

THE CONSEQUENCES OF GLOBAL SOCIAL CHANGE FOR HUMAN DEVELOPMENT

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Summary

Technical advances have extended human reach beyond the constraints of environment, tradition, and locale. To a greater extent than ever before, human beings can modify the material, social, and even environmental conditions under which they live. As species, we can do more than we know how to do, or manage, well. Our extended reach provides unparalleled opportunities to improve the quality of human existence: We now know how to make good basic education and health available to all. We have eliminated many diseases and developed new sources of food. We have agreed on

social and economic obligations to each other and our children. We have established legal principles that supercede the individual, clan, and, sometimes, the nation. Our stock of knowledge doubles every few decades, and we have increased the productivity of land, machine, and people hundreds-fold. This article begins with a discussion of seven major social changes that have transformed the world in which human beings live. The second section outlines some of the human consequences of those changes. The article concludes that human beings have substantially loosened the environmental constraints of population, economic constraints on good health and education for all, and physical constraints on lifespan and disease. Many of the previous oppressions have been challenged and overcome, but humans seem powerless in their inability to stop war or to close the gap between haves and have-nots.

1. Introduction

Advances in science and technology have extended the hands and brains of the human species to the point where human beings can now alter, irreversibly in some cases, the physical, material, social and cultural conditions under which it lives. In many ways, human capacities to change the environment extend beyond the order and the boundaries provided by traditional ways of living and thinking. Humans now know how to do more than they know how to manage. The new social world provides many people with unprecedented opportunities to improve the quality of their lives. Others, however, are less well off than before, less able to care for themselves, and less able to participate in the ongoing process of human development. Change has been profound, resulting in both a greatly increased globalization of communication, economy, and culture and a paralleling increase in reliance on local identity, practices, and beliefs. While global, the new world lacks an overall legitimate authority. There is no unifying culture from which all derive meaning. In such a world, the “haves” are likely to profit, the “have-not’s” to fall behind.

The first section of this article discusses seven major social changes that have transformed the social world in which human beings live. The second section then outlines some of the human consequences entailed in those changes. Necessarily, the view here is a broad one, unfaithful to the particulars of specific localities. It is hoped, nonetheless, that some of the great trends can be portrayed for what they are, a thorough re-ordering of the conditions of human existence.

2. The Nature of Global Social Changes

At least seven major social changes have transformed the conditions under which human beings live. For purposes of this discussion, which emphasizes social rather than economic change, some areas are more elaborated than others. Yet all interact and play a major role in reshaping the world.

2.1 Advances in Science and Technology

Improvements in science and technology lie behind most of the other social transformations of twentieth century social life. Research and applications in biology and medicine, productive and information technologies, weaponry, have transformed

quite radically the conditions of human existence. It is conceivable, now for the first time, for a human-created weapon to destroy the basis of life on earth. Biologists have learned enough about the building blocks of nature to modify the genetic code. New technologies have led to increases in global food production that, for a time at least, outstripped growth in population. The species continues to generate knowledge, the knowledge base growing at exponential rates, doubling every decade or so. Because of their capacity to shake the foundation of existence, these advances challenge us to bound our activities in ways we have not had to before.

2.2 Demographic Transitions

Twentieth century reductions in mortality must be understood in the context of larger demographic trends over the past several centuries, especially in terms of population growth, mortality decline, fertility decline, along with corresponding changes in norms and values and shifts in the roles of women and children. Though demographers and economists disagree about the causal mechanisms involved, there is general consensus about what has happened.

Population growth, for most of human history, remained near zero. There was a rough equilibrium achieved between population and resources. Periods of rapid population growth were followed by periods of high mortality. In the 1500s world population started to grow, perhaps as a result of new sources of food, the rate of growth increasing after the mid-1700s particularly in Europe. Since then, population has increased more and more rapidly. Between 1950-1975, for example, the world grew by 2 percent per year, a rate that results in doubling of the population in 35 years.

Prior to the industrial revolution, the food supply served as the major factor limiting population growth. Technical advances over the past century have considerably loosened this constraint. Improvements in transportation permit food to be brought to populations unable to raise their own. Improvements in crops, fertilizers, and pest control have increased yields faster than growth in population, a trend that will be enhanced by advances in genetic science and bioengineering. Environmental conditions are much less determinative than prior to the industrial revolution. Still, time population growth can only be sustained to the extent that resources are, or can be made, available.

Population growth has both positive and negative effects, depending on a complex set of internal and external social and economic factors. In pre-industrial societies, large populations served as a resource for agriculture, military, taxation. Larger societies tended to be richer and more powerful. This relationship shifted with industrialization. Now, large populations often represent poverty rather than wealth, a burden to be supported rather than a resource. In any society, population growth increases the pressure on resources and can reduce the quality of life. Still, population pressure can lead to technological and social change resulting in technical progress and increases in production and consumption. People in the industrialized nations represent a minority of the world's population, but generate, and consume, most of its production. In doing so, they utilize a substantial majority of the resources consumed, and generate most of the waste.

Demographic change is commonly understood in terms of demographic transition theory, a model of demographic change and modernization that summarizes in broad strokes the population shifts that have taken place in industrialized nations over the past 200 years. Stage 1 was characterized by high levels of mortality due to poor socioeconomic conditions and a lack of scientific knowledge about how to prevent mortality. Population growth was minimal, kept in check by high levels of mortality in general, as well as periodic crises – epidemics, famines, wars – often lasting decades or more. Fertility was high. Social and cultural norms corresponded to demographics, especially vis a vis the value placed on fertility and the roles of women and children. Stage 2 saw slow declines in mortality in Europe and North America during the 18th and 19th centuries. Mortality decline during this period was due to better sanitation and hygiene, improved supplies of food as well as some progress in disease control, for example small pox vaccinations. Declines in mortality led to increased population pressures at both national and household levels. While social norms still valued high levels of fertility, it too eventually began to decline. Stage 3 has brought scientific advances that have further increased the pace of mortality decline. Life expectancy increased to 60 to 70 or more years in the industrial nations in the 20th century, and fertility has declined to near, sometimes even below, replacement levels. The industrialized nations are now in stage 3. Developing countries are in stages 2 moving toward 3. While there is debate about the number and nature of stages as well as the extent to which demographic transition theory adequately captures developing country experience, the general trends of reductions in mortality, population growth, then reductions in fertility appears to be universal and irreversible. These changes often take place quite quickly. Infant mortality in Mexico, for example, declined from 13% in 1950 to 3% in 1992. Fertility has fallen from an average of 7 children per family in 1970 to 3.2 in 1992 (see, for example, McCaa).

These demographic changes present a dramatic challenge to the norms and culture and the economic order around which traditional societies are organized. Where mortality and fertility are high, for example, in agricultural societies, education is of relatively little value. Children tend to represent a resource to be utilized in labor. Given a greater likelihood of survival, however, investment in children in the form of education becomes economically viable. At the same time, however, that investment in children increases future potential benefits, it increases present costs. Higher costs and greater likelihood of survival leads families to desire fewer children, but children of higher “quality.” Quality begins to supplant quantity. The intergenerational flows of income are reversed, from children providing income to parents to parents investing in children.

Though the directions and nature of causality is debated, the roles of women also appear to shift in significant ways in societies undergoing demographic transition. The age of marriage increases as the average number of children borne by each woman falls. Economic changes often require women to generate additional family income with paid work. Work outside the home increases women’s independence and income, reducing their economic and social dependence on male family members. The possibility of work increases the investment value of educating women. Educated women become more valuable. They are more likely to delay marriage and have fewer children. Better enabled to care for themselves and their children, they take steps that result in lower mortality and fertility. At the same time, educated women are more likely to make

decisions independently of wisdom received from traditional sources. In several ways, the increasing value of women, their increasing economic role and independence from child-bearing and care responsibilities along with redefined roles for children challenge traditional hierarchies and value systems that place women and children in subordinate roles.

2.3 Improvements in Health and Survival

Demographic change has been augmented by progress in science and technology. The nutritional, hygienic, and economic improvements that helped initiate mortality decline in Europe and North America in the 19th century were amplified in the 20th by medical advances, which dramatically improved the health of citizens in the wealthier nations and then spread throughout the world. In the United States, for example, life expectancy nearly doubled between 1900 and 2000. After centuries of relatively stable levels of high mortality, poorer countries have experienced tremendous reductions in mortality rates. In Mexico, for example, life expectancy has risen from an estimated 25 years historically to 70 years in 1992 (McCaa).

Medical advances have considerably weakened economic constraints. Whereas dramatic reductions in mortality had previously taken place only in wealthy nations, good health has become substantially delinked from national income. Some extremely poor nations and regions within nations have mobilized the technical and political wherewithal to improve the health of their populations far beyond average levels predicted by per capita national income (Caldwell, 1986). Sri Lanka, the Indian state of Kerala, China, Costa Rica, Cuba have all mobilized to reduce mortality substantially more than many wealthier nations. The critical ingredients appear to be high levels of female education, a political commitment to mass provision and access to basic health and education services, and relatively egalitarian relations between women and men. The social insight is that economics need not be determinative of basic public health.

It has become a matter of course that many diseases can be controlled, even eliminated. Unicef regularly sets targets for the eradication of childhood diseases. International mobilization maintains regular immunization of 75 percent of the world's children against diphtheria/pertussis/tetanus (Unicef, 2002). These achievements represent successful mobilization of medical as well as political, financial, and social political factors.

Medical advance improved the reliability of birth control, thus dramatically changing the life options for women of relative means.

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Biographical Sketch

James H. Williams is Director of the International Education Program at The George Washington University and an assistant professor of international education and international affairs. He has an Ed.D. from Harvard University in International Education. His research has included work on the effects of mass education on health, civic behavior, and labor; education and gender; the relationship between education and conflict; and the distribution and correlates of socioeconomic gradients in education. He has worked in a number of countries in Asia, Japan, Cambodia, Azerbaijan, and Armenia; and sub-Saharan Africa, Botswana, Zimbabwe, South Africa, Malawi, Ghana, and Ethiopia. He has carried out research for a variety of United Nations agencies and development organizations in Washington DC, New York, Geneva, and Paris, including UNESCO, IIEP, Unicef, the World Bank, USAID, CARE, U.S.

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