What's Ahead for Cuba ● Our Crumbling Schools

# U.S.NEWS

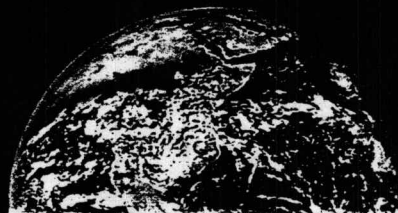SEPTEMBER 12, 1994     **& WORLD REPORT**     $2.50

# EXPLODING
# THE POPULATION
# MYTHS

The world's population
will double in the next few decades.

We're doomed to mass
starvation and environmental chaos.

graphic transition that occurred in developed countries in the absence of any organized national family planning programs.

5 The mathematical relationship between acceptance rate ($A$), discontinuation rate ($d$), and contraceptive prevalence rate ($X$) is quite simple. In order to maintain a contraceptive prevalence rate of $X$, the number of annual acceptors should be equal to the number who discontinue the use of a method in a year. If we assume that the discontinuation rate of a method does not vary from year to year or from one cohort of acceptors to another, the relationship between the number of acceptors and the number of discontinued users simply translates into the following equation: $A = dX$.

6 A simulation model developed by Bongaarts and Stover (1986) is applied to the data from India. The demographic goal set by the Government of India is to reduce the net reproduction rate to 1 by 1996 for the country as a whole. This goal is translated, by the Government of India, into a birth rate of 21 and a death rate of 9 per 1,000 population. The birth rate target is translated into a contraceptive prevalence rate of 60, which is closer to the projections based on the unlikely assumption of no decline in the duration of postpartum amenorrhea. A better scenario appears to be the one represented by the standard projection, which suggests that the level of contraceptive prevalence would have to increase from 25 percent in 1980 to about 72 percent in 2020 in order for the TFR to decline from 4.9 in 1980 to 2.1 in the year 2020, instead of 1996 assumed by the Government of India. The results of the simulation model presented in this article, however, do not depend upon the year selected for achieving a TFR of 2.1. The standard projection was based on the assumption of a linear decline in TFR from 4.9 in 1980 to 2.1 in 2020 and on the assumptions of no change in method mix from 1980 to 2020, an increase in female age at marriage of three years, and a decline in postpartum amenorrhea of about seven months from 13.5 months in 1980 to 6 months in 2020. The incidence of induced abortion is assumed to remain low. Based on a national survey conducted by the Operations Research Group (Khan and Prasad, 1983), it is estimated that 25.4 percent of couples were practicing contraception in 1980, which included 19.6 percent sterilization, 0.4 percent IUDs, 1.0 percent pills, and 4.4 percent condoms. These rates were slightly different from those given in the original report of the survey prepared by Khan and Prasad (1983) because of the differences in the age distribution of women used in the simulation model. The annual discontinuation rates for sterilization, IUDs, pills, and condoms are assumed to be 1, 33.3, 66.7, and 66.7 percent, respectively. These rates do not include discontinuation due to aging of the users. The effectiveness levels assumed for these methods are 100, 95, 90, and 70 percent, respectively.

7 Multiple segments of IUD use refers to the total experience with IUD use including reinsertions after spontaneous expulsions or removal.

8 These simulations are based on assumptions used in the standard projection (see note 6 above). The difference is that the assumption about method mix remaining constant during 1980 to 2020 has been changed to correspond to these three assumptions.

9 The discontinuation rates of IUDs were found to be similar in Taiwan and India. However, the reactions of service providers to discontinuation rates were quite different in the two countries. These differences affected the management of contraceptive needs of women who discontinued IUD use in the two countries, which eventually affected the fate of IUDs there.

10 A word of caution is important. The information available and,

therefore, the analysis undertaken does not reflect the variations within a country in terms of either availability or contraceptive prevalence. Moreover, there may be some degree of circularity in responses. Since the measure of availability (choice) is based on responses received from persons knowledgeable about a country, their responses to these questions might be influenced by their knowledge of method-specific use of contraceptives in that country. This could be a serious bias. However, these are the only data available on accessibility of contraceptive methods for a large number of developing countries.

11 All four components of program effort are highly correlated with each other. For example, the correlation coefficient between availability and the variable representing all three other components is 0.87. With this high correlation, it is difficult to completely isolate the independent causal effects of each of these components. However, they can be arranged in a sequence according to their proximity to contraceptive use. Since availability is more proximate to contraceptive prevalence than other components, it can be hypothesized that the effect of these components on contraceptive prevalence would be mitigated through availability of contraceptive methods. For example, a policy to reduce the rate of population growth would affect contraceptive prevalence by improving the availability of contraceptive methods. The results presented in Table 4 also provide partial support to this hypothesis (see also Lapham and Mauldin, 1985).

12 These six factors were used as independent variables in a multiple regression equation to predict contraceptive prevalence in 1980. The regression coefficients of these factors were used as weights in combining them in an index of socioeconomic development for each country.

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