

THE CHALLENGE OF MAN'S FUTURE

by HARRISON BROWN

Industrialization of the underdeveloped areas of the world is one of the most formidable tasks confronting mankind today. We have the ability to do it. Do we have the vision and the will?

INDUSTRIALIZATION of the underdeveloped areas of the world is perhaps the most formidable task confronting mankind today. We must now ask: Can we visualize ways and means by which existing primitive agrarian societies can be transformed reasonably rapidly and smoothly into modern industrial societies?

Thus far we have discussed primarily the importance of family limitation as a necessary feature of such a transition. But we must recognize that even if family-limitation techniques should receive widespread acceptance, the path of industrialization would still be extremely difficult, and it would still be fraught with innumerable dangers.

An industrialization program must possess many interlocking features, no one of which can be divorced from the others. The ultimate goal of such a program would be to manufacture goods in sufficient quantity so that every person would have adequate housing, clothing, education, medical and public health facilities, and at the same time receive adequate nutrition.

In order to accomplish this end, factory buildings and production machines must be built, building materials must be produced, machines must be fabricated which in turn can be used to fabricate machines, metals must be produced, ores must be mined, fuels must be obtained, and transportation systems must be extended. Men must be trained to build and to operate the factories and transportation systems. *These men must come from the farms*, but they cannot leave the farms until food production per man-hour has been increased without decreasing crop yields—otherwise there would be a lowering of food production and more widespread starvation. In turn, a significantly increased food production per man-hour requires mechanization of farms. Mechanization of farms in turn requires machines, which in turn require a certain degree of industrialization if they are to be

*This article—the second of two parts—has been adapted from the concluding chapter of the book, *The Challenge of Man's Future*, by Harrison Brown, to be published March 19, 1954, by The Viking Press. Copyright 1954, Harrison Brown.*

manufactured and properly maintained. Thus, in a sense, the inhabitants of underdeveloped areas find themselves in a vicious circle which cannot easily be broken.

Industrialization requires enormous investments of materials and labor before goods can actually be produced, transported, and used. Obviously, if all persons in a given society must spend all of their working hours producing food for their own consumption, accumulation of a surplus becomes impossible. We have seen that if a surplus of food can be produced, some members of the society can engage in occupations other than farming and can manufacture goods. But unless a mechanism is available whereby a part of the effort can be channeled into the production of capital goods such as machines and factory buildings, which are not consumer items but which will later enable greater production of such items, industrialization cannot expand.

In other words, mechanisms must be available which enable persons to deprive themselves of consumer goods and instead to use a part of the surplus food and goods which they have produced for the purchase of capital items which are not immediately useful but which will eventually result in increased consumer production. Translated into terms of money, this process means that persons must refrain from spending all the money they derive from the sale of goods and other services, and the "savings" must be invested in capital goods that will result in increased production.

Capital investment

We can obtain some idea of the amount of capital investment that is required in a highly industrialized society by examining the capital resources of the United States. Prior to World War II, the real capital resources, exclusive of land, amounted to about 250 billion dollars, corresponding to an average of 2000 dollars for every person in the country. At the same time the average per capita income in the United States amounted to about 550 dollars per year. Simultaneously, the average per capita income in the underdeveloped areas of the world amounted to little more than 40 dollars per year.

If all underdeveloped areas at their existing population levels were to possess the per capita capital investment enjoyed by the United States immediately prior to World War II, the total investment in those countries would amount to about 3600 billion dollars. It has been estimated that a sum corresponding to about one-seventh that amount—about 500 billion dollars—would suffice over a 50-year period to switch about one-fourth of the labor force and their families from agricultural to industrial and commercial occupations. This would give them an economic situation similar to that which existed in prewar Japan.

In view of the low incomes of underdeveloped areas,

it is clear that industrialization requires either outside financing during the initial stages, or forced savings well above the voluntary rate, similar to the compulsory savings in the Soviet Union. However, even with strict totalitarian regimes of the Russian type, industrialization would necessarily proceed slowly in the absence of help from the outside, largely as the result of the unfavorable population-land-resource situations in most underdeveloped areas.

The most difficult part of an industrialization program is that of getting started. Once industrialization is well under way and goods begin to flow in increasing quantity, both per capita incomes and savings can increase rapidly. Substantial help from the outside can contribute greatly toward overcoming the initial hurdles and can accelerate the whole industrialization process.

Chances of success

It seems likely that, given concerted efforts of both the underdeveloped areas and the industrialized regions of the world, the standards of living of the underprivileged two-thirds of humanity could be raised significantly in about 50 years, and standards of living characteristic of the industrialized West of today might be attained in an additional 50 years without resorting to totalitarian methods. But it is equally likely that in the absence of concerted efforts and vigorous application of imagination and ingenuity to the problem, the programs would be doomed to failure. The chance of success is much greater for a vigorous program than for a half-hearted one.

Let us assume for the purpose of discussion that a degree of industrialization in the underdeveloped areas equivalent to that which existed in prewar Japan could be attained with an investment of about 500 billion dollars over a 50-year period. Let us assume further that an additional 100 billion dollars would be required for increasing agricultural production to the point where all persons would receive adequate nutrition. The average annual investment would then be somewhat over 10 billion dollars, of which perhaps one-half could be furnished over the entire period by the underdeveloped regions. During the initial years the domestic savings would provide only a small proportion of the required sums, but, as incomes increased in the underdeveloped regions, they would be able to provide an increasing proportion of the investment. On this basis, foreign investments averaging about 5 billion dollars annually over the 50-year period would be required. The annual requirement for foreign investments might be less than this during the initial years because of the limited existing capacity of most underdeveloped areas to absorb new capital. But the requirements for outside financing would rise rapidly. After about 30 years the require-

ments for foreign investment would begin to decrease as the result of increased local savings.

If the industrialized areas of the world were to join in recognizing the overwhelming importance of the problem, and would agree to take common action to speed the industrialization of the underdeveloped areas, the problems of financing would not be prohibitive. Largely because of the risk involved and the uncertain profits to be gained, it is difficult to visualize large amounts of private capital from Western nations contributing substantially to the development program. For this reason it seems likely that the greater part of the outside funds, at least during the initial stages, must be public funds.

On the basis of a policy of investing in proportion to ability to pay, the United States would at first carry the greater part of the financial burden—perhaps as much as three-quarters of the international investment during the first decade. But as the economic situation of Western Europe improves, the share from the United States might well decrease appreciably.

Comparative costs

The average cost to the United States of a world development program over a 50-year period might amount to between 4 billion dollars and 5 billion dollars annually. When we compare this figure to our national income, to our present federal budget, to the funds required for armament, and to the cost of waging war, the amount required does not appear to be excessive. When we compare it to the potential gains that can result from a successful development program, it appears even smaller. And when we compare the cost to that of inaction and to the consequences of attempting to maintain the status quo, it is indeed insignificant.

It is clear that the nations of the West possess sufficient resources and productive capacity to catalyze a successful world development program at the present time. Our physical ability to bring about successful transition is not one of the unknowns. We have the ability to do it; whether we have the vision and the will is another matter.

If industrial civilization eventually succumbs to the forces that are relentlessly operating to make its position more precarious, the world as a whole will probably revert to an agrarian existence. In such an event history will continue for as long a time as man exists. Empires, republics, and military states will rise and fall. There will be wars, migrations, and revolutions. Art, music, and literature will flourish, wane, then flourish again. As in the histories of the past and of the present, there will be unceasing change. Yet, looked upon over a period of thousands of years, history will have a sameness like the repeated performances of a series of elaborate epic plays in which, over the centuries, the actors change, the lan-

guages change, the scenery changes, but the basic plots remain invariant.

But if industrial civilization survives—if wars are eliminated, if the population of the world as a whole is stabilized within a framework of low death rates and low birth rates—will there continue to be human history? The terms “stability” and “security” imply predictability, sameness, lack of change. And these terms further imply a high degree of organization—universal organization to avoid war, local organization to produce goods efficiently—and organization in turn implies subjugation of the individual to the state, confinement and regimentation of the activities of the individual for the benefit of society as a whole.

Today we see about us on all sides a steady drift toward increased human organization. Governments are becoming more centralized and universal. In practically all areas of endeavor within industrial society—in our systems of production, in fields of labor, capital, commerce, agriculture, science, education, and art—we see the emergence of new levels of organization designed to coordinate, integrate, bind, and regulate men's actions. The justifications for this increasing degree of organization to which man must accommodate himself are expressed in terms such as “stability,” “security,” and “efficiency.”

The end result of this rapid transition might well be the emergence of a universal, stable, efficient, industrial society within which, although all persons have complete personal security, their actions are completely controlled. Should that time arrive, society will have become static, devoid of movement, fixed and permanent. History will have stopped.

To what purpose?

Here we indeed find ourselves on the horns of the dilemma. To what purpose is industrialization if we end up by replacing rigid confinement of man's actions by nature with rigid confinement of man's actions by man? To what purpose is industrialization if the price we pay for longer life, material possessions, and personal security is regimentation, controlled thought and controlled actions? Would the lives of well-fed, wealthy, but regimented human robots be better than the lives of their malnourished, poverty-stricken ancestors? At least the latter could look forward to the unexpected happening—to events and situations which previously had been outside the realm of their experiences.

In a modern industrial society the road toward totalitarianism is unidirectional. In days gone by men could revolt against despotism. People could arise against their governments in the absence of legal recourse, and with muskets, sticks, knives, and stones as their weapons they could often defeat the military forces of the central

authorities. But today our science and our technology have placed in the hands of rulers of nations weapons and tools of control, persuasion, and coercion of unprecedented power. We have reached the point where, once totalitarian power is seized in a highly industrialized society, successful revolt becomes practically impossible. Totalitarian power, once it is gained, can be perpetuated almost indefinitely in the absence of outside forces, and can lead to progressively more rapid robotization of the individual.

Thus we see that, just as industrial society is fundamentally unstable and subject to reversion to agrarian existence, so within it the conditions which offer individual freedom are unstable in their ability to avoid the conditions which impose rigid organization and totalitarian control. Indeed, when we examine all of the foreseeable difficulties which threaten the survival of industrial civilization, it is difficult to see how the achievement of stability and the maintenance of individual liberty can be made compatible.

Reducing the pressures

The view is widely held in our society that the powers of the machine will eventually free man from the burden of eking out an existence and will provide him with leisure time for the development of his creativity and enjoyment of the fruits of his creative efforts. Pleasant though this prospect may be, it is clear that such a state cannot come into existence automatically; the pressures forcing man into devising more highly organized institutions are too great to permit it. If he is to attain such an idyllic existence for more than a transitory period he must plan for that existence carefully, and in particular he must do everything within his power to reduce the pressures that are forcing him to become more highly organized.

One of the major pressures that give rise to the need for increasing numbers of laws, more elaborate organization, and more centralized government is increase of population. Increase of numbers of people and of population density results in greater complexities in day-to-day living and in decreased opportunities for personal expression concerning the activities of government. But even more important, as populations increase and as they press more heavily upon the available resources there arises the need for increased efficiency, and more elaborate organizations are required to produce sufficient food, to extract the necessary raw materials, and to fabricate and distribute the finished products. In the future we can expect that the greater the population density of an industrial society becomes, the more elaborate will be its organizational structure and the more regimented will be its people.

A second pressure, not unrelated to the first, results

from the centralization of industrial and agricultural activity and from regional specialization in various aspects of those activities. One region produces textiles, another produces coal, another automobiles, another corn, and another wheat. Mammoth factories require mammoth local organizations. Centralized industries must be connected, and this requires elaborate transportation systems. Regional localization of industries gives rise to gigantic cities, which in turn give rise to elaborate organization for the purpose of providing the inhabitants with the necessary food, water, and services. All of these factors combine to produce vulnerability to disruption from the outside, increased local organization and regimentation, more highly centralized government, and increasing vulnerability to the evolution of totalitarianism.

A third pressure results from increasing individual specialization and the resultant need for "integration," "coordination," and "direction" of activities in practically all spheres of vocational and leisure activity. It results in the placing of unwarranted trust in "integrators," "coordinators," and "directors." Early specialization results in lack of broad interests, lessened ability to engage in creative activities of other individuals, and lessened abilities to interpret events and make sound judgments. All of these factors combine to pave the way for collectivization, the emergence of strong organization, and, with it, the great leader.

Strong arguments can be presented to the effect that collectivization of humanity is inevitable, that the drift toward an ultimate state of automatism cannot be halted, that existing human values such as freedom, love, and conscience must eventually disappear.

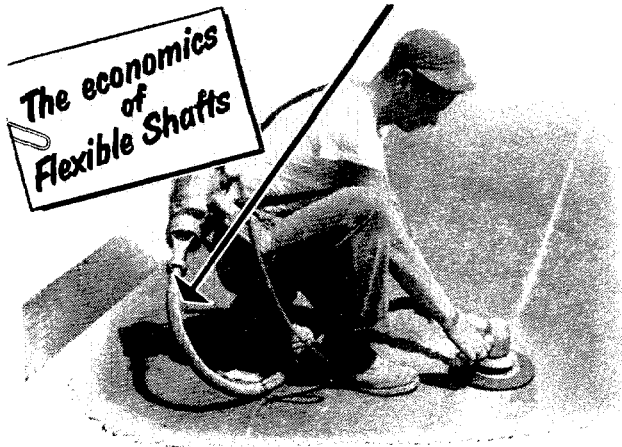
Industrial civilization and human values

Certainly if we used the present trends in industrial society as our major premises, the conclusion would appear to be inescapable. Yet is it not possible that human beings, recognizing this threat to the canons of humanism, can devise ways and means of escaping the danger and at the same time manage to preserve those features of industrial civilization which can contribute to a rich, full life? Is it really axiomatic that the present trends must continue and that in the long run industrial civilization and human values are incompatible? Here, in truth, we are confronted with the gravest and most difficult of all human problems, for it is one that cannot be solved by mathematics or by machines, nor can it even be precisely defined. Solutions, if they exist, can arise only in the hearts and minds of individual men.

The machine has divorced man from the world of nature to which he belongs, and in the process he has lost in large measure the powers of contemplation with

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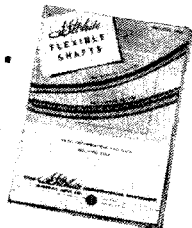


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MAN'S FUTURE . . . CONTINUED

which he was endowed. A prerequisite for the preservation of the canons of humanism is a reestablishment of organic roots with our natural environment and, related to it, the evolution of ways of life which encourage contemplation and the search for truth and knowledge. The flower and vegetable garden, green grass, the fireplace, the primeval forest with its wondrous assemblage of living things, the uninhabited hilltop where one can silently look at the stars and wonder—all of these things and many others are necessary for the fulfillment of man's psychological and spiritual needs. To be sure, they are of no "practical value" and are seemingly unrelated to man's pressing need for food and living space. But they are as necessary to the preservation of humanism as food is necessary to the preservation of human life.

I can imagine a world within which machines function solely for man's benefit, turning out those goods which are necessary for his well-being, relieving him of the necessity for heavy physical labor and dull, routine, meaningless activity. The world I imagine is one in which people are well fed, well clothed and well housed. Man, in this world, lives in balance with his environment, nourished by nature in harmony with the myriads of other life forms that are beneficial to him. He treats his land wisely, halts erosion and over-cropping, and returns all organic waste matter to the soil from which it sprung. He lives efficiently, yet minimizes artificiality. It is not an overcrowded world; people can, if they wish, isolate themselves in the silence of a mountaintop, or they can walk through primeval forests or across wooded plains. In the world of my imagination there is organization, but it is as decentralized as possible, compatible with the requirements for survival. There is a world government, but it exists solely for the purpose of preventing war and stabilizing population, and its powers are irrevocably restricted. The government exists for man rather than man for the government.

Create a world

In the world of my imagination the various regions are self-sufficient, and the people are free to govern themselves as they choose and to establish their own cultural patterns. All people have a voice in the government, and individuals can move about when and where they please. It is a world where man's creativity is blended with the creativity of nature, and where a moderate degree of organization is blended with a moderate degree of anarchy.

Is such a world impossible of realization? Perhaps it is, but who among us can really say? At least, if we try to create such a world there is a chance that we will succeed. But if we let the present trend continue it is all too clear that we will lose forever those qualities of mind and spirit which distinguish the human being from the automaton.