

large, relatively untapped pool of intellectual and technical talent; tapping that pool effectively could help reduce population growth and also would provide many other direct benefits to any society.

Social pressures on both men and women to marry and have children must be removed. As former Secretary of Interior Stewart Udall observed, "All lives are not enhanced by marital union; parenthood is not necessarily a fulfillment for every married couple."<sup>98</sup> If society were convinced of the need for low birth rates, no doubt the stigma that has customarily been assigned to bachelors, spinsters, and childless couples would soon disappear. But alternative lifestyles should be open to single people, and perhaps the institution of an informal, easily dissolved "marriage" for the childless is one possibility. Indeed, many DC societies now seem to be evolving in this direction as women's liberation gains momentum.<sup>99</sup> It is possible that fully developed societies may produce such arrangements naturally, and their association with lower fertility is becoming increasingly clear. In LDCs a childless or single lifestyle might be encouraged deliberately as the status of women approaches parity with that of men.

Although free and easy association of the sexes might be tolerated in such a society, responsible parenthood ought to be encouraged and illegitimate childbearing could be strongly discouraged. One way to carry out this disapproval might be to insist that all illegitimate babies be put up for adoption—especially those born to minors, who generally are not capable of caring properly for a child alone.<sup>100</sup> If a single mother really wished to keep her baby, she might be obliged to go through adoption proceedings and demonstrate her ability to support and care for it. Adoption proceedings probably should remain more difficult for single people than for married couples, in recognition of the relative difficulty of raising children alone. It would even be possible to require

<sup>98</sup>1976: *Agenda for tomorrow*.

<sup>99</sup>Judith Blake, The changing status of women in developed countries; E. Peck and J. Senderowitz (eds.), *Pronatalism, the myth of mom and apple pie*; Ellen Peck, *The baby trap*.

<sup>100</sup>The tragedy of teenage single mothers in the U.S. is described by Leslie Aldridge Westoff in *Kids with kids*. The adverse health and social effects of teenage child-bearing in an affluent society have recently been documented by several studies. One good sample can be found in a special issue of *Family planning perspectives*, Teenagers, USA.

pregnant single women to marry or have abortions, perhaps as an alternative to placement for adoption, depending on the society.

Somewhat more repressive measures for discouraging large families have also been proposed, such as assigning public housing allowances to families with children, removing dependency allowances from student grants or military pay. Some of these have been implemented in crowded Singapore, whose population program has been counted as one of the most successful.

All socioeconomic measures are derived from knowledge of social conditions that have been associated with low birth rates in the past. The more repressive suggestions are based on observations that people have voluntarily controlled their reproduction most stringently during periods of great social and economic stress and insecurity, such as the Depression of the 1930s.<sup>101</sup> In a sense, all such proposals are shots in the dark. Not enough is known about fertility motivation to predict the effectiveness of such policies. Studies by demographer Judith Blake<sup>102</sup> and by economist Alan Sweezy<sup>103</sup> for instance, have cast serious doubt on the belief that economic considerations are of the greatest importance in determining fertility trends. Sweezy has shown that the decline of fertility in the 1930s in the United States was merely a continuation of an earlier trend. If their views are correct, then severely repressive economic measures might prove to be both ineffective and unnecessary as a vehicle for population control, as well as socially undesirable. At the very least, they should be considered only if milder measures fail completely.

### Involuntary Fertility Control

The third approach to population limitation is that of involuntary fertility control. Several coercive proposals deserve discussion, mainly because some countries may ultimately have to resort to them unless current trends in birth rates are rapidly reversed by other means.<sup>104</sup> Some

<sup>101</sup>Richard A. Easterlin, *Population, labor force, and long swings in economic growth*. Further discussion of Easterlin's ideas can be found in Deborah Freedman, ed., *Fertility, aspirations and resources: A symposium on the Easterlin hypothesis*.

<sup>102</sup>Are babies consumer durables? and Reproductive motivation.

<sup>103</sup>The economic explanation of fertility changes in the U.S.

<sup>104</sup>Edgar R. Chasteen, *The case for compulsory birth control*.

involuntary measures could be less repressive or discriminatory, in fact, than some of the socioeconomic measures suggested.

In the 1960s it was proposed to vasectomize all fathers of three or more children in India. The proposal was created not only on moral grounds but on practical ones as well; there simply were not enough medical personnel available even to start on the eligible candidates, let alone to deal with the new recruits added each day! Massive assistance from the developed world in the form of medical and paramedical personnel and/or a training program for local people nevertheless might have put the policy within the realm of possibility. India in the mid-1970s not only entertained the idea of compulsory sterilization, but moved toward implementing it, perhaps fearing that famine, war, or disease might otherwise take the problem out of its hands. This decision was greeted with dismay abroad, but Indira Gandhi's government felt it had little other choice. There is too little time left to experiment further with educational programs and hope that social change will generate a spontaneous fertility decline, and most of the Indian population is too poor for direct economic pressures (especially penalties) to be effective.

A program of sterilizing women after their second or third child, despite the relatively greater difficulty of the operation than vasectomy, might be easier to implement than trying to sterilize men. This of course would be feasible only in countries where the majority of births are medically assisted. Unfortunately, such a program therefore is not practical for most less developed countries (although in China mothers of three children are commonly "expected" to undergo sterilization).

The development of a long-term sterilizing capsule that could be implanted under the skin and removed when pregnancy is desired opens additional possibilities for coercive fertility control. The capsule could be implanted at puberty and might be removable, with official permission, for a limited number of births. No capsule that would last that long (30 years or more) has yet been developed, but it is technically within the realm of possibility.

Various approaches to administering such a system have been offered, including one by economist Kenneth

Boulding.<sup>105</sup> His proposal was to issue to each woman at maturity a marketable license that would entitle her to a given number of children—say, 2.2 in order to have an  $NRR = 1$ . Under such a system the number could be two if the society desired to reduce the population size slowly. To maintain a steady size, some couples might be allowed to have a third child if they purchased "dec-child" units from the government or from other women who had decided not to have their full allotments of children or who found they had a greater need for the money. Others have elaborated on Boulding's idea, discussing possible ways of regulating the license scheme and alternative ways of allotting the third children.<sup>106</sup> One such idea is that permission to have a third child might be granted to a limited number of couples by lottery. This system would allow governments to regulate more or less exactly the number of births over a given period of time.

Social scientist David Heer has compared the social effects of marketable license schemes with some of the more repressive economic incentives that have been proposed and with straightforward quota systems.<sup>107</sup> His conclusions are shown in Table 13-5.

Of course, a government might require only implantation of the contraceptive capsule, leaving its removal to the individual's discretion but requiring reimplantation after childbirth. Since having a child would require positive action (removal of the capsule), many more births would be prevented than in the reverse situation. Certainly unwanted births and the problem of abortion would both be entirely avoided. The disadvantages (apart from the obvious moral objections) include the questionable desirability of keeping the entire female population on a continuous steroid dosage with the contingent health risks, and the logistics of implanting capsules in 50 percent of the population between the ages of 15 and 50.

Adding a sterilant to drinking water or staple foods is a suggestion that seems to horrify people more than most proposals for involuntary fertility control. Indeed, this

<sup>105</sup>*The meaning of the 20th century*, pp. 135–136.

<sup>106</sup>Bruce M. Russett, *Licensing: for cars and babies*; David M. Heer, *Marketing licenses for babies*; Boulding's proposal revisited.

<sup>107</sup>*Ibid.*

TABLE 13-5  
*Evaluation of Some Relatively Coercive Measures for Fertility Reduction*

Effect	Marketable license systems		Financial incentive systems			Quota systems
	<i>Boulding proposal for baby licenses</i>	<i>Baby licenses that may be sold or lent at interest to the government</i>	<i>Monthly subsidy to persons with no more than two children</i>	<i>Monthly tax on persons with more than two children</i>	<i>One-time tax for excess babies over two</i>	<i>Identical quota for all couples</i>
Restriction on individual liberty	Moderately severe	Moderately severe	Moderately severe	Moderately severe	Moderately severe	Very severe
Effectiveness of children's financial support	Probably beneficial	Probably beneficial	Unknown	Unknown	Probably beneficial	Slightly beneficial
Effectiveness and acceptability of enforcement mechanisms	Effective enforcement at possible price of depriving some children of a family environment	Effective enforcement at possible price of depriving some children of a family environment	Fairly effective enforcement	Fairly effective enforcement	Effective enforcement at possible price of depriving some children of a family environment	Effective enforcement at possible price of depriving some children of a family environment
Effectiveness for precise regulation of the birth rate	Moderate	High	Low	Low	Low	Moderate

Source: Adapted from David Heer, Marketing licenses.

would pose some very difficult political, legal, and social questions, to say nothing of the technical problems. No such sterilant exists today, nor does one appear to be under development. To be acceptable, such a substance would have to meet some rather stiff requirements: it must be uniformly effective, despite widely varying doses received by individuals, and despite varying degrees of fertility and sensitivity among individuals; it must be free of dangerous or unpleasant side effects; and it must have no effect on members of the opposite sex, children, old people, pets, or livestock.

Physiologist Melvin Ketchel, of the Tufts University School of Medicine, suggested that a sterilant could be developed that would have a very specific action—for example, preventing implantation of the fertilized ovum.<sup>108</sup> He proposed that it be used to reduce fertility levels by adjustable amounts, anywhere from 5 to 75 percent, rather than to sterilize the whole population completely. In this way, fertility could be adjusted from time to time to meet a society's changing needs, and there would be no need to provide an antidote. Contraceptives would still be needed for couples who were highly

<sup>108</sup>Fertility control agents as a possible solution to the world population problem, pp. 687-703.

motivated to have small families. Subfertile and functionally sterile couples who strongly desired children would be medically assisted, as they are now, or encouraged to adopt. Again, there is no sign of such an agent on the horizon. And the risk of serious, unforeseen side effects would, in our opinion, militate against the use of *any* such agent, even though this plan has the advantage of avoiding the need for socioeconomic pressures that might tend to discriminate against particular groups or penalize children.

Most of the population control measures beyond family planning discussed above have never been tried. Some are as yet technically impossible and others are and probably will remain unacceptable to most societies (although, of course, the *potential* effectiveness of those least acceptable measures may be great).

Compulsory control of family size is an unpalatable idea, but the alternatives may be much more horrifying. As those alternatives become clearer to an increasing number of people in the 1980s, they may begin *demanding* such control. A far better choice, in our view, is to expand the use of milder methods of influencing family size preferences, while redoubling efforts to ensure that the means of birth control, including abortion and

sterilization, are accessible to every human being on Earth within the shortest possible time. If effective action is taken promptly against population growth, perhaps the need for the more extreme involuntary or repressive measures can be averted in most countries.

### POPULATION CONTROL AND DEVELOPMENT

Population control cannot be achieved in a social or economic vacuum, of course. To formulate effective population control measures, much greater understanding is needed about all peoples' attitudes toward reproduction, and how these attitudes are affected by various living conditions, including some that seem virtually intolerable to people in developed countries. Even more, it is essential to know what influences and conditions will lead to changes in attitudes in favor of smaller families.

The economists and demographers who believed that urbanization and industrialization of LDCs would automatically induce a demographic transition in those societies seem to have been disastrously wrong. While they waited for the birth rate to fall, one billion people were added to the human population. At the very least, it is obvious that the causes of demographic transitions are far more complex than was once believed. But the social scientists may have been wrong mainly in their approach. Many aspects of modernization may indeed have important influences on reproductive behavior.

Such influences, of course, fall outside the purview of population programs; they are an integral part of development as it affects—or fails to affect—each member of a society. When development is the kind that improves the living conditions of everyone down to the poorest farm worker, development that starts *at the grass roots level*, then there is hope that poverty, hunger, disease, and hopelessness might be reduced—and along with them the desire for many children.<sup>109</sup>

The general problems of LDC development are discussed in detail in Chapter 15, but its indirect effects on fertility are worth mentioning here. While no one factor of development can be singled out as ever having

“triggered” a decline in fertility—no particular level of infant mortality or per-capita GNP, for instance—a *constellation of factors* does often seem to be associated with such declines. Among these are rural development and land reform favoring small, family-owned farms; availability of adequate food, basic health care, and education (especially of women) to the entire population; industries favoring labor-intensive, rather than capital-intensive, means of production; and a relatively small income gap between the richest and poorest segments of the population.<sup>110</sup>

Table 13-6 compares some of these interrelated factors in nine less developed nations, four of which have shown significant drops in fertility since 1960 and five of which have not. While each of the nine countries, like nearly all LDCs, exhibits some of the salient factors listed above, those with substantially reduced fertility much more commonly manifest them. Understanding of the important influences on reproductive behavior and how they operate is so far sketchy at best. Achieving a solid base for population policy may be one of the most important—and perhaps most difficult—research assignments for the next decade.

Since the goals of both development and population control are supposedly identical—an improvement in the well-being of all human beings in this and future generations—it seems only reasonable to plan each to reinforce the other. Emphasis accordingly should be placed on policies that would further the goals of *both* family limitation and development—for example, rural development and land tenure reform; increased agricultural output; universal primary education for children; old-age support schemes; and improved health care and nutrition, especially for mothers and children.

Survival of human society nevertheless seems likely to require the imposition of direct population control measures beyond family planning in most LDCs. There is no guarantee that processes of modernization can quickly enough induce the necessary changes in attitudes that might bring growth to a halt. High priority should be given to stimulating those attitude changes and counteracting the effects of pronatalist traditions.

<sup>109</sup>William Rich, *Smaller families through social and economic progress*; Kocher, *Rural development*; Grant, *Development*.

<sup>110</sup>*Ibid.* See also Freedman and Berelson, *The record of family planning programs*.