NEGATIVE POPULATION GROWTH

THE NPG FORUM

How To Influence Fertility:
The Experience So Far

by John R. Weeks

This is the tenth in a series of NPG FORUM papers exploring the idea of optimum population—what would be a desirable population size for the United States? Without any consensus even as to whether the population should be larger or smaller, the country presently creates it demographic future by inadvertence as it makes decisions on other issues that influence population change.

The approach we have adopted is the "foresight" process. We have asked specialists in various fields to examine the connection between alternative population futures and their fields of interest. In this issue of the FORUM, Dr. Weeks discusses how fertility might be consciously influenced if the nation should conclude that lower fertility is desirable.

Dr. Weeks is Professor of Sociology and Director of the International Population Center at San Diego State University. He is the author of the text ***Population: An Introduction to Concepts and Issues*** *(Belmont: Wadsworth), now in its fourth edition. Currently, he is completing a federally-funded research project on infant health outcomes among low-income immigrants in California.*

Lindsey Grant, Editor

Introduction

The population of the United States is currently growing at a rate of one percent per year—well below the world average rate of 1.8 percent. The average number of children born per woman is, as is well known, right at two—a level that is just below replacement. Less well understood is the fact that the number of births each year in the United States is considerably higher than the number of deaths, owing to the demographic momentum built into the age structure. In 1990 American women were giving birth to 3.8 million babies, while 2.1 million people of all ages were dying. Thus, we are increasing by 1.7 million people each year just from natural increase. Net legal migration is estimated to be 600,000 and an additional 200,000 undocumented immigrants are also augmenting the total population.[1] The population of the United States thus continues to grow by more 2.5 million people each year. In less than two years this country adds as many people as there are in Norway, and it would take only four years for the annual growth in the United States to equal the total population of Sweden. Some people react to such numbers with alarm because they think the rate of growth is too low—how can business expand when markets are not increasing at as rapid a pace as in the past? Others react to the numbers with a potentially xenophobic concern about the balance between natural increase and immigration—shouldn't the birth rate be higher so that the rate of growth would be composed of a higher fraction of native-born babies and fewer imported workers? Still others react to the U.S. growth rate by noting that the average American consumes a vastly disproportionate share of the world's resources and so the impact of population growth in this country is far greater in the long-run than is true of population growth in Asia, Africa, or Latin America.

This uncertainty about how to respond to our current demographic situation is both a cause and a consequence of the fact that the United States has never had a formal population policy—has never tried directly to influence the direction or size of the birth rate. On the other hand, we have sat back rather smugly with our relatively low levels of fertility and dispensed advice (often unsolicited) to other countries (mainly developing nations) about how *they* should proceed to lower their fertility. Could we do the same? If it became clear that our national interest would be better served by a lower fertility rate, would we know how to go about designing a set of policies to influence fertility?

Developed nations have very little experience in directly influencing fertility levels to drop, but a great many things that governments have done in the West have serendipitously helped to generate lower fertility, and there may be much to be learned from these "accidental" or indirect policies. Most governmental efforts to influence fertility in developed societies have

been attempts to *raise* levels that are perceived to be too low, and there is also something to be learned in the general failure of these policies to have much impact. However, most of the direct fertility policy lessons come to us from the developing world and while the third world experience may not always be directly applicable to a country such as the United States, some of the successes and failures may be guideposts to effective policy.

Direct and Indirect Policies Designed to Influence Fertility

Based on the detailed histories of fertility trends in Europe, Ansley Coale has argued that there are three preconditions for a sustained decline in fertility: (1) the acceptance of calculated choice as a valid element in fertility, (2) the perception of advantages from reduced fertility, and (3) knowledge and mastery of effective techniques of control.[2] Each of these components has implications for population policy, as can be seen in Table 1. Some policy initiatives are aimed *directly* at influencing demographic behavior, while others are oriented toward trying to change social behavior which will then *indirectly* have an impact on population processes.

Table 1. Examples of Policies to Limit Fertility

Precondition For Which Intervention is Desired[1]	Examples of Policies: *Direct*	*Indirect*
"Rational Choice"	*Provide full legal rights to women *Increase legal age at marriage for women	*Promote secular education *Promote communication between spouses
"Motivation for Smaller Families"	**Incentives** *Payments for not having children *Priorities in jobs, housing, education for small families *Community improvements for achievement of low birth rate **Disincentives** *Higher taxes for each additional child *Higher maternity and educational costs for each additional child ("user fees")	**Incentives** *Economic development *Increased educational opportunities for women *Increased labor force opportunities for women *Peer pressure campaigns *Lower infant and child mortality rates **Disincentives** *Child labor laws *Compulsory education for children *Peer pressure campaigns *Community birth quotas
"Availability of Means for Limiting Family Size"	*Legalize abortion *Legalize sterilization *Legalize all other forms of fertility control *Train family planning program workers *Manufacture or buy contraceptive supplies *Distribute birth control methods at all health clinics *Make birth control methods available through local vendors *Establish systems of community-based distribution	*Public campaigns to promote knowledge and use of birth control *Politicians speaking out in favor of birth control

[1] See text for explanation of preconditions

Rational Choice. The first example of policy initiatives confronts the awareness of population issues at both the private and public levels. The principal barrier to recognition of personal freedom in determining reproductive goals is *tradition*—in particular the attitude that reproduction is in the hands of God or those of a woman's husband. It is a world view that does not admit to self-determination of family size. Rather, the view could be summed up by the phrase "children happen."

This is an attitude that is often associated in the western world with third world nations, especially Islamic nations,[3] but shades of it are evident in all human societies, because it is often associated with religious *fundamentalism,* regardless of the specific religious *preference.* In the United States, Christian fundamentalists (including both Catholics and Protestants) argue that certain aspects of reproduction (such as abortion or contraception for unmarried teenagers) should not be under the control of the woman herself.

In order to change such behavior, policies can aim directly to grant women more freedom to act in their own interest (in combination with family interest, rather than solely on the basis of what others wish). This would include providing full legal rights to women, including the right to obtain birth control devices, an abortion, or a sterilization without having to obtain permission from the husband or some other family member. In Bangladesh, for example, a young women wishing to use contraception will typically have to do so through the cooperation of her mother-in-law, with whom she lives. This will almost certainly be called to the attention of her husband, and may well lead to considerable family strife. Thus, it is often easier for a woman to get pregnant than to risk the social ire of others by seeking contraception.[4]

Other legislation that may directly influence a woman's ability to think and act for herself is a raising of the legal age at marriage, making it more difficult for a family to push daughters into an early marriage. These direct policy initiatives go hand-in-hand with indirect measures to raise the status of women and thereby increase the awareness that they, their husbands, and other family members have of the contributions that they can make to the family and to society besides simply being baby-machines. Articulating and attempting to alter the basic components of traditionalism (which is almost always pronatalist) would be one type of indirect population policy, albeit a vague and controversial one. Indeed, thus far, no one has explicitly promulgated such a policy, but mass secular education is the most successful antidote to the kind of traditional attitudes that prevent women (and couples) from exercising full control over their reproductive capacities. Associated with this is the need to promote communication between spouses on all matters, including reproduction. Without interpersonal communication, a spouse is more likely to assume that his or her partner holds the stereotypically traditional attitudes, and behavior will follow suit. Recent studies in rural Peru and in Burkina Faso have shown that, even in these geographically disparate societies, men appear to have more accurate knowledge about female reproduction than women, and know nearly as much about contraception. However, cultural norms tend to maintain the traditional gender roles and limit the amount of such information that is passed between spouses.[5] Mass education helps to break down some of these walls by exposing both sexes to the same information in a context in which both men and women know that the other knows about reproduction and contraception, and thus the subject is easier to broach and discuss.

The importance of education as a factor in reducing fertility cannot, in fact, be overstressed. Virtually every study ever done on the topic has revealed that higher education is associated with lower fertility, no matter what the cultural setting, geographic region, or religious preference of the respondents. In a recent review of four Latin American countries, for example, researchers concluded that improvements in female education alone could account for 40-67 percent of the fertility decline, other things being held constant.[6] Education works directly to lower a woman's fertility by delaying her exposure to intercourse, and indirectly by showing her alternatives in life to early marriage and numerous children. More broadly and fundamentally, though, education changes the way all people think about their lives and the role that reproduction plays in life.

In a less developed society, as in some areas in the United States, a 16 year old female may appear in every way to be a *woman*. She has been raised with the expectation that she will be a wife and mother and by age 16 she is physically and socially ready to take on those roles which, when accepted, will hold her in virtual bondage for the rest of her life. Her family may be delighted at her marriage because, among other things, it relieves them of the worry that she will shame the family name by having an out-of-wedlock pregnancy.[7] By contrast, in a more developed nation, a 16 year old female is still a *girl* with several years of schooling ahead of her and a job to start or career to establish before marriage and reproduction enter her social picture. Physically, of course, she is ready for parenthood and that is a dilemma that most developed countries outside of the United States have dealt with by providing access to contraception (which is discussed below) for young people who are literally bursting with hormones, but who are not yet ready to be shackled by premature parenthood. Parenthood at younger ages is only premature, however, because a more educated society redefines its terms and reorients its expectations.

Motivation For Smaller Families. Self-determination of reproduction does not necessarily mean fertility limitation. Thus, the second precondition suggests policies oriented toward motivating a person or a couple to limit family size. If societal leaders are convinced that reducing fertility levels is an important way to reach desired social goals, then these policies are designed to reduce the gap between public needs (lower fertility) and private wishes (the maintenance of high fertility in the face of pronatalist pressures). Such policies include direct and indirect initiatives, within which we find both incentives and disincentives (rewards for small families; punishments for large families).

Direct incentives include payments to women or couples for not having a pregnancy during a specified interval (as is practiced on several tea estates in India)[8], or payments to individuals to undergo voluntary surgical contraception (VSC), such as was instituted in the now-famous vasectomy programs in India. Non-cash incentives include priority for housing, or for educational placement of children for first or second children, but not for higher-order births. Even broader still are incentives practiced in some rural areas of China in which communities are rewarded with improved community infrastructure (a new school, paving of streets, etc.) if they meet targeted birth rate levels. Of course, the farther away from the individual is the reward for a small family, the more important is the indirect policy of social pressure to encourage compliance with a low fertility regimen.

In the now developed nations, the path to lower fertility was alongside the road to economic development and the classic statement of the demographic transition spotlights development as the major stimulus to fertility limitation. From that concept were born the maxims that "development is the best contraceptive" and "take care of the people and population will take care of itself."[9] The problem with development as a policy initiative is that it is a much slower process than imitation. But, we don't need to imitate our past. We simply must extract the appropriate lessons. One of the crucial elements of industrialization was that it reversed the flow of income between children and parents—children became economic liabilities rather than assets. Furthermore, it was built on the back of a better educated labor force which has increasingly moved toward maximizing human capital by bringing women into the paid labor force.

The lesson, then, is that economic development appears always to be associated with fertility declines because the process of development incorporates a complex set of direct and indirect incentives to limit family size along with direct and indirect disincentives to have large families. The task of the modern policy-planner is to sort through those factors that may be implemented independently of the process of development and which, through diffusion rather than innovation, may lead to lower fertility. For example, the motivation to have a small family can be enhanced by indirect incentives such as greater opportunities for women to become educated and to enter the paid labor force. As I have argued elsewhere[10], economic independence is the key to raising the status of women which, in turn, is a key element in the decline in fertility. Even direct public pressure may influence behavior by publicly changing norms in a manner not unlike the spread of fad and fashion in a society. Thus, governments that wish to lower fertility sometimes begin the process by "spreading the message" that small is beautiful when it comes to family size. There is evidence that fertility in Europe, for example, was subject to strong social influences independent of levels of socioeconomic development,[11] so the idea that family size preferences can be influenced at least to some extent by social pressure seems to be a reasonable one.

Since it is often argued that the development of high fertility norms in societies was an historically rational response to high death rates, it is reasonable to suggest that the lowering of infant and childhood mortality may help indirectly to lower fertility by reducing the pressure that couples feel to have several children so that a few will survive to adulthood. Of course, as I pointed out above, most societies are already devoting as many resources as they can to the lowering of mortality for purely humanitarian, if not social and economic, reasons, but the policy certainly can be explicitly incorporated into a population policy. Interestingly enough, there is some evidence emerging to suggest that lower levels of fertility themselves help to lower infant mortality (a reversal of the expected causal direction) by lengthening the interval between children and allowing a mother to concentrate her physical and social resources on her new-born child.

Disincentives may also be employed to limit fertility. Children may be taxed after the second one (in direct opposition to the pronatalist policy in the United States of permitting tax deductions for each child), and each successive child might result in higher "user fees" for maternity care, educational services, and other public resources. Indeed, subsequent

children might result in a loss of specific benefits for a family, especially in a socialist state (such as China) where many resources are distributed through the government. Similarly, at the community level there may be punishments (such as less electricity or oil available, or higher community tax rates) if a community does not meet a preestablished birth quota. As was true with incentives, these disincentives are most effectively implemented when combined with measures of indirect pressure on couples to use contraception or to abort a birth if it might cause the community to exceed its quota. This latter situation, which has the elements of coercive abortion, has apparently existed within some rural Chinese communities[12] and is the root of the Reagan and now Bush administration's unfortunate and misguided policy of withholding money from the United Nations Fund for Population Activities because the latter organization supports family planning programs in China. The United States is in the incongruous situation of withholding funds from the United Nations Fund for Population Activities because that organization supports family planning efforts in China that may include abortion (which is legal in China), when abortion is also legal in the United States. Indeed, the abortion ratio in China (31 abortions per 100 pregnancies) is not significantly different from the level in the U.S. (30 per 100).[13]

Draconian coercive measures may be implemented if quick results are required at the expense of individual freedom, but there is a variety of indirect disincentives that historically have had important long-term effects on the motivation for small families. Child-labor laws, if rigorously enforced, help to lower (or at least delay) the economic benefit of children to their parents and thus may cause parents to think again about the value of an additional child. Similarly, a societal mandate (again when enforced) that children must attend school not only takes children out of the labor force so that they can no longer contribute to the parents' income, but schooling may cost money—for appropriate clothes, books and supplies, meals, et cetera—either directly (cash spent on each child) or indirectly (through some system of taxation to pay for schooling).

Availability Of Means For Limiting Family Size. Even if a person is motivated to limit family size, implementing that desire is facilitated by the accessibility of effective means of fertility control. "Accessibility" includes knowledge of methods—what is available, where to get them, and how to use them, and the actual availability of methods—making it possible for them to use a method. Thus, policies oriented to a direct implementation of this precondition for a fertility decline will be focused on legalizing all those methods of fertility control (including abortion, voluntary surgical sterilization, and other means of contraception) that are culturally acceptable in that society. An ideal program of fertility control (and one that prevails in most Western nations) is to teach boys and girls about the reproductive processes of both sexes (often called "fertility awareness" classes), and then to have a wide range of highly effective chemical contraceptives (such as the pill and injectables) and barrier methods (such as the IUD, contraceptive sponges, and condom) available for those who wish to delay pregnancy while still engaging in sexual intercourse. Postpartum breastfeeding accompanied by barrier methods of birth control enhance maternal and infant health by maximizing infant nutrition and spacing the next pregnancy. Voluntary surgical contraception for those who wish to avoid further pregnancies reduces the risk of unwanted children at older ages and permits societal resources for the more expensive chemical and barrier methods to be spent on the younger members of society.

The success of a fertility control policy aiming to make methods available to the citizenry depends upon the way in which such a policy is implemented. This is of course true for any policy, but the private nature of reproduction seems to highlight the importance of program effort in achieving success. For example, legalization of methods is but a first step. This must be followed by the training of people who can teach others to use a method, accompanied by the mechanism for manufacturing or buying a supply of the method, along with an organized distribution system. The various ways by which contraceptives (especially the more popular ones such as the pill and condom) are distributed has been the subject of considerable evaluation over the past decade and, while the results suggest that there are many different ways successfully to organize a program, female contraceptives have the highest continuation rate when a consistent supply is available through a discreet mechanism of personal transfer (such as a community worker making a personal delivery). Condoms are also most widely accepted when they are routinely available at stores and other outlets such as street vendors. Vasectomy programs have proven successful even in strongly "macho" areas such as Brazil if they are performed in high quality, male-only clinics. Not surprisingly, vasectomy adopters are typically married men who have consulted with their wives and are concerned about the adverse health consequences for their wife of an additional pregnancy. Thus, we are reminded that these policies work best when we have gotten past the first two preconditions.

The idea that a motivation for a smaller family is perceived to drive the demand for effective contraception is a reasonable one, but it appears that it does not exhaust the possibilities. There also appears to be a "supply side" factor in fertility limitation. That is to say, the availability of an effective program of contraception may, in fact, create its own demand. Discussing their experience with the Matlab project in Bangladesh, Phillips and his associates have pointed out that "an intensive service program can compensate for weak or ambivalent reproductive motives and create demand for services, leading to contraceptive adoption where it might otherwise not occur."[14]

For a program to have that kind of impact, however, it must have a broad base of support, which is typically generated or least enhanced in two different ways: (1) by public campaigns that promote the knowledge and use of birth control, and (2) by important politicians and other community leaders speaking out in favor of birth control. The latter is particularly important because political support is often the leading edge of resources being made available to mount and maintain a successful family planning program.

The above paragraphs set out the range of possibilities for policies to limit fertility. Success with such a policy will depend partly on the mix of strategies employed, and partly on the effort expended to implement the policy. Let us now turn to an examination of some of these factors in the context of policies that have been put into place in various nations around the world.

Policies To Limit Fertility: The Evidence

Out of 170 countries surveyed by the United Nations in 1989, 68 (40 percent) perceived their rate of growth to be too high.[15] These countries included 64 percent of the population of the globe, but did not include a single industrialized nation. In 1974 (the year of the United Nation's first such survey) only 28 percent of countries (encompassing 59 percent of the total population) had perceived their growth to be too high. Most, although not all, of these countries had a government policy in 1989 designed to lower the fertility level. Thus, as of 1989, 64 countries, comprising 63 percent of the world's population had some kind of policy designed to lower fertility.

In the abstract, of course, it is impossible to evaluate the efficacy of those policies, but we can note that between 1974 and 1989, the crude birth rate for the world declined from 35 births per 1,000 population to 28 per thousand,[16] representing a 20 percent decline. Objectively, then, the short-term past has not witnessed dramatic declines in fertility, but clearly the world-wide trend is in the direction of lower fertility. To assess these patterns, it is useful to examine the globe regionally and look at some representative instances of the implementation of policies designed to limit fertility.

East Asia. Eastern Asian nations have generally been the most successful in engineering short-term rapid declines in fertility. The decline in Japan, for example, seems to have been born of necessity. A population trying to rebuild a nation after war, but swamped with repatriated Japanese who had been living in occupied countries needed demographic relief and found it in abortion. Between 1947 and 1957 the birth rate was cut in half in Japan, almost exclusively through the use of abortion, which had been legalized as part of the "Eugenics Protection Act" of 1948 in Japan (which had been passed primarily to eliminate illegal abortions which had been on the rise). Only since the 1960s have other forms of contraceptives (especially the condom, and more recently the pill) increased in importance as a factor in keeping birth rates low. At present, fertility levels in Japan are below replacement level and the government has no fertility control policy.

Singapore's fertility decline has somewhat different roots. Singapore is a city-state that used to be part of Malaysia and more than three-fourths of its 2.5 million inhabitants are ethnic Chinese. Upon independence in 1965 there was governmental recognition that rapid population growth would deter the nation's ability to continue developing economically. The government first established a family planning program to make contraceptives available on the assumption that the demand for such services existed. The results were disappointing, however, and in 1969 the government adopted a "Two is Enough" slogan, while legalizing abortion and introducing some direct disincentives for large families, including steeply rising maternity costs for each additional child, low school enrollment priorities for third and higher-order children, withdrawal of paid 2-month maternity leave for civil service and union women after the second child, low public housing priority for large families, and no income tax allowance for more than three children. The impact on fertility was dramatic, with the average number of children being born to women dropping from 4.5 in 1966 to 1.4 in 1988. So low did fertility drop that Singapore's prime minister began to worry that too many of the wealthier, better educated women were cutting back on births, while too few of the poorer, less educated women were, so in a plan that generated world-wide controversy, selective incentives were instituted to encourage "elite" women to increase their level of reproduction. Indeed, since 1986 the official government view is that fertility is too low and the policy is to try to raise it, and available evidence suggests that the birth rate is edging back up.

The People's Republic of China has instituted the most famous program of fertility control ever devised, although the one-child policy does not actually explain low fertility in that country. Fertility began to drop steeply in China as early as the mid-1960s, long before the one-child policy was established in 1979. Communism brought with it a significant restructuring of family and gender roles, particularly among younger people. Children became less of an economic asset and women had increased access to education and to the labor force and were no longer so likely to be dominated by elders in the family. Thus, the motivation for fertility limitation had been growing, especially within the Han majority, for some time before the government moved in the direction of more coercive measures. The current policy is, in essence, designed to keep fertility low among those groups who already have low fertility, and to extend the pattern of fertility limitation to rural areas and ethnic minority groups where high fertility norms still persist. Thus, the one-child policy, with its mix of direct incentives for small families, and direct disincentives for large families, enforced by the indirect mechanism of strong social pressure, has been viewed by the government as an interim measure to bring a halt to population growth—stabilizing the population size at a target of 1.2 billion—after which the controls can be eased just enough to maintain that numerical limit. Despite U.S. concern about abortion in China, the official statistics indicate that fertility is kept low by the use of the IUD until the family is completed, at which time voluntary surgical contraception is the norm. We should note in passing, that despite the one-child *policy,* China's fertility rate remains above the replacement level (at about 2.3 children per woman—virtually the same level as in 1980) because some groups such as rural ethnic minorities are exempted and some families do not comply.

Since one in five humans lives in China (although less than one in seven newborn *babies* is Chinese) world interest remains riveted on that part of the world. The government's policy continues to favor limitations on fertility and the success of that policy will influence world growth rates for the foreseeable future. On the other hand, the Chinese have a disproportionately small impact on world resources because it is one of the poorest countries in the world, with a per person income that is less than two percent of the average income in the United States.

Southern Asia. An additional one in five humans lives in the southern Asian Indian subcontinent, including India, Pakistan, and Bangladesh. High fertility remains more firmly entrenched in this part of the world, despite government policies designed to limit fertility. The average woman in India continues to bear more than four children, despite nearly 40 years of official government effort to lower the birth rate, and despite the fact that per person income in India is virtually the same as in China. The major difference between the two countries is in the amount of effort and resources that the government has been able to mobilize to impact any of the three preconditions for a fertility decline. India's first family planning effort in 1952 relied heavily on the rhythm method, whose high failure rate is well known.[17] Indeed, the old joke asks:

What do you call users of the rhythm method? and the answer is "parents." India's next major foray into family planning was with the vasectomy campaigns of the 1960s, but this program was hampered by the fact that many men who were sterilized had already fathered several children, and some had wives who were already past menopause. Furthermore, there were claims that men were being forced into sterilizations by recruiters who (like the person undergoing the vasectomy) were rewarded with a transistor radio or similar premium. The IUD has also been available in India since 1961 and abortion was legalized in 1971, but the pill is still not widely distributed. In various areas of India there have been experiments in paying women not to have babies by depositing money in a pension-type account for them for each month or year that they delay or avoid a pregnancy. Such schemes have been generally successful but they have had neither the funding nor the local government backing necessary to make them widespread.

The contrast between China and India reveals that in poor populous countries beset by a variety of problems including multiple ethnic groups and diverse linguistic and cultural practices, the birth rate can be dramatically lowered if the government insistently promotes a small-family norm, helps to generate a demand for fertility control by instituting social changes that undermine traditional pronatalist practices, make it worth a young person's while to delay marriage and within marriage to limit the number of children, and then backs up these motivations with widespread availability of the means by which fertility can be limited. At the same time, the case of China shows that a decline in fertility can be wrapped around a concomitant decline in mortality, as China's leaders clearly understood that "barefoot doctors were the indispensable allies of intrauterine devices."[18] Indeed, in the mid-1950s China and India had virtually the same mortality and fertility levels. In 1990, China has mortality and fertility levels nearly comparable to those in Europe, while Indians continue to die at rates well above the world average. Yet, during all of the this time, average income in the two countries has remained roughly the same.

Indonesia provides good evidence of the way in which government support for subtle social change and effective delivery of family planning services can impact fertility. Indonesia is the fifth most populous nation in the world, and the most populous Moslem nation. In a relatively short period of time women in Indonesia have brought their fertility down from 5.7 children per woman in 1960 to an average of 3.3 in 1990—higher than China, but clearly lower than anywhere on the Indian subcontinent. There is some evidence that oil-based development in Indonesia was beginning to build a latent demand for smaller families, but most analysts agree that the strong support of President Suharto and of Islamic religious leaders for the government's programs were crucial in its widespread adoption. A survey in 1971 suggested that only 3 percent of married couples of reproductive age were using contraception, whereas by 1987 the percentage had increased to 48 percent. "Of great importance in the country's achieving this shift was Suharto's support for the family planning program's budget even when, as in 1986, government revenues were falling."[19] The government accommodated Islamic religious beliefs by omitting abortion and sterilization from the family planning program, and from the beginning religious leaders were included in the policy-planning phases. They have thus been able to assist the program by assuring the community that family planning was in accordance with the Koran, by adding family planning messages into wedding ceremonies, and by actively telling individuals about the program. Educational levels are rising in Indonesia and that has accompanied delayed marriage among women, along with a later start and earlier stop to childbearing. As is true throughout the world, this pattern of childbearing also helps to reduce infant mortality which then circles back to reassure parents that they are safe in having a smaller family.

Latin America. Latin America (including the Caribbean) reveals considerable regional diversity in achieving low levels of fertility, ranging from a low in the tiny islands of Antigua and Barbuda of 1.7 lifetime births per woman to a high in Guatemala where woman are having children at the rate of 5.6 each. The Caribbean islands in general have achieved low fertility, but the case of Haiti (where the total fertility rate is 5.1 births per woman) shows that being an island is not necessarily a defense against high fertility. Several of the islands have been aided in achieving lower fertility by the outmigration of young people (especially males), many of whom head to the U.S. mainland to search for jobs. Cuba has not recently had the U.S. as a major migration outlet, but did find some temporary relief in its military adventures in Angola and elsewhere, effectively removing young men from the island for substantial periods of time. In recent years this has facilitated a rise in the average age at marriage in Cuba which, in combination with legalized abortion and access to free contraceptives, has pushed Cuban fertility to below the replacement level.[20]

The government of Mexico has also become increasingly active in promoting small family norms and of providing family planning assistance through public and private outlets. For decades, if not centuries, women in Mexico had been bearing an average of 7-8 children, until the 1960s. In the middle of that decade it appears that the birth rate began to drop, perhaps as economic development began tentatively to take root. In 1974 the government rather dramatically reversed its previously pronatalist position and the General Law of Population was rewritten to encourage "responsible parenthood," and to offer family planning services to Mexican couples. Less than 15 years later, in 1987, a nation-wide fertility survey indicated that fertility had dropped to an average of 3.8 children per woman nationwide.

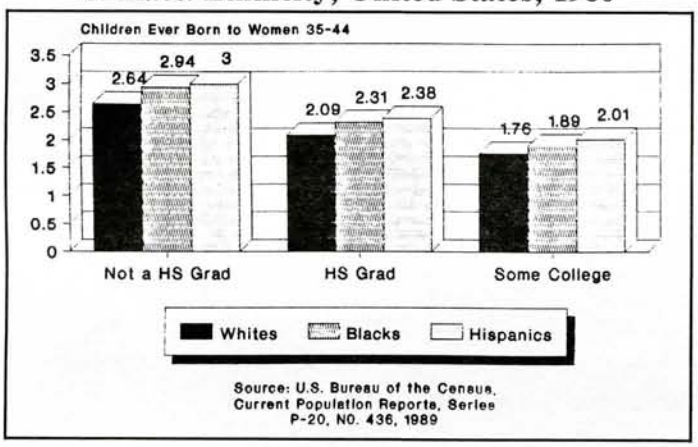
Conclusion: What Can The U.S. Learn?

Any policy oriented toward fertility limitation must keep in mind that population control is rarely an end in itself but rather an implementing strategy that helps to achieve other goals. Our eye is on the prize of a desired social order, and population policies must be kept in that perspective. Policies based on racism or elitism should be clearly unacceptable in American society. Instead, policies need to focus on groups whose fertility is above average and ask: (1) why do these groups have higher fertility? and (2) what policy lessons learned from elsewhere in the world can be applied to encourage lower levels of fertility within the context of a society in which the small-family norm is already well rooted?

In the United States, as in most areas of the world, fertility rates are highest among the least educated, among the poor, and among racial/ethnic minority groups. Using data from the U.S. Census Bureau's Current Population Survey in 1988 (the most recent data available as of this writing), we can see that, among women aged 18-29 (the ages in which most childbearing takes place), women who had less than a high

school education were almost twice as likely to have had a baby during the previous year as were college graduates. Women in families with income under $10,000 per year were nearly three times as likely to have had a baby in the previous year as those women in families with $50,000 or more income. Hispanic women were 25 percent more likely to have a child than non-Hispanic women, and black women were 40 percent more likely to have had a child than a white woman. These categories are not mutually exclusive, of course, since racial/ethnic minority group members tend disproportionately to have lower levels of education and to have lower incomes. Indeed, these structural features explain much of the racial/ethnic differences in fertility in the United States. In Figure 1 it can be seen that in the United States in 1988, the differences between racial/ethnic groups in fertility were much less than were the differences in education.

Figure 1. Fertility Levels Are Highest Among the Least Educated, Regardless of Race/Ethnicity, United States, 1980



Given the previously discussed policy initiatives, one could imagine a two-pronged approach to fertility limitation in the United States. Fertility could be brought down by increasing educational and income levels within society, and it could be brought down by increasing the motivation of less educated and less well-off persons to have small families and increasing their access to effective means of fertility control. It must be recognized, though, that we are referring to a multi-cultural, multi-lingual group in American society and it is almost certain that no single approach will work best in all situations. In areas dominated by immigrant groups, some of the methods utilized in their own homelands may be effective when adapted to the U.S. environment. In other inner-city areas characterized by fractured families, high unemployment, and high crime, a system based on the Chinese "barefoot doctors" may be the model for the delivery of family planning, maternal, and infant health services. In Caroline County, Maryland, a page has been torn from the third world with an experimental program to pay high school girls not to get pregnant.[21] However, before running off and designing a program only for the least educated and poorest segments of the population, we should bear in mind that in the year prior to the 1988 survey referred to above, women with less than a high school education accounted for only 18 percent of all births in the United States, whereas those women who had graduated from high school, but had not attended college accounted for 43 percent of all births. If we concentrated on the least educated group and reduced their birth rate to the level of high school graduates, we would reduce the annual number of births by 3 percent. On the other hand, if we concentrated on lowering fertility of the high school graduates down to the level of women who have attended college, we could reduce the annual number of births by 7 percent. Clearly the latter is the more effective strategy in terms of a quantitative impact on the birth rate. It is probably also more effective in terms of cost-efficiency because this is a group more apt to be amenable to policy pressure. Governmental policies that affect motivation for small families through taxation, the housing market and the consumer credit market, and the availability of educational and labor force opportunities for women are more likely to find a response among the middle classes than among the group often labeled the underclass.

The experience of other nations suggests also that government policies influence family size decision-making partly through their economic impact, but partly also through the social message they carry. Humans are inherently social creatures (not simply rational economic beings) and we are constantly looking about us for clues to social behavior. A consistent set of government initiatives aimed at lower fertility is almost certain to have the long-term effect of leading couples to think more consciously about their family size decisions. Such consciousness could be raised especially by the adoption of what has been called a *Demographic Impact Report*. Analogous to the Environmental Impact Reports (which initially contained the clear intent that demographic issues be addressed) the DIR would be required of all (or at least broad classes of) legislation to evaluate the proposed law's effect on either raising or lowering the fertility rate. The importance of the DIR lies in the fact that the demographic implications of most public policies are hidden to the untutored eye and only become apparent when it may be too late to overcome the consequences.[22] The DIR would have the effect both of actually promoting lower fertility (by rejecting legislative initiatives that would have the opposite effect) and of promoting low fertility values through the example set by legislative leadership.

Throughout the world the success of fertility limitation policies often depends upon the strength of leadership, and there is little reason to think that the U.S. would be an exception to this. The personal support of national leaders such as Suharto in Indonesia, Lee Kuan-yew in Singapore, and Bourguiba in Tunisia has seemed to have an unmistakable influence in the promotion of lower fertility in those countries. In this country, our complacency about low fertility has allowed national leaders to sidestep the population issue. Yet, every addition to the population in a country like the United States yanks a vastly disproportionate hunk out of the world's storehouse of known resources. For this reason, policies that affect population growth in the U.S. have a major long-term effect on all aspects of the world's ecosystem. We should assist globally in every way we can and we should lead by example. We do that now *implicitly* by having low fertility, but it is not always clear to the world that we, as a nation, actually *prefer* the level of fertility we have. We exhibit considerable ambivalence about national fertility levels, and pronatalist voices are often louder than antinatalist voices. A mechanism such as the Demographic Impact Report could be one part of a larger national policy condoning the concept of a small, healthy family which would generate a lower and more equitably distributed birth rate in the United States while adding clout to our international assistance efforts by reducing the perception that those efforts are patronizing or even genocidal in their intent. In the words of the President of the Swiss National Bank, the United States would be offering "a frank and unashamed word in favor of family planning."[23]

NOTES

[1] U.S. Bureau of the Census, "Estimates of the Population of the United States to March 1, 1990," *Current Population Reports,* Series P-25, No. 1056, 1990; and "Population Profile of the United States, 1989," *Current Population Reports,* Special Studies, Series P-23, No. 159, 1989.

[2] Ansley Coale, "The demographic transition." Proceedings of the International Population Conference, Liege. Volume 1, pp. 53-72.

[3] I have discussed elsewhere the fact that the prevalence of these attitudes in Islamic nations appears to be more a matter of social structure, than it is religion *per se.* See John R. Weeks, "The Demography of Islamic Nations," Population Bulletin 43(4), 1988.

[4] James Phillips, Ruth Simmons, Michael Koenig, and J. Chakraboty, "Determinants of reproductive change in a traditional society: evidence from Matlab, Bangladesh," *Studies in Family Planning* 19(6),Part 1:313-334, 1988.

[5] Gisele Maynard-Tucker, "Knowledge of reproductive physiology and modern contraceptives in rural Peru," *Studies in Family Planning* 20(4):215-224, 1989; Therese McGinn, Azara Bamba and Moise Balma, "Male knowledge, use and attitudes regarding family planning in Burkina Faso," *International Family Planning Perspectives* 15(3):84-87, 1989.

[6] Mary Booth Weinberger, Cynthia Lloyd, and Ann Klimas Blanc, "Women's education and fertility: a decade of change in four Latin American countries," *International Family Planning Perspectives* 15(1):4-14, 1989.

[7] Saad Gadalla, *Is There Hope? Fertility and Family Planning in a Rural Community in Egypt* (Chapel Hill: Carolina Population Center), 1978.

[8] J. Satia and R. Maru, "Incentives and disincentives in the Indian Family Welfare Program," *Studies in Family Planning* 17(3):136-145, 1986.

[9] Quoted by Michael Teitelbaum, "Relevance of the demographic transition for developing countries," *Science* 188:420-425, 1975.

[10] John R. Weeks, *Population: An Introduction to Concepts and Issues, Fourth Edition* (Belmont: Wadsworth Publishing Co.), 1989

[11] See, for example, Ronald Lesthaeghe, "On the social control of human reproduction," *Population and Development Review* 6(4):549-580, 1980.

[12] John Aird, *Slaughter of the Innocents* (Washington, D.C.: American Enterprise Institute for Public Policy Research), 1990

[13] Stanley Henshaw, "Induced abortion: a world review, 1990," *Family Planning Perspectives* 22(2):76-89, 1990.

[14] Phillips, et al, op cit, p. 323.

[15] United Nations, *Trends in Population Policy,* Population Studies, No. 114 (New York: United Nations).

[16] Data for 1974 are from the "World Population Estimates" prepared by the Environmental Fund, while the 1989 are from the Population Reference Bureau's "World Population Data Sheets."

[17] The rhythm method must be distinguished from more modern methods of periodic abstinence such as the symptothermal method, which have failure rates that are similar to the condom.

[18] United Nations, *World Population at the Turn of the Century,* Population Studies, No. 111 (New York: United Nations), 1989, p. 122.

[19] Donald Warwick, "The Indonesian family planning program: government influence and client choice," *Population and Development Review,* 12(3):, 1986, p.455.

[20] See, for example, Paula Hollerbach, Sergio Diaz-Briquets and Kenneth Hill, "Fertility Determinants in Cuba," *International Family Planning Perspectives* 10(1):12-20, 1984.

[21] "Pregnancy Propositions—Dollars for Those Who Don't," *New York Times,* May 29, 1990.

[22] This is example of "foresight" in public policy-making, and I am indebted to Lindsey Grant for suggesting this line of thought.

[23] Quoted in *Popline* 6(4):1, 1984.

NEGATIVE POPULATION GROWTH, Inc.

210 The Plaza, P.O. Box 1206, Teaneck, N.J. 07666-1206, Telephone: (201) 837-3555

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