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SUBTRACT BILLIONS

## Demographic 'Bomb' May Only Go 'Pop!'

By DONALD G. McNEIL Jr.

**R**EMEMBER the population bomb, the fertility explosion set to devour the world's food and suck up or pollute all its air and water? Its fuse has by no means been plucked. But over the last three decades, much of its Malthusian detonation power has leaked out.

Birthrates in developed countries from Italy to Korea have sunk below the levels needed for their populations to replace themselves; the typical age of marriage and pregnancy has risen, and the use of birth control has soared beyond the dreams of Margaret Sanger and the nightmares of the Vatican.

The threat is now more regional than global, explosive only in places like India and Pakistan. Ever since 1968, when the United Nations Population Division predicted that the world population, now 6.3 billion, would grow to at least 12 billion by 2050, the agency has regularly revised its estimates downward. Now it expects population to plateau at nine billion.

Where did those billions go? Millions of babies have died, a fraction of them from AIDS, far more from malaria, diarrhea, pneumonia, even measles. More millions have been aborted, either to avoid birth or, as in China and India, to avoid giving birth to a girl. (Cheap ultrasound technology has in the last decade made it easy to determine a child's sex.)

But even AIDS and abortion are drops in the demographic bucket. The real missing billions are the babies who were simply never conceived. They weren't conceived because their would-be elder brothers and sisters survived, or because women's lives improved. In the rich West, Mom went to college and decided that putting three children through graduate school would be unaffordable. In the poor Eastern or Southern parts of the globe, Mom found a sweatshop job and didn't need a fourth or fifth child to fetch firewood.

"On a farm, children help with the pigs or chickens," explained Joseph Chamie, director of the United Nations population division. Nearly half the world's people live in cities now, he said, "and when you move to a city, children are not as helpful."

Beyond that, simple public health measures like dams for clean water, vitamins for pregnant women, hand-washing for midwives, oral rehydration salts for babies, vaccines for youngsters and antibiotics for all helped double world life expectancy in the 20th century, to 60 years from 30.

More surviving children means less incentive to give birth as often. As late as 1970, the world's median fertility level was 5.4 births per woman; in 2000, it was 2.9. Barring war, famine, epidemic or disaster, a country needs a birthrate of 2.1 children per woman to hold steady.

The best-known example of shrinkage is Italy, whose women were once symbols of fecundity partly because of the country's peasant traditions and partly because of its Roman Catholicism, which rejects birth control. By 2000, Italy's fertility rate was Western Europe's lowest, at 1.2 births per woman. Its population is expected to drop 20 percent by midcentury.

Italy plummeted right past wealthy, liberal, Protestant Denmark, where women got birth control early. Denmark was below population replacement level in 1970, at 2.0 births per woman, and slid to 1.7 by 2001. In Europe's poorest country, Albania, where rural people still live in armed clan compounds, the 1970 rate of 5.1 births per woman fell to 2.1 in 1999.

Even in North Africa, regarded as the great exception to the shrinking population trend, birthrates have dropped somewhat. Egypt's, for example, went from 5.4 births per woman in 1970 to 3.6 in 1999. Mr. Chamie, of the United Nations, says the numbers refute what he calls the "myth of Muslim fertility," an unfair characterization, he says, that will disappear as the lives of Muslim women ease. Jordanians, for example, he said, had eight children per woman in the 1960's; now the rate is 3.5. (Across the river, Israel's numbers went from four in the 1950's to 2.7 today.) In Tunisia and Iran, the number may be close to two children, he said.

Old notions of Asian fertility are similarly false. China has pushed its fertility rate below that of France; Japan's population is withering with age; and after five decades of industrialization, South Korea, a mostly rural country with six births per woman during its civil war in the 1950's, now has 1.17 births per woman.

Alarmed by the trends, many countries are paying citizens to get pregnant. Estonia pays for a year's maternity leave. The treasurer of Australia, Peter Costello, introduced \$2,000-per-baby subsidies in that country's 2004 budget. He told his fellow citizens to "go home and do your patriotic duty tonight."

Japanese prefectures, tackling the problem at an earlier stage, arrange singles' cruises. Unique among developed countries, the United States has little need to finance romance because its birthrate has held steady at 2.13 per woman. Its growth, about three million people a year, is mostly fueled by immigration, as it has been since the Mayflower.

Half the world's population growth is in six countries: India, Pakistan, Nigeria, Indonesia, Bangladesh and China (despite its slowed birthrate). That makes doom-saying trickier than it was in 1968, when Paul R. Ehrlich frightened everyone with his book "The Population Bomb." Fertility shifts in individual countries are notoriously unpredictable, said Nicholas Eberstadt, a population expert at the American Enterprise Institute, so one might just as well use a Ouija board to predict the fallout.

Local changes can be even harder to anticipate. Calcutta, for example, once the epitome of overcrowding, is starting to shrink, Mr. Eberstadt said.

The father of the population bomb, Dr. Ehrlich, a professor of population studies and biology at Stanford, says he was "pleasantly surprised" by global changes that have undermined the book's gloomiest projections. They include China's one-child policy and the rapid adoption of better seeds and fertilizers by Third World farmers, meaning that more mouths can be fed, even if just with corn porridge and rice. (He notes, however, quoting United Nations figures, that about 600 million people go to bed hungry each night.) But Dr. Ehrlich still argues that the earth's "optimal population size" is two billion. That's different from the maximum supportable size, which depends on the consumption of resources.

"I have severe doubts that we can support even two billion if they all live like citizens of the U.S.," he said. "The world can support a lot more vegetarian saints than Hummer-driving idiots."

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