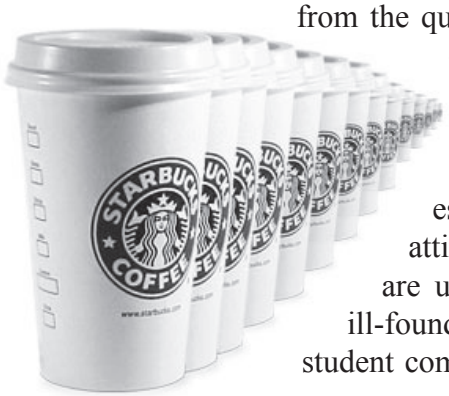
The Futility of Our Economic Objectives

Economists might be willing to concede that the existence of consumer freedom of choice with respect to market goods, along with freedom of choice of occupation and enterprise, though undoubtedly good in themselves, provide no assurances for the quality of life; that, indeed, such rightly coveted economic freedoms are quite compatible with a decline in the quality of life. Thus, when the evaluating economist says that he will equate an increase in social welfare with an increase in the area of (market) choice for individuals, he is—or he should be—aware of the weight being borne by the ceteris paribus clause.

It is not merely the fact, which many economists now realize, that there can well be too much choice—incredible array of new brands and models and designs that bewilders more than it delights the consumer. Far more significant is the implied requirement of constancy of the individual's tastes and of his capacity for enjoyment. In reality both are certain to vary over time in the modern economy, and indeed to vary rapidly with the continuing changes in the material conditions of life. Inasmuch as production technologies and the goods they spawn alter radically within a person's lifetime, the urban environment—the size, architecture, and atmosphere of the cities; the unending swirl of traffic, the incessant clamor, the assault on the senses along with an entire style of living also alter rapidly and, in doing so, alter for better or worse the behavior, attributes, belief systems, and communal aspirations. These changes are the vital factors that ultimately determine the welfare of the members of society, yet they do not lend themselves easily, if at all, to measurement on a scale of better and worse.

Thus any serious endeavor to understand the operation of the economic universe must begin with a recognition that the all-too-familiar indices of economic changes and trends amount to near-irrelevant abstraction. They constitute, in fact, an economic-numbers veil that, over time, serves to conceal a shattering succession of urban transmogrifications, social upheavals, and spiritual crises, that are the unavoidable by-products and, therefore, the critical reality of modern economic activity.

Nonetheless, the far-reaching social transformation that has occurred since the turn of the century can be pondered, interpreted, and debated intelligently if not perceptively. To be sure, an informal reflective approach to any set of phenomena, physical or social, elicits condescension if not contempt from the quantitatively orientated specialist obsessed with the statistics of hypothesis-testing. Such attitudes, however, are unwarranted and ill-founded. A serious student comes far closer to



an understanding of the way Americans actually lived in the 1820s from an acute observer such as de Tocqueville than from any conceivable pile of econometric studies directed to estimating real income distribution or trade imbalances.

At all events, my critique of the conventional economic world-view of recent history is developed in terms of observation and interpretation, with only incidental regard to magnitudes. From a number of interrelated themes associated with the material progress made in the West since the turn of the century, I shall restrict myself here to two: first, the futility of the chief social objectives commonly accepted and currently pursued by governments everywhere, irrespective of political complexion, and second, a conjectural assessment of the human consequences of the so-called microcomputer revolution.

The gist of the writings of the more articulate growth-men reflect a persistent belief—a belief which has become official doctrine for members of the "Enlightened Establishment"—that a continuation of those developments most closely connected with economic growth must culminate in a better life for the citizen. These developments, the measures of which are then used as indicators of social welfare, include (1) more and better goods, (2) more income equality, (3) more education, (4) more mobility, and although there are now dissenting voices, (5) an extension of the social services. My brief comments on each of these popular social goals are intended to suggest that, if more time were available to us, a respectable case could be made for the contrary view: that continuing endeavors to realize each one of them is more likely, on balance, to reduce human welfare than to augment it.

More Is Worse

(1) Since so much has already been written, pro and con, about the value of more and better goods in the post-industrial world, I shall confine my remarks to little more than a summary of my more skeptical reflections.

In conditions of destitution or hard poverty no reasonable man will dispute the importance of more consumer goods, in particular, more food and shelter. I remind you, therefore, that we are not considering the plight of populations in the less-developed countries, but the plight of populations who live in the countries of the West or, more generally, in the so-called affluent or post-industrial societies and live in material conditions to which the poorer countries aspire as a matter of course.

In these affluent societies the bulk of the working population—according to recent surveys—regard themselves as middle-class. And of the dwindling minority of the "proletariat," or manual workers or "blue collar workers," the larger proportion enjoy earnings which compare favorably with the better-paid clerical or "white-collar workers." In a physical sense, and certainly as compared with the material conditions prevailing in the third world countries, there are goods aplenty for the mass of the people. Even among the poorest 10 percent of the population, which can legitimately claim to be suffering from "relative deprivation," there are few who suffer hunger or real physical hardship.

In the post-industrial society the first and most significant characteristic to emphasize is its self-defeating ethos. For in order to ensure the absorption of increasing amounts and kinds of the products and services of modern industry, it has been found necessary to devote considerable resources to the creation of want dissatisfaction, effectively to inflame the spirit of dissatisfaction with one's existing possessions, with one's style of living, with one's status, with one's accomplishments and education. The intent and effect of media reports and comments, of official attitudes and establishment propaganda, and of course of the omnipresent commercial advertising industry, are directed continually to renewing the springs of discontent in economic man, which is hardly a prescription for promoting human fulfillment. Indeed, it represents a notorious perversion of the putative ends of economic endeavor, as repeatedly stated by economists, which is to use material resources to produce "want satisfaction."

It is hardly surprising then that many of the goods produced and consumed have their rationale reversed; rather than being perceived as ends they are perceived as means, or also as means; rather than regarding goods as goods in themselves, they

have become psychologically transmuted in greater or lesser degree to indices of success in life.

Economists in the West have, of course, long been aware of this characteristic propensity of their somewhat over-motivated citizens to regard the main purpose of life as that of "keeping up with the Joneses." In economist's slang this propensity is referred to as the "Jones' effect" and is formalized in the statement that the welfare of the citizen depends, inter alia, upon his command over market goods relative to those of others.

The implications of the undeniable existence of this Jones' effect are a thorn in the side of the pro-growth lobby. For the more this Jones' effect predominates, and it is destined to grow in affluent societies, the more futile is the policy of raising per capita consumption as a means of increasing the general welfare.

Again, a mass consumption economy in the affluent society, being one of continuing innovation and therefore, also, of rapid goods-obsolescence, necessarily breeds a throw-away attitude towards man-made goods irrespective of their use or performance. There is no time to grow fond of any possession no matter how well it serves. For it will, in any case, soon be superseded by a new brand or model. In time, almost everything bought, including "consumer durables," come to be regarded as potential garbage and therefore treated as such.

Moreover, a mass-consumption economy that emerges from a mass-production economy rests heavily on standardization. The "Age of Abundance," it transpires, is abundant with pre-packaged and chemically processed foodstuffs, with plastic knick-knacks, with plug-in machines and fine-tuned equipment. A part of the price that people in the West pay for this unending procession of shiny assembly-line products is the concomitant loss of those now-rarer things that once imparted zest to people's lives the loss of individuality, uniqueness, and flavor; the loss of true craftsmanship, of local variety and richness; the loss of intimacy and atmosphere, of eccentricity and character.

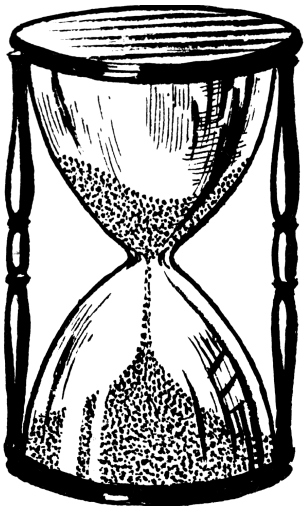
Again, and thinking primarily of continuing innovation in the provision of products and services, a further development should be borne in mind. A large proportion of the consumer innovations that have appeared since the end of the First World War is of the kind that acts to distance us from our fellows. Thus the by now all-too-familiar auto mobile, the radio, the stereo, the television and, of course, the increasingly popular home-computer are also the elegant instruments of our growing mutual estrangement.

These are the kinds of innovation that have multiplied over the last few decades, perhaps being "labor-saving," inevitably so: Today we can shop in the supermarket without speaking a single word to any one. In business also, in banking, insurance and in travel, the ratio of personnel to customers continues to decline year by year. Increasingly we are identified by code numbers and express our wants by filling in forms and pushing buttons. The greater part of the clerical staffs in a wide range of agencies and businesses spend the working day pressing keys and gazing at the flickering green letters which race across miniature screens.

And this withdrawal from direct communication with others has much further to go. Technically speaking, the greater part of education at all levels can be done by television on open or closed circuit and by computer teaching machines. Although we are loath to recognize it, teaching personnel could today be radically reduced, and the greater part of school and university buildings made obsolete.

Those international conferences, beloved of businessmen, civil servants and academics, are on the verge of being technically unnecessary since satellite television link-ups have been developed.

Physicians are learning to depend upon the computer for diagnoses, and visits to the local doctor or medical centre will decline as people learn to respond to computer-screen questionnaires about the nature of their symptoms. In hospitals, patient-monitoring devices make the bedside attention of nurses unnecessary; the temperature, pulse rate, blood pressure, and so on, of each of several score bed-patients can be read on a central panel by a single nurse who will direct attention to a particular bed only when a critical reading is registered.



Again, games like chess and bridge can now be played by a single person matching his skill against the computer.

One could go on listing instances of innovations that have come into being, or are coming into being, which in the ordinary commerce of life remove us from direct contact and intercourse with our fellow men. Since the turn of the century, then, and with increasing rapidity, we have come to depend both for our needs and for our entertainment upon the products of technology and ever less upon the physical presence, upon the direct help and company of other human beings. In consequence, the direct flow of feeling and sympathy, so essential to the sense of being and living, becomes increasingly blocked as channels for their expression fall into desuetude.

To add an important footnote, these innovations that keep us to ourselves, that keep us indoors and in our automobiles, also keep people off the streets and so act to encourage street crime. The nuclear family, which, of course, better serves the modern economy's need for a highly mobile workforce, is also a family that is unlikely to strike roots. The individual can no longer count upon the moral support and the sympathy of an extended family group, or upon a neighborhood or community in which he is known, a community within which he and his parents and perhaps also his grandparents were reared. As the American author Vance Packard observes in his *Nation of Strangers* (1972), the chances today in America, at least in the larger cities, are that a family does not know the names even of its immediate neighbors.

Since the foot-loose city-dweller has no commitment, then, to the vicinity in which he is currently residing, and since he is unable to depend upon the support and the loyalty of members of a community, it is not surprising that he does not wish "to become involved," to use a popular American phrase. If he sees a crime committed before his eyes, he is as likely as not to turn the other way. He may hesitate even to inform the police lest he, or a member of his family, be victimized. In this way, and in other ways to be mentioned presently, the unprecedented rise in street crime and violence in Western countries over the last thirty years can be traced back to technological innovation.

As a final observation, we may turn to a theme developed by the Scandinavian economist Stefan Linde in his *Harried Leisure Class* (1970), a theme that might be expressed in a re-coined phrase: too many goods chasing too little time.

Families in the West, especially in the U.S., are already under strain from the weight of abundance. Quite apart from inroads into their pattern of living made by the demands of their automobiles and their television and video sets, they are beset by the problem of time; time that is necessary to use their assorted sports gear and other recreational toys, time that is necessary to avail themselves of travel opportunities and "new and exciting" forms of entertainment.

Alas, they are finding that, there being only twenty-four hours in a day, it is time itself that places an irremovable constraint on their powers of consumption. Already, all too many of them live in a state of animated frustration amid the grow-

ing opportunities for accumulating possessions, and for recreation, entertainment and travel. Their homes are littered with newspapers, reports, and magazines that are scarcely glanced at, with books that never get read, with old transistor clocks, with electric gadgetry that is hardly used, with bargain clothes seldom worn, with discarded sports equipment, with drawers full of gifts, impulse-bought gew-gaws, and bric-a-brac, and on tables and desks and shelves, piles of subscription forms, postcards, sales catalogues, travel brochures, and jottings and memoranda.

How unsurprising then is the common complaint that "there is never time to do anything." Each day is felt to be incomplete; scarcely begun before it is over. One wonders nostalgically about an innocent age of man long ago when, as in childhood, time was abundant, when the hours lingered, the mind wandered, and the senses opened to the joys of the here and now.

Equity, Education, and Mobility

(2) Turning to the belief that continuing economic growth is necessary for a more equitable distribution of incomes, one is bound to be skeptical. Despite extensive and determined government intervention, economic growth over the last three decades has not succeeded in making a significant impression on the distribution of "real" disposable income. Nor would I care much if it did. While I would not deny the case for more discriminating methods of removing the remnants of hard-core poverty within the wealthier nations, the case in welfare and justice for spreading purchasing power more evenly among their citizens is dubious. Elaborating new techniques for the measurement of what we now call "relative deprivation" will continue to provide occupational therapy for some economists. But in those countries where the overwhelming majority of families live far above subsistence levels, it is not a concept that can excite genuine compassion. Current preoccupation with distributional issues in the West springs in the main from a growing impatience and envy among competing groups in a society whose economic life is shaped and powered by an ethos productive of restlessness and discontent. Certainly, the goal of material egalitarianism, as a component of social justice, has no panoramic appeal even if it could be realized without political coercion. If it has a philosophical vindication, it is one that rests on the belief in a deterministic universe, one in which each individual is wholly a victim of circumstances he is powerless to influence.

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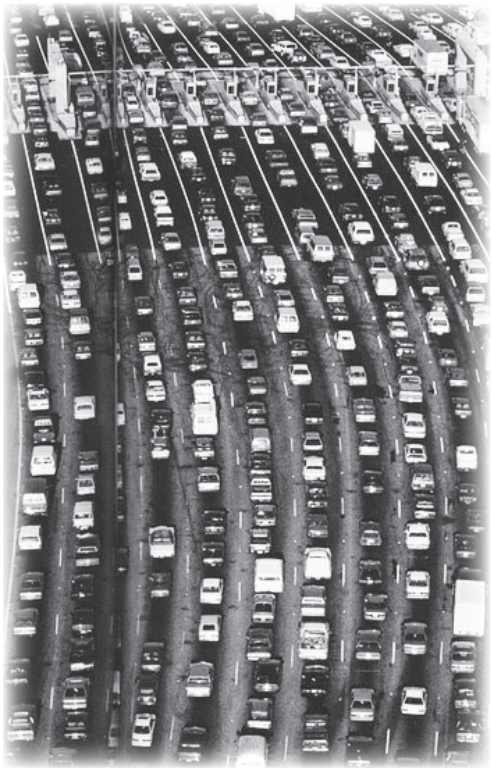
(3) The goal of increasing higher education serves the needs of economic or rather technological growth itself since so much of it is vocational

and technical. This sort of higher education is not education in the classical sense. It is not education in the humanities. It has no direct affinity with art or culture or civilized living. Indeed, the liberally educated man is today a figment. A man may be literate and well-read in a popular book-review sense. But he can be 'educated' only over a minute strip of the expanding spectrum of knowledge.

Hence the universities, or "multiversities," the centers today of what cynics call "the knowledge industry," are, in the nature of things, no longer able to produce educated men, or men of cultivated intelligence. They are geared to produce specialists, in particular scientists and technicians. The hyper-refined specialization involved in post-graduate work, which cramps the spirit and warps judgment, is the antithesis of the older ideas of education.



Even the spirit of humanity, and toleration, wont to be associated with the university, seems to have evaporated. Developments since the Second World War have made it evident that, in its new populist version, the university can no longer be thought of as a sort of secular cathedral conducive to detached reflection and uninhibited conjecture and debate. It is fast becoming a microcosm of the larger community. Into it are imported not only the political passions and prejudices of the community at large, but also its fashionable aberrations and trendy "liberation" movements. It is sad to recall, moreover, on so many occasions over the last decade, the one place within the Western democracies where a controversial issue could not be publicly debated were the university precincts.

Seen in perspective, the surrender of the original ideas of the university as to conform with a high-technology mass-consumption society, with its emphasis on vocational training, may be associated with the decline in the status and the influence of a more leisured and educated middle class and, consequently, with the decline of what used to be called the social graces, a decline in urbanity, a decline even in civility.

(4) Let us turn now to the goal of increased freedom of movement, long linked with the idea of progress, sometimes in the naive belief that travel broadens the mind. Whether in fact the package-tour explosion of the postwar era has done much more for the affluent masses than to narrow down the number of places worth traveling to, is doubtful.

The private automobile has multiplied like the locust, and like the locust has swarmed over and eaten the heart out of our cities and resorts. We think today of the ambient environment, whether urban or suburban, largely in terms of traffic opportunities or problems. We live, eat, work, sleep, in the midst of it all. Times and distances, road conditions, highway routes, peak hours, short cuts, traffic lights, freeways, one-way streets, road signs, parking spaces, auto repairs, car prices, car accidents, auto accessories, fuel bills—all these, along with the perpetual din, the dirt, fume, and danger, have become the everyday preoccupation of our hurried lives. New car-towers identify the modern city, which since the Second World War has become more of a venue for arrivals and departures, a place of perpetual transit and repair, one more node in the country's intricate network of roads and freeways, junctions and airways.

There are, indeed, many things essential to the good life that the market cannot be expected to produce. Of itself it cannot bring into being, nor can it ensure the existence of, the boisterous gaiety and the intermingling of animated crowds strolling along boulevards and about city centers. The operation of the market cannot ensure that the city is built on a human scale; for people, not for cars; for the hum

of human voices, not for the interminable roar of traffic. The operation of the market cannot of itself bring dignity, harmony, or inspiration into the urban environment.

Neither can the institution' of any system of property rights help (even if property rights were distributed equitably among the populace, they would be sold at the highest market price to motoring interests and ambitious developers). The great cities of antiquity (Athens, Rome, Antioch, Babylon), the cities of the early Renaissance (the statued squares and palaces of Florence and Venice), and the Georgian crescents of London, all these were not the products bf a commercial spirit. To be sure, wealth was needed, but it was not enough. This ennobling architecture arose from the ethos of a particular civilization, to be sure a more elite civilization than our own, one in which wealth and culture, life and art, were more close interknit. Possibly, only in smaller communities set in a less frantic age than ours can the current of civic pride flow strong and steady, and provide both the impulse and the dedication to create from stone and marble and glass and space a physical environment of grace and harmony, a source of joy to the citizen and an expression of faith in his future.

The Need for the Compassionate State

(5) Let us turn finally to those incurably optimistic liberals credulous enough to discover in the rise of the welfare state the emergence of what they love to call "the compassionate society." Reference instead to the "compassionate state" would provide a more revealing terminology.

In order to appreciate the origin and the raison d'être of the "compassionate state" one need not go far back in history: in Britain, to the collapse of the self-sufficient village community in the wake of the agricultural revolution, in the latter part of the eighteenth century, followed by the so-called Industrial Revolution. A century later, particularly after the Second World War, urban and suburban communities began to fold up. For in an increasingly mobile and anonymous society—each family equipped with its own set of electric labor-saving gadgetry, its television screen, its stereophonic equipments, its private automobile—people have become too hurried, too stretched, too strained, too "motivated," and too fearful of "slipping behind" or "missing out," to find the time to know or care much about their immediate neighbors. Indeed, over the last two decades, the media have reported innumerable instances of people being victimized in public, that is, of being visibly assaulted, robbed, raped, and even murdered while passers-by and lookers-on refuse to get "involved," not even bothering to call the police.

At all events it is just because, in our new super-affluent super-mobile mass civilization, ordinary people have begun to live under conditions in which they are evidently unwilling or unable to help or to care for each other that the state has, perforce, to expand the umbrella of its welfare and rescue services. In effect, since direct interpersonal compassion can no longer be depended upon in the new rootless metropolitan society that modern technology has brought into being, compassion itself has had to be institutionalized; it has therefore, in this form, had to be administered, in part by large voluntary organizations, but, in the main, by an army of state employees. Not surprisingly, however, this army of state-employed social workers has a strong vested interest in their vocation. As with all state bureaucracies, the members seek to augment their power; in this instance by seeking ways and means of increasing the numbers of their "clients," and the range of services that the government provides.

It is important to understand, moreover, that the growth of this "institutionalized compassion" not only replaces the personal compassion of the more traditional community, it also facilitates and fosters the spirit of irresponsibility—irresponsibility which is an important component of the psychological underpinning of the so-called permissive society. Just as a person has the choice of adopting regular health habits which require self-discipline or, alternatively, of indulging himself in all that strikes his fancy (in expectation that his abused body can be repaired when necessary by the medical profession), so society makes a similar choice and clearly has made a choice. As a whole it has chosen to be a "reactive" rather than a responsible society. It has

chosen to indulge itself in all innovations showing commercial promise, undeterred by evidence of the cumulative damage both upon the physical environment and upon the health and the character of the citizen. After all, a hideous environment, a population increasingly prone to nervous diseases, a rising trend of family breakdown, disorientated adolescents, youth delinquency, a phenomenal increase in pregnant schoolgirls, and so on—all these untoward developments offer vast opportunities for social workers, support their cry for more funds, for more social workers, for more counseling centers, for more psychiatric clinics, and for more scientific research!

The Computer Utopia

I turn, finally, to consideration of a development that is sure, incidentally, to increase the size and the power of governments: the microcomputer revolution. As I indicated at the beginning of my talk, mention the possible dangers of a new development and the knee-jerk reaction of our dedicated growth-men is to make merry with the clamor of false alarms that have run along the corridors of history. A global shortage of vital resources? What rot! Did not so eminent an economist as Jevons make a fool of himself by forecasting a shortage of coal before the end of the nineteenth century? Have not English writers since the time of Chaucer been lamenting the disappearance of the English countryside? Consequently, if I speak of this coming micro-electronic transformation of industry, and the fearful problems we shall struggle to cope with, you may depend upon it that complacent colleagues will at once hark back to the forebodings voiced during the "Industrial Revolution" and will be eager to remind me that it brought prosperity to the world and immeasurably improved the material condition for the working man. Ergo, we are not to worry. (Nonetheless, I might add in a footnote that a large proportion of two generations of working-class Englishmen suffered untold misery, and that the "dark satanic mills" of Lancashire were a terribly reality to numberless women and children who were brutalized, deformed, and went to an early grave. There were also frequent revolts, and more than once in the first half of the nineteenth century, England was near the edge of civil war.)

We may aptly refer to this dark episode of history as an earlier transitional period since I am addressing myself to this new industrial revolution which has just begun. Yet the difference between this new industrial revolution and the old is as remarkable as, in the military sphere, is the difference between gunpowder and atomic missiles—a difference of destructive power so great as to constitute a difference in kind.

And we are not talking of the future; the future has already arrived. Already it is technically feasible to use micro-electronic control devices as to render superfluous, in government, industry, and commerce, the greater part of the existing workforce.

The jobs that are becoming economically unnecessary are not only those that are monotonous, exhausting, distasteful, or dangerous. Computer design systems can perform faster and more accurately the skills of the plough-man, the printer, and the designer. Microcomputers are replacing typists in offices. Developments in telecommunications, and in the storage and manipulation of information, now threaten the functions of middle management and personnel. Computers that amass the accumulated knowledge of leading experts in the field will take over the greater part of the work of professional administrators, lawyers, doctors, and others. As indicated earlier, patient-monitoring devices in hospitals will drastically reduce nursing staff.

Personnel in travel agencies, in banks, in government offices, are being replaced by sophisticated machinery. Shopping in supermarkets will become superfluous as home links with terminal computers (possibly making use of the telephone system) take over. Industrial robots, once used for restricted operations, such as paint-spraying and welding, are now being designed to run machine tools and to do general assembly work, including such intricate jobs as installing lights in car instrument-panels. I have read of a company in Japan making robots which manage automated machine tools, and which can run five different machines at once.[3]

General progress in the design of computers of increased versatility and capacity is today so rapid that it has to be dated in months, not years. The transformation of the post-industrial economy has already begun, and one may confidently anticipate unprecedented labor turmoil over the next two decades. Only the tunnel-visioned technocratic mind can ignore the terrifying problems that will face modern nations during an indeterminate "transitional" period, and prematurely rejoice in the prospect of wealth and leisure to be placed within the grasp of all.

Conventional economic nostrums will have very limited application to a situation when, within a few short years, millions of workers in all the industrial countries will find their hard-earned skills superseded by micro-electronic devices. Let us look briefly at the alternative ways of coping.

(A) Attempts to maintain high employment with comparable hours of work is hardly feasible for two reasons. First, since any manual or mental skill that can be reduced to a routine or to a response-system can be taken over by a micro-computer, it is more than just possible that the kind of work at present seemingly beyond computer capacity (the work that in a computer economy still remains to be done by humans)—innovative activity, and work on computer designing and repairing—may also be beyond the capacity of most ordinary men and women. The larger part of a modern nation's potential labor force will, for the first time in history, be literally unemployable. Second, even if by some miracle the whole of such labor force could be productively employed, it would create output levels of products and services that are likely to exceed even the alleged insatiability of the American citizen, who, as alleged earlier, can no longer find the time to enjoy the uses of his accumulating possessions and the growing opportunities of amusement.

(B) The other alternative is obviously increased leisure for the masses—a capital idea, an age-old dream to be realized at long last! But consider the difficulties. First, just how much education, culture, and recreation can the ordinary person imbibe? How much more travel is possible? Cities, beaches, resorts the world over are barely able to accommodate the existing numbers of tourists. How much home television-computer entertainment can an unemployed adult stomach each day before wanting to scream? Second, what of the psychological strain of having to live with the knowledge that one is permanently unemployable. In all hitherto-existing societies, a man's daily work has been his anchor holding him to the real world, a ballast steadying his life, a routine imparting structure to it. If today so many older men with dwindling strength and energy become distressed or demoralized when compelled to retire from productive activity, how much harder will it be for the young and energetic to adapt to a life of compulsory leisure? To the man receiving it, a profit, a salary or wage is more than just a pecuniary return to his enterprise and effort: his remuneration is also perceived as a form of recognition, an assurance that the community places a value on his services, however humble. The payment for the services he renders is thus also a source of a man's self-esteem without which he is a pitiable creature.

Of course, our dedicated growth-men are sworn never to see problems; only to see "challenges." But recourse to semantics cannot assure their being met satisfactorily.

Some problems may indeed be well "beyond the wit of man" to resolve. Those mentioned above appear to me to fall into that category. We may confidently anticipate labor troubles galore over the next decade or so.

Beyond that, unlimited leisure for the mass of people looks to me to be a necessary economic consequence of the microcomputer revolution taking place in the prosperous countries of the world. But if such a mass-leisure society can be made viable, official propagation of a new concept of the purposes of life would be necessary, reinforced by new institutions and by more embracing forms of state control. For in a society of human drones, the risk of anomie or demoralization, and the reactions to it in outbreaks of hooliganism, rampage, and revolt, would be intensified. Already, it seems the best we can hope for is a society akin to Aldous Huxley's *Brave New World*.

To conclude, I have been unable, alas, to conform to the popular convention that bids the speaker end on a high note or at least a note of hope. I do not believe that there is any escape from the dilemma facing us: if we are able to survive the perils posed by ecological hazards, by the permissive society, and by the incipient computer revolution, it can only be at the cost of a more embracing and more repressive state. For so grim a prophesy, I beg your indulgence. ■

Endnotes

1. The price of the raw materials relative to the wage index (and even to the current price index).
2. In *The Costs of Economic Growth* (Penguin, 1967); *The Economic Growth Debate* (Allen and Unwin, 1977).
3. As is well known, Japan has (May 1982) more robots than the rest of the world put together. In two or three years it is expected that robots will machine and assemble other robots. It has been estimated that by the year 2000 there will be 10 million robots in Japan nearly 10 per cent of the current Japanese human population.

Dr. Albert Bartlett

Can you think of any problem on any scale, from microscopic to global, whose long-term solution is in any way aided, assisted, or advanced by having larger populations at the local level, state level, nationally, or globally? Can you think of anything that will get better, if we crowd more people into our towns, cities, states, nations, or world?

—Dr. Albert Bartlett, Professor of Physics, Colorado University (Ret.)