Problems of Rapid Population Growth

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During the next four decades, we will witness the greatest increase in human numbers in all history. According to the latest United Nations estimates, the world population will nearly double from 5.5 billion today to 10 billion in 2050, before leveling off at 11.6 billion after 2150. For the remainder of this century, the world will add 97 million new people every year.

Practically all of this increase will occur in countries that have the fewest resources to deal with rapid population growth. Ninety-seven percent of the increase is expected to occur in the developing countries of Asia, Africa, and Latin America. Africa alone is expected to account for one-third of the rise.

This unprecedented growth in human numbers will have profound political, economic, health, and ecological effects. In much of the developing world, population growth rates will outpace national economic growth, leaving greater numbers of people living in absolute poverty. Moreover, rapid population growth will overwhelm the very health and educational services that offer the promise of raising the standard of living of the poor. Many developing countries have already experienced cutbacks in primary health care systems, with a lessening of immunization rates and with fewer per capita resources for control of such widespread health problems as malaria, tuberculosis, and parasitic diseases.

A critical concern is whether the earth can provide adequate food for 10 billion people. In recent years, substantial increases in agricultural productivity have matched population growth. Between 1950 and 1990, the world's population increased from about 2.5 to 5 billion, but the "green revolution" in agriculture prevented famine on a massive scale. The development of new high-yielding varieties of seeds, combined with increased irrigation, fertilizer use, and the amount of land under cultivation produced significant yield increases.

Now, however, there is widespread agreement among agricultural experts that engineering a second green revolution to outpace the next doubling of the world's population will be much more difficult if possible at all. Most of the world's arable land is already in use. In addition, crop yields are rising more slowly and, in some parts of the developing world, are declining. Finally, irrigation, once viewed as a solution, has become a major problem. Irrigation accounts for most of the freshwater used each day, contributing to serious water depletion in much of the world. Moreover, it is now estimated that half of the total irrigated cropland may be in danger from deteriorating soil, primarily salinization (United Nations Population Fund, 1991).
The earth appears to be approaching its maximum agricultural capacity, with its depleted soil and water resources unable to support another 5 billion people.

The effects of rapid population growth are not limited to economic and land resources at the national level. There is growing recognition of the significant negative impact of population growth and consumption activities on global climatic changes. Of greatest concern is the progressive accumulation of greenhouse gases in the atmosphere (principally carbon dioxide) that are thought to increase global temperatures. Warming, in turn, will lead to worldwide changes in weather conditions and to a rise in the sea level, the ecological consequences of which remain unclear.

Human activities such as the burning of fossil fuels, deforestation, rice cultivation, use of fertilizers in agriculture, and production of chlorofluorocarbons lead to the emission of a number of greenhouse gases. Developed countries currently account for the majority of greenhouse gases, due to their heavy use of fossil fuels. In the developing world, however, rapid rates of population growth and economic development are expected to raise its emissions above those of the developed world for most of the next century (Bongaarts, 1992). Reversal of the greenhouse effect would entail increasing the tree cover of the globe and reducing the combustion of fossil fuels. These outcomes would be difficult to attain with a stable population and appear to be impossible in the coming decades of unparalleled population growth. If current predictions of population growth prove accurate and patterns of human activity of the planet remain unchanged, science and technology may not be able to prevent irreversible degradation of the environment or continued poverty, sickness, and starvation for much of the world.

These projections are frightening because of their massive global scale. However, it is important that the scope of the problems does not divert us from realizing that concealed behind these trends is the reproductive behaviors of individual families. If we double the world's population it will be one birth at a time. Conversely, efforts to slow the rate of growth must in some way influence the reproductive behaviors of individual couples. But how can couples be influenced to have fewer children?

This question has fascinated a growing number of psychologists, sociologists, anthropologists, and economists. Rather than attack the change question directly, their efforts have focused on understanding the central issue of why people want children. By analyzing the motivational underpinnings of high fertility, they hope to identify humanistic means by which the socially desirable end of reduced fertility can be obtained. In the paragraphs that follow, I will briefly review some of the major findings concerning the motivation for children. I will then discuss research on fertility regulation decisions. In both of these sections, I will focus on findings from developing countries.

In most of the developing world, couples living in traditional agrarian societies have large families. The explanations for this high fertility can be found in the positive advantages, at the familial level, of having many children. John Caldwell (1983) presents one of the best summaries of the direct economic costs and benefits of children. Foremost among these benefits, children represent an investment for the future. For most of the world's population, the only satisfactory source of protection and support in old age is surviving children.

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The second major benefit of children in traditional agrarian societies is that they are an important source of relatively inexpensive labor. Most children in these societies work from a very young age, often starting when they are less than 10 years old. As adolescents, they are expected to be almost as productive as adults. The children live very modestly and do not have first claim on food or other work profits. Caldwell argues that in traditional societies, before the onset of a fertility decline, net intergenerational wealth flows in an "upward" direction, from children to parents.

To take his analysis one step further, when net intergenerational wealth (including labor and services, goods and money, and old age support) flows in a "downward" direction, from parents to children, lower fertility should result. Factors that increase the cost of children and the downward flow of wealth include urbanization; compulsory primary and early secondary school attendance; nonfamilial employment structures; women having access to income earning opportunities, including jobs not easily compatible with childbearing and childrearing; and the development of private and public insurance and pension schemes. Consistent with Caldwell's theory, when at least some of these conditions are met, the demand for large families decreases.

The discussion up to this point, focusing only on the economic costs and benefits of children, must seem like a "cold" view of parents' fertility motives. Clearly the benefits of children are not limited to the economic. A number of psychosocial values influence couples' motivation for children: the desire for companionship; the need to love and be loved by children; the play, fun, and distraction that children provide; the desire to continue the family name; the search for a sense of achievement from having children; the idea that children provide fulfillment, improve character, and allow one to attain goals vicariously; and the desire to fulfill religious or social obligations or to attain adult status through having children. These values have the potential to vary in importance across cultures and social classes, and could, in many settings, be more prominent than economic factors.

Comparative research by James Fawcett (1983) and his colleagues provides the most comprehensive information on the relative importance of the psychosocial and economic values of children. Their studies focus predominantly on a selection of East and Southeast Asian nations. And, unlike many other fertility studies, in which motives are inferred from behavior, these researchers asked the couples themselves to identify and rate the significance of various costs and benefits of children. In a number of important ways, their findings are consistent with the findings cited above on the economic determinants of fertility.

In each of the high fertility developing countries that they have studied, many couples view instrumental contributions as a main reason for having children. General financial and practical assistance from children, along with expected help in old age, are among the most frequently cited advantages of children. By contrast, very few respondents in more developed countries cite any economic advantages to children. Instead they focus on the companionship children provide, their role in personal development, and their strengthening of the marital bond. These differences among countries are repeated when rural and urban groups are contrasted within each of the Asian countries. Rural parents emphasize the economic and practical benefits to be derived from children. Urban parents emphasize the psychological and emotional benefits that result from interacting with children and guiding their growth and development. On the negative side, urban parents are concerned about opportunity costs and restrictions on freedom, along with economic costs, while rural parents tend to give greatest weight to economic factors and the physical burden of children.

Fawcett (1983) has summarized these findings by noting that "where children have economic or practical value in the household, these benefits dominate the way parents perceive the satisfactions of children. Only when the instrumental value of children is absent or of lesser consequence are children valued primarily for the emotional rewards they provide to parents" (pp.433-434). He goes on to point out that the pattern of costs attributable to children seems to reflect conditions external to the household, such as the availability of alternative sources of gratification in urban areas and in societies at higher levels of development, as well as differences in preferences and income at the household level.

The discussion up to this point is certainly consistent with the idea that "economic development is an excellent contraceptive." Rural and traditional settings, in which the net benefits of children are the greatest, and the odds of children surviving to adulthood are the lowest, are associated with
higher levels of fertility. With modernization and urbanization, the net costs of children increase, resulting in lower levels of fertility. However, while development might serve as an effective contraceptive, it tends not to be a fast-acting method. Human fertility behavior often adjusts slowly to economic change, and economic development is only at a nascent stage in much of sub-Saharan Africa and south Asia—regions with some of the fastest population growth. As a result, population researchers have continued to search for alternative ways to reduce population growth.

Recent changes in some developing countries indicate that rising incomes and urban life are not necessary preconditions for reducing the size of families. The evidence from countries like Thailand, Sri Lanka, and Indonesia shows that fertility rates can drop sharply in poor countries if governments adopt the right policies. For example, in 1965, the average Thai woman had 6.3 children but by 1987 this figure had fallen to 2.2. Yet as late as 1989 Thailand was only 22 percent urbanized and two-thirds of the population worked in agriculture.

What distinguishes many of the developing countries that have had the greatest success in slowing population growth is the attention to the human aspects of development. Key factors are better education and health care for women, including the provision of acceptable and accessible methods of family planning. Not surprisingly, women who have easier access to modern contraceptives tend to use them more, and those who do use them have fewer and healthier babies.

The mere presence of family planning programs has an impact for two reasons. First, there are large numbers of women who want no more children but lack access to contraceptives. Surveys carried out in developing countries in the late 1980s revealed an unmet need for contraception, ranging from a high of 24 percent in sub-Saharan Africa to a low of 13 percent in Asia (World Health Organization, 1992). Simply making services available to these women would have a measurable impact on birth rates. Second, quality family planning services create the demand for more family planning. As Harrison (1992) has described, contraceptive technology, with the education and discussion that accompany it, make more women aware that they can space their births or limit their family size—at the same time as providing easier ways of doing so.

Great strides have been made over the past 20 years in improving the accessibility of family planning services. The World Health Organization (1992) estimates that 60 percent of the people in developing countries have access to at least one safe and effective method of contraception. There are, however, wide differences among regions in the availability of family planning. Couples in East Asia have almost universal access to contraceptives. In Southeast Asia and Latin America, roughly half the population has access. But in the Near East and North Africa, the proportion falls to 13–25 percent. In sub-Saharan Africa the situation is dire with fewer than 10 percent of the couples having access. In sum, 300 million couples who do not want any more children have no access to safe and reliable forms of contraception.

A sustained and concerted program is needed to curb the expansion of the world’s population. This action is necessary to reduce poverty and hunger and to protect the earth’s natural resources. There is clearly an important role for social scientists in these efforts. More needs to be understood of the social, economic, and motivational determinants of the demand for large families and of the manner in which these demands respond to structural changes. More information also is needed about the conditions under which the supply of family planning services contributes to reductions in fertility. Social scientists have an important role to play in the design of culturally acceptable family planning services, and in the creation of appropriate information, education, and communication programs (Davidson, 1989). There is much wisdom that is available to build upon. However, the challenges to be faced are daunting and complex and we have only a limited amount of time to deal with them.

REFERENCES


