World Population Issues

Compiled by
Roy Janne
NSAR
Boulder, Colo
March 1999

Water Crisis
Challenges
Jordanians
Nov 1998

Petrified Europe
Feb 1998

Millions of Rwandans
Threatened by AIDS
July 1998

Russia, don’t fade away
Aug 1998

The Population Implosion
Dec 1997

Argentina Seeks to Halt Illegal Aliens
Feb 1999
World Population Issues

Some clippings about population issues are presented. The following text introduces some of the topics.

1. Population predictions to year 2100.
   a. Observed World Population (millions)
   
<table>
<thead>
<tr>
<th>Year</th>
<th>Millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>2,555</td>
</tr>
<tr>
<td>1970</td>
<td>3,704</td>
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<td>1990</td>
<td>5,293</td>
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   b. Projections
   
<table>
<thead>
<tr>
<th>Year</th>
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</thead>
<tbody>
<tr>
<td>2000</td>
<td>6,114</td>
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<tr>
<td>2050</td>
<td>9,578</td>
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<tr>
<td>2100</td>
<td>10,958</td>
</tr>
<tr>
<td>2150</td>
<td>11,401</td>
</tr>
</tbody>
</table>

   Note: Nearly all of the population growth from 2000 to 2150 is due to an aging of children already born. Very little of the growth is due to an increase in the number of children being born. A chart is shown.

2. Issues about water supply.

   There are a few articles about water supply problems associated with more people, more irrigation, etc. In other files, I have many more articles on this subject.


   The Census Bureau projects that the children of immigrants will account for 88% of the increase in the under-18 population in the US from 2000 to 2050. Without immigration, the population of children would decrease slightly from 2000 to 2015.

   Immigrants have better health when they come to the USA; worse later on.

4. Illegal immigrants.

   Feb 1999: Argentina seeks to halt illegal aliens.

5. The birth dearth.

   In many developed countries, there is a big problem with too few children being born. This leads finally to a declining population and many problems in taking care of the older generation when they retire.
Examples are:
- Japan: 2.7 million kids born each year about 1947 – 49; only about 1.2m per year about 1989 – 91.
- Aug 1998: “Russia, don’t fade away,” an article written in “Russian Life” magazine. The population is now shrinking by almost one million per year.
- The Western European countries have birth rates that are well below replacement levels.

6. The effect of AIDS.

The AIDS effect on population, especially in some areas of the world such as southern Africa. There are several articles about this. This is a huge health problem.


This was a cover article for *US News & World Report* (March 1, 1999). It affects issues like:
- Cost of social security systems
- Health costs
- The level of taxes on younger people

<table>
<thead>
<tr>
<th>Selected Countries</th>
<th>Average Age of Retirement for Men</th>
<th>Workers to Supper Each Retiree</th>
<th>Payroll Tax Rates Needed</th>
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<tbody>
<tr>
<td></td>
<td>1960</td>
<td>1995</td>
<td>2050</td>
</tr>
<tr>
<td>USA</td>
<td>66.5</td>
<td>63.6</td>
<td>4.2</td>
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<tr>
<td>Japan</td>
<td>67.2</td>
<td>66.5</td>
<td>2.6</td>
</tr>
<tr>
<td>UK</td>
<td>66.2</td>
<td>62.7</td>
<td>2.7</td>
</tr>
<tr>
<td>France</td>
<td>64.5</td>
<td>59.2</td>
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<tr>
<td>Germany</td>
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<td>60.5</td>
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<tr>
<td>Italy</td>
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<td>1.3</td>
</tr>
<tr>
<td>Canada</td>
<td>66.2</td>
<td>62.3</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Note: It is clear that some of the future tax rates needed to preserve business as usual can not happen. It would crush the younger families. However, voting patterns will not necessarily support a good strategy.

8. Eastern Europe and Russia; Countries in Transition

The dependency ratio (people on pension as a percent of all workers) is high in many of these countries (between 50 and 75% in 15 countries). Yet the total spending on pensions is typically only 5 to 11% of the whole national economy. This means that if the pensions are not too generous, then a high fraction of older people might not break the bank. The dependency ratio has been increasing rapidly in many of these countries; probably because the older workers either can't find jobs when the economy is poor, or they leave to make room for younger workers. But then the high dependency ratios causes a new set of problems. Some of the tables are included here.
World Population Projections 1994-95 Edition

by Eduard Bos
My T. Vu
Ernest Massiah
Rodolfo A. Bulatao

Figure 4. Comparison of Global Projections

Published for The World Bank
The Johns Hopkins University Press
Baltimore and London

Figure 5. Comparison of Regional Projections

More info on this at end of tekst
## World Population, 1990 – 2150

Except for Africa, the population of people 0 – 4 years old is expected to be almost constant during 1990 – 2150. However, the population of older people will be growing rapidly in most regions of the world. This increases the world’s population.

<table>
<thead>
<tr>
<th></th>
<th>1990</th>
<th>2000</th>
<th>2050</th>
<th>2100</th>
<th>2150</th>
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<tbody>
<tr>
<td><strong>World</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. World</td>
<td>5266.0</td>
<td>6113.7</td>
<td>9578.3</td>
<td>10,957.8</td>
<td>11,401.2</td>
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<td>2. Africa</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total People</td>
<td>627.5</td>
<td>821.5</td>
<td>1999.0</td>
<td>2643.0</td>
<td>2826.6</td>
</tr>
<tr>
<td>Male (0-4)</td>
<td>56.3</td>
<td>68.4</td>
<td>84.9</td>
<td>85.6</td>
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<tr>
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<td>8.6</td>
<td>43.9</td>
<td>76.2</td>
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<td>3. Asia</td>
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<tr>
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<td>20.5</td>
<td>20.7</td>
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<tr>
<td>5. North America</td>
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<td></td>
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<tr>
<td>Total People</td>
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<td>309.4</td>
<td>374.4</td>
<td>384.4</td>
<td>388.1</td>
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<tr>
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<td>11.5</td>
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<tr>
<td>Male (55-59)</td>
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<td>7.4</td>
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<td>11.0</td>
<td>10.8</td>
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<tr>
<td>6. Latin America</td>
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<td></td>
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<tr>
<td>Total People</td>
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<tr>
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<td>7.8</td>
<td>24.5</td>
<td>25.5</td>
<td>25.8</td>
</tr>
<tr>
<td>7. Oceania</td>
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<td></td>
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<tr>
<td>Total People</td>
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<td>1.38</td>
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<td>.52</td>
<td>.67</td>
<td>1.22</td>
<td>1.29</td>
<td>1.31</td>
</tr>
</tbody>
</table>

From “World Population Projections, 1994 – 95,” from World Bank (Bos, et. al.)

Roy Jenne
Feb 1999
Japan's demography poses questions for old and young alike

[TOKYO] Japan faces even more rapid ageing and decline in numbers of its population than previously estimated, according to a study released last week by the Ministry of Health and Welfare's Institute of Population and Social Security Research. The gloomy projections do not bode well for the country, which is already confronted with an unfavourable economic future.

The institute predicts that Japan's population will peak at just under 128 million in 2007, four years earlier than estimated in a survey in 1992, and will decline steadily thereafter to 100 million by 2050. This latest estimate is based on demographic projections from an analysis of the 1995 population census, the birth rate and life expectancy.

The population of people over 65 will rise rapidly to 32 million by 2015, constituting a quarter of the population (compared with 15 per cent at present), while the working-age population, aged between 15 and 64, that has to support them, will fall from 87 to 76 million. The working population will continue a steady decline to only 55 million — barely half the population — in 2050.

In 1994, Japan was eleventh in the league of developed nations with large elderly populations; Sweden topped the list, with 17.5 per cent of the population over 65. But by 2015 Japan will have the world's largest proportion of elderly people.

The pessimistic projections are driven by a declining birth rate, which dropped to a record low of 1.42 per woman in 1995, and high life expectancy, which stood at 83.0 years for women and 76.6 years for men in 1994. The institute projects that life expectancy in Japan will rise to 86.5 for women and 79.4 for men by 2050 because of improved health care, while the birth rate will continue to decline to 1.38 in 2000 and then rise gradually to 1.60 by 2022. The 1992 survey had predicted a recovery in the birth rate from 1995 onwards, but that has proved wrong.

The projections of a more rapidly ageing society combined with a more rapid decline in the working-age population will put an enormous strain on the national health-insurance system, which is already destined to plummet into the red unless there are major reforms requiring patients and working people to pay more.

Analysts say that the latest projections are expected to drive the pharmaceutical industry to invest even more heavily than it is already doing in the development of drugs to treat the diseases of old age, such as Alzheimer's disease.

David Swinbanks
6 billion and counting

U.S. must increase family planning aid overseas

As we approach a new year and a new millennium, population growth ought to be on America's agenda. In 1999, the six-billionth human will enter the world. By the end of the year, 600,000 women will die from health problems related to pregnancy, millions more will die from botched abortions or sexually transmitted diseases. Population is more than a number. It must be put into a social context and addressed with a global perspective.

One tool to address population growth is the United Nations' "Cairo Plus Five" conference in 1999. More than 180 nations will reassess a plan that came out of the U.N.'s International Conference on Population and Development in Cairo four years ago. The Cairo conference set ambitious goals of providing basic reproductive services, health care and disease prevention programs to those who need it, especially the poorest developing countries. To do so would require $17 billion in 2000, increasing to $21.7 billion in 2015.

The delegations in Cairo agreed that developing countries would shoulder two-thirds of the cost, while industrialized nations would fill the gap. The United States is expected to provide $1.9 billion in 2000 and more in subsequent years. This will be difficult to do because resistance to increasing family planning funds overseas has remained strong in the U.S. Congress.

For the third consecutive year, U.S. funding for family planning assistance overseas will remain at $385 million. Funding hasn't increased, in part, because of political bargaining. Dating back to the Helms Amendment in 1973, which bars U.S. funding for abortions overseas, family planning advocates in Congress have had to fight recurring funding restrictions. This year a Senate bill to repay U.N. debts was adopted with a provision to cut off U.S. aid to family planning organizations overseas if they — with their own money — legally provide abortion services, lobby for changes in abortion laws or provide a forum to discuss abortion laws.

The "global gag rule" and three similar provisions introduced in preceding years, would withhold critical information from women about health consequences from unsafe abortions. President Clinton vetoed this year's bill because of the gag rule, but the tradeoff was a cap on foreign aid for women's reproductive health.

The 105th Congress further voted to halt U.S. contributions ($20 million) to the United Nations Population Fund, which has family planning programs in 150 countries.

The recent shift against U.S. family planning funds comes at a bad time. Lack of health information, health care and in some cases, politics, has left millions of people in great need of assistance. For example, the United Nations projects rising deaths in the near future from HIV/AIDS in 34 developing countries, including 29 in sub-Saharan Africa. In Afghanistan, the Taliban has relegated women's health care to women caregivers, and there are few female doctors in the country.

The 106th Congress brings hope but uncertainty. The House gained lawmakers who tend to approve family planning assistance funding, but the majority remains opposed. (The majority of senators are expected to vote for family planning funds overseas.) World population, women's health status and the spread of disease affects us all.

The United States should take a leadership position in granting universal access to reproductive health care.
The Population Implosion

The McCaughey septuplets notwithstanding, the world's population is growing far more slowly than anyone imagined just a few years ago. It's a fact not often mentioned by the "experts" who see the planet drowning in people.

If current trends hold, the once-feared "population bomb" will simply fizzle out.

Back in the 1970's, demographers thought the world's population might jump to as much as 20 billion. Better health care and nutrition were helping people live longer, and fertility rates stayed high.

But, while the better health care and nutrition are still with us, the fertility rates are dropping—like a rock.

United Nations data show that, worldwide, women now bear an average of 2.96 children, down 40% from the average seen during the late '60s. The decline in fertility has been sharpest in poorer countries, where women bear an average of 3.3 children, down from six just 30 years ago.

In rich countries, rates are down to 1.7 children per woman. That is below the 2.1 rate needed to keep a population constant over time.

Ben Wattenberg, senior fellow at the American Enterprise Institute and a longtime skeptic of population scares, figures that worldwide fertility will keep dropping. That would mean world population will peak at about 8.5 billion in the middle of the next century, and then start to fall.

Wattenberg's forecast differs sharply from the one used to predict trends like global warming and food needs. Most people use the United Nations' middle-of-the-road forecast, which says the population will top 9 billion at mid-century and peak at a much-higher 11.3 billion by 2100.

Why the difference? The commonly used U.N. forecast assumes global fertility rates will drop to 2.1 children per woman, and then stay there. Wattenberg thinks that's wrong, and history seems to be on his side. As poor countries become more modern, he argues, they will behave like today's rich countries. In other words, women will continue to have fewer babies.

If he's right, that's one more reason to doubt predictions of a global-warming disaster. Fewer people will mean less burning of fuels that cause the emissions said (by some scientists, notably) to be warming the planet.

The lower fertility rates also undercut forecasts of famine. A new study from Johns Hopkins University says the world may not be able to feed itself 30 years from now. The study, though, assumes population growth won't slow (it also downplays the impact of new technology).

But aren't poor countries already having trouble feeding their own people? Some are, certainly, but the root cause of their woes is economic or political. They're hungry because of wars, rapacious rulers or bad economic policy, not because they have too many people.

And as they come to grips with their real problems, they find the population "problem" solves itself.

Wealthy countries with modern, market-based economies tend to have low birthrates. This makes economic sense. A family's success in such places no longer depends on how many strong backs it has, but on how many minds it can train.

And training minds is an expensive process. Rather than have as many babies as possible, families have only as many as they can afford to invest in.

Wealth also gives access to better health care and nutrition. More babies now survive to live full lives, so parents no longer need to have so many in the expectation that some will not reach adulthood. Modern economies also create opportunity for women outside the home—which creates the demand for and use of family planning.

The news isn't all good. A full-scale population bust would create problems of its own in countries where the baby boomers haven't produced many babies. For one, Social Security and health-care systems will face enormous strain as swelling numbers of the elderly depend on the efforts of shrinking numbers of workers.

Even more important might be the potential psychological impact of a birth dearth, as Wattenberg calls it. Children are to be welcomed, not feared. They are the future. And if their numbers continue to shrink, what will it say about ours?
GUEST OPINION

Nation must address population growth

By Frosty Wooldridge

Driving Boulder Turnpike is a frightening dilemma today. High-speed gridlock. That driver behind you is so close, you can see the whites of her eyes. You feel guilty going the speed limit, so 75 is the only option if you don’t want people playing “Road Warrior” or passing you in the breakdown lane.

With that harsh reality in mind, Broomfield city council recently approved another 3,800 new homes. Superior sprawls south like a living cancer. Lafayette looks like a runway Monopoly game complete with golf courses. Tiny Niwot explodes daily like a kid blowing bubble gum. Louisville has a new Sam’s Club looming. Everywhere our mountainous skyline is being replaced by concrete and glass-tarnished with highwaysand cars.

Knock, knock. Is anybody home or are they brain dead on those city councils? Why would you okay more building when you haven’t solved our problems of deadly, scary, daily driving to and from work? Are we a bunch of lab rats for your amusement? But you live here too? So what’s driving this rush to make ourselves more miserable with more crowding?

Has anyone thought about what another 1 million people will do to this state and the quality of our lives in the next 10 years? If you build homes, they will come. What about 2 million? If you keep building, they will keep coming. The Front Range will look like a King Soopers parking lot from Fort Collins to Colorado Springs.

With that kind of abnormal growth, like a cancer, our lives will diminish with each new home, car, and commercial building. Just like a family with 10 kids and only one pumpkin pie, the pieces get smaller and smaller until there is no pleasure or sustenance in the tiny pieces of pie shared. That problem exists in LA, Chicago, New York City, Detroit, Miami and all large cities already. They’re running to Colorado to escape overpopulation problems.

DIA will add 400 flights daily in the next two years to keep up with the numbers. Light rail will be added. More lanes will be cut into I-70 and I-25 will be expanded. And what will be the result? More gridlock, danger and more deadly accidents.

At some point in the next 20 or 30 years, no matter what we do, the quality of our lives in Colorado and the USA will diminish to that of an ant hill. We burn 18 million barrels of oil per day. We place 3,000 acres under concrete and asphalt DAILY. Our numbers grow by 3 million per year. Our air and water quality and food supply diminish with each added human. Yet, we keep multiplying and ignoring.

We can’t keep adding people, planes, cars, and lanes to a finite area. At some point, we the people and specifically our leaders, both political and religious, must address a national population policy that stabilizes the U.S. If we don’t, the problem will become so horrendous, we won’t be able to control it.

Two thousand years ago, the Bible told us to go forth and multiply and take dominion over the animals. There were no perceived limits. Today, limits are a reality. We can’t keep gobbling up 80,000 acres on the Front Range per year and expect to have a healthy life. Vail recently devoured 850 acres. What about the next 1,000 acres? They turn into a ski run? Where, in the end, will the animals go? We can’t keep adding 100,000 people per year into this state and expect to enjoy normalcy. On the national level, we can’t keep adding 3 million people who consume, pollute and drive a car — as if there are no limits.

This population “thing” will not remain silent for long and the faster you and I push for a national dialogue, the sooner we can move toward a solution here in Colorado and the nation. If you have better ideas that will solve the problem of too many people, express them and gain a consensus.

The worst decision you can make is to think you can do so little, that you do nothing at all. Write letters to the editors of local, regional and national newspapers. Write your politicians. Talk to your religious leaders. Get onto local news programs and force the issue of overpopulation. We, as a state and a nation need to move on two children per family as a national policy. We need a zero immigration moratorium for five years. We can’t keep waiting as if nothing bad will happen.

Why? Because you can already see the whites of his eyes in your rear view mirror on Boulder Turnpike. If that’s not enough, you’re driving blind. Do something, anything to bring this population discussion into the public forum. Do it as if your children’s lives depended on it, because they do.

(Frosty Wooldridge has ridden his bicycle 100,000 miles on six continents in the past 24 years. He has seen the consequences of overpopulation worldwide. His book, “Handbook for Touring Bicyclists” is available nationwide. He’s currently working on “On the Ice: Wanderings of a Middle-Aged Man in Antarctica.”)
Russia, don’t fade away

Alexander Griboyedov’s hero Famasov (see Survival Russian, page 18) used to complain to the Creator about how tough it is to be “the father of grown daughter.” Tough it is.

But being the father of a grown son (which I also am) is hardly any easier in today’s Russia. Rampant criminality and vagrancy, drug addiction among teens, a culture and secondary education that get second shift ...

... What other dangers threatening the young generation need I mention to illustrate the hardship of parenthood in Mother Russia? Rising unemployment? Months-long wage arrears? Bank failures and an unstable national currency?

Not exactly the type of situation ripe for a baby boom. So should we really wonder why our country’s population is shrinking by almost 1,000,000 per year, with the total now at less than 147 million (see Note Book). As Alexander Solzhenitsyn justly put it, this loss is comparable to the human casualties suffered during a civil war.

So, with two kids, I seem to have fulfilled at least one civil duty. Almost. Demographers argue that two children are barely enough to assure simple reproduction. And a territory as vast as Mother Russia needs much more than simple replacement of the population. Count Lev Tolstoy, by the way, used to say that only three children are enough for a normal family. He himself was not only a prolific writer, but also a prolific father of 13 children.

Then again, for all the socio-economic difficulties we are living through, it can’t be as bad with children as it was in, say, 1990, when I was taking the local, empty-shelved Universam by storm each morning, shouldering and elbowing my way through crowds just to pick up two liters of milk to feed our young son. We tend to forget these things too quickly.

Now, the food supply has improved considerably. And young parents no longer need to line up for diapers, baby food, baby carriages and what not. And even though the supply of money often falls short of the cost of food, people somehow are getting by, juggling many jobs and fighting the only deficit we are left with — money.

Actually, those that are doing much better than “getting by” seem to be doing less than their “fair share” in supplying and raising Russia’s next generation. As feminism, birth control and other traits of a market-oriented society gradually take root here, having children takes a back seat in the plans of well-to-do couples — behind apartments, cars, dachas and trips to the Bahamas or Turkey.

If the shrinking population trend continues, even the seemingly inexhaustible flow of Russian tourists to summer destinations will decline by early next century. Demographers predict that the number of Russians could plummet to less than 100 million in the next millennium if the reproduction rate remains as low as it is now.

One might conclude that the state has to do something about this. In contrast to China’s oppressive “one child only” policy (which many Russians seem to have adopted voluntarily), Russia needs something to better incentivize families to have children.

However, in Russia, pinning all hopes on the state, if past experience is any guide, will bring no better results in our demographic situation. Russians need to think for themselves. Maybe a Tolstoyan birth-rate is not necessary, but at least simple maintenance of the population base is a must. After all (thank you, Creator) being “father of grown” daughters and sons is a great gift of nature which fills normal human beings with joy and happiness. And we can all always use a bit more of that.

— Mikhail Ivanov

Today’s Russia is not exactly ripe for a baby boom, but something needs to be done to better incentivize families to have children...

Aug-Sep 1998
Population growth slows

UNITED NATIONS (UPI) — The United Nations says the world’s burgeoning population, heading to 6 billion next year, is being slowed generally by declining fertility rates and in Africa by the AIDS epidemic.

However, the U.N.’s Department of Economic and Social Affairs added today the mortality rate is declining and people are dying at older ages. There are 135,000 people now more than 100 years old, but there are expected to be 2.2 million by 2050.

The number of people on earth is expected to nudge 9 billion by then.

Joseph Chamie, director of the DESA Population Division, told reporters at U.N. headquarters that growth rates are coming down. He pronounced population “an evolving success story,” but said “more work has to be done on mortality.”

He said the total fertility rate has declined from five children per woman in the early 1950s to 2.7 births per woman this year and is expected to hit 2.1 births per woman — the level necessary for the replacement of generations — in 61 countries or areas of the world by 2000.

The “1998 Revision” of the official U.N. estimates also said fertility has decreased to below replacement levels “in several countries from less developed regions, including all countries in the populous regions of Eastern Asia except Mongolia.”

In the 29 countries of Africa hardest hit by AIDS, the average life expectancy is 47 years, seven years less than it would have been estimated without the disease.

In Botswana, where one in four adults is infected, life expectancy is expected to drop from 61 years in 1990-1995 to 41 years in 2000-2005.

“For the first time,” the report said, “the number of octogenarians (80-89), nonagenarians (90-99) and centenarians (100 years and older) are estimated and projected for all countries of the world.”

It said there were 66 million people over 80 this year, or one of every 100 persons.

Oct 29, 1998

Millions of Rwandans Threatened by AIDS

Tragedy upon tragedy has befallen the tiny east central African country of Rwanda in this decade. Now, years after civil war has ceased and many people are returning to their homes, a new and greater threat looms, one that endangers the lives of millions of Rwandans and the future of the country itself: AIDS.

The disease is reaching epidemic proportions. An increasing proportion of the population is infected, stemming from increased promiscuity and the reappearance of polygamy which had virtually disappeared under colonial rule. The future is frightening with the level of infections leveling off in the cities, but increasing sharply in the countryside from 1.3 percent in 1986 to 11 percent today.

Many women who lost their husbands and sons in the fighting earlier in this decade now share men in order to have more children.

Water Crisis Challenges Jordanians

The Middle Eastern kingdom of Jordan is facing a water shortage crisis that has caused the country to limit its citizens to two days of water a week from public supplies. With streams drying up, water levels are declining across the country and the national government is desperately seeking to find ways to stretch existing supplies.

The severity of the problem is attributed to the fact that Jordan does not have the rivers of nearby Egypt, Iraq, Syria and Turkey, nor does it have the funds oil-rich Persian Gulf countries have to pay for desalination of sea water.

Other Middle Eastern countries have their share of water problems. For example, Lebanon's broken down system prevents regular water delivery to its citizens even though the country has a sufficient supply.

Jordan, however, is the only country that rations water throughout the year, limiting households to 22 gallons a day. But the average household has nine persons and the water must be used for cooking, house cleaning and showers, as well as for drinking. By comparison, Saudi Arabia receives 65 gallons per household per day and Israel 78 gallons.

Water firms running dry

By Charles Clover, Environment Editor

SOME water companies in south-east England are likely to run out of water over the next 25 years because of rising demand, according to a new study.

"There is potentially a big problem," said Dr Giles Phillips, of the Environment Agency, at a conference—sponsored by The Daily Telegraph—on water and the 44 million homes to be built by 2016.

Next month the agency will publish an update of a 1994 study which showed rises in demand of 37 per cent by 2021 in the Anglian region and 28 per cent in the Thames region. Those figures did not include the new households now predicted or the latest forecasts of climate change.

Many of the assumptions about how much water is available from rivers and boreholes are turning out to be too high. Some companies are likely to have to build reservoirs—or restrain demand—much sooner than they thought.

Dr Phillips said the agency was reviewing figures from one company which showed that a lot less water might be available.

The conference was told by Lilli Matson, of the Council for the Protection of Rural England, that while the Government insisted that 44 million homes needed to be built, "not a squeak" had been heard on where the water would come from.

A parliamentary answer from Angela Eagle, the environment minister, had said that it was up to water companies to work out whether they had sufficient supplies.

Pamela Taylor, chief executive of the Water Companies Association, said of the housing forecasts: "All of this signals trouble—or challenge—ahead.

"Perhaps the number of homes and the increase in demand they will bring may not be equivalent to the supplies we have available."

"The short answer is, we're not entirely certain. The powers that be haven't asked us if we can do it. And that is a major part of the problem."

The smaller, water-only companies want a statutory right to be consulted on developments.
Famine slashes N. Korean population

By The Associated Press

SEOUL, South Korea — North Korea’s population of about 24 million has shrunk by up to 3 million people in the past four years because of famine, South Korean intelligence officials said, citing a classified North Korean survey. The survey by the North’s Public Security Ministry confirms wide-spread Western reports that more than 500,000 North Koreans have died of hunger each year since 1995, they said.

Massive floods swept much of North Korea in 1994, aggravating the country’s chronic food shortage caused by decades of inefficient collective farming.

Bad weather, including droughts, in successive years caused the food shortage to become acute, forcing the country to turn to the international community for help.

North Korea, a closed country, does not release any official statistics, even on population.

Feb 19, 1999

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Argentina Seeks to Halt Illegal Aliens

By Clifford Krauss
New York Times Service

BUENOS AIRES — With the economy slowing and street crime rising, President Carlos Saul Menem has introduced a series of bills to Congress to stem the flow of illegal immigration from Bolivia, Paraguay and Peru.

Congressional debate on the legislation has not yet begun, but the bills have already created tensions between Argentina and its poorer neighbors. And they have prompted criticism from the hierarchy of the Roman Catholic Church and human-rights groups that the government is unleashing a xenophobic campaign to make scapegoats out of poor, defenseless people.

But by raising an issue with widespread appeal, the ruling Justicialist Party may succeed in putting the opposition on the defensive in a presidential election year.

The debate over the bills also highlights the growing rate of migration of peasants and workers across borders throughout South America, raising a potentially potent and divisive issue not only in Argentina, but also in Chile, Uruguay and Venezuela.

The new laws would impose fines of up to $500,000 on individuals or companies who employ illegal aliens. They would give the interior minister the power to deport any alien sentenced to more than two years in prison. Anyone arrested for helping foreigners enter the country illegally would be subject to prison sentences of 5 to 20 years.

Statistics about illegal immigration here are imprecise, and the government and private groups disagree on the dimensions of the problem.

But experts seem to agree that Argentina has recently seen an increase in the immigration of poor Bolivians, Paraguayans and Peruvians, a practice that started at least 30 years ago. Some analysts have estimated that up to 1 million Peruvians live outside Peru, mainly in the United States, Argentina and Chile.

According to the latest Argentine census figures, the number of Paraguayans here increased from 154,000 in 1960 to 250,000 in 1991. In that period, the number of Peruvians increased from 5,100 to 16,000.

Experts say the trend is accelerating as the regional economy slows in response to the East Asian and Brazilian financial crises.

In the northern provinces, migrants frequently do backbreaking work like picking cotton and strawberries. In the cities they shine shoes and do other odd jobs. The alien migrants are rarely unionized, and they are generally paid much less than Argentines.

An opposition congressman, Juan Pablo Cañiero, has called the move to tighten immigration laws “a racist campaign.” He added, “What they are trying to do is blame our social problems on the immigrants.”

According to Mr. Cañiero, the 70,000 or so immigrants in the Buenos Aires metropolitan region make up less than 2 percent of the workforce, so they cannot be blamed for an unemployment rate that has risen slightly over the last month after decreasing under the previous year.

He said 2.5 percent of those found guilty of crimes were foreigners.

In explaining the need for the new legislation, Hugo Franco, a senior official in charge of immigration control, said the government was merely interested in “protecting legal immigration and fighting illegality.”

Officials said at least 60 percent of those arrested for petty crimes in Buenos Aires in recent months were foreigners. Critics contest that estimate and note that foreigners make up a much smaller percentage of the prison population.

Bolivia’s president, Hugo Banzer, has publicly expressed concerns that the new proposals will generate anti-Bolivian feelings and asked for guarantees that the rights of Bolivian immigrants will be respected.

“We want Argentine authorities to prevent abuses and deportations,” Mr. Banzer said.

Feb 19, 1999  with Herald Tribune
Board of Directors

Insights from Politics

As Europe's population shrinks and ages, so will its influence on world politics. As Europe's power wanes.

The European Union's foundations are fraying. As aging populations in regional states struggle to stay competitive, Europe faces a demographic crisis. Among the nations in the region, these challenges are particularly acute in several countries.

Aging Populations

In many European countries, the population is aging, with a declining birth rate and an increasing life expectancy. This trend is expected to continue, with the potential for a shrinking workforce and an increasing burden on social security systems.

demographic challenges

The demographic challenges facing Europe are significant and will have far-reaching implications for the region's economy, politics, and social structures. As populations age, there may be a need for increased care and support for the elderly, while a shrinking workforce could lead to economic challenges. Additionally, the decline in the working-age population could impact the labor market and economic growth.

Policy Responses

Governments in Europe have implemented various policies in response to demographic changes. These include measures to encourage higher birth rates, such as incentives for families and improvements in public services. There has also been a focus on aging populations, with efforts to improve healthcare and support systems.

International Comparisons

Comparing Europe to other regions of the world, differences in demographics and population trends are evident. Some countries have managed to maintain or even increase their populations, while others continue to experience declines. Understanding these international differences can provide valuable insights into the factors affecting population dynamics.

Population Shrinkage

Population shrinkage is a global phenomenon, with many regions experiencing declines in their populations. In Europe, the pace of population decline is slower compared to some other regions, such as Japan. However, the implications for economic development, social welfare, and political stability are significant.

Economic Impacts

As populations shrink, there may be changes in the economic landscape. With a smaller workforce, the labor market could face challenges, and there may be a need for adjustments in economic policies. Additionally, the reduced tax base could impact government spending and social programs.

Social Implications

Population declines can have significant social implications, including changes in family structures and community demographics. As populations age, there may be increased pressure on social security systems and a need for elderly care services.

Political Challenges

The decline in population sizes presents challenges for political stability and representation. Smaller populations may lead to underrepresentation in decision-making processes and could impact the effectiveness of government programs.

International Cooperation

Addressing demographic challenges requires international cooperation. As populations decline in some regions, there may be opportunities for collaboration on issues such as workforce development, immigration policies, and social welfare programs.

The Future of Europe

Facing the demographic challenges of an aging population and declining size, Europe must adapt and innovate to ensure a sustainable future. This may involve embracing new technologies, developing workforce training programs, and exploring international partnerships to address the economic, social, and political implications of population changes.
AIDS ravages southern Africa

Skyrocketing infection, death rates threaten to wipe out a generation, devastate economies

By Daniel J. Wakin  Oct 18

Associated Press

LILONGWE, Malawi — The patients lie two to a bed and on the floor, waiting to be sent home to die. Tattered blankets brought by relatives drape their shrunken bodies, because Lilongwe Central Hospital doesn’t have any linen. The sounds of sawing and hammering in the streets testify to the booming business done by the capital’s coffin makers. Public offices grind to a halt because so many workers are away at funerals. Businesses are crippled when key employees die.

After coursing through other parts of Africa, AIDS is rampaging in southern Africa, turning the region into the epidemic’s supernova and changing the nature of existence.

Extraordinarily high death and infection rates are devastating families, threatening economies, creating a generation of orphans and lowering life expectancy in Zambia, Zimbabwe, South Africa, Malawi, Swaziland, Botswana and Namibia.

“It’s worse than anything else southern Africa has seen,” said Dr. Peter Piot, executive director of the U.N. AIDS program in Geneva.

“...What other catastrophe is going to kill 20 to 30 percent of the adults?”

All told, Africa south of the Sahara has two-thirds of the world’s people infected with the AIDS virus, or 21 million. Four of every five women with the virus live there, and as do virtually all the 8.2 million children orphaned by AIDS.

Already overwhelmed with poverty and basic health issues like clean water, African governments have responded feebly to the epidemic, AIDS experts say, leaving much of the task to foreign donors and aid agencies.

It’s hard to ignore the numbers.

In Botswana and Zimbabwe, one of every four adults is infected with the AIDS virus, the U.N. AIDS program estimates.

In Zimbabwe, where bodies are filling morgue corridors, 1.2 million adults will die from the disease by 2005, the government says.

Zambia has 360,000 children orphaned by AIDS.

The continent’s biggest economic and military power, South Africa, is reaching its own state of crisis.

From 1994, when free elections ended apartheid, to last year, the infection rate rose from 7.6 percent to 17 percent. In the worst-hit province, KwaZulu-Natal, nearly one-third of pregnant women are infected with the AIDS virus.

See AIDS on 57A

South Africa stands to lose a generation

AIDS from 42A

“In South Africa you talked about the loss of a generation of kids due to apartheid. Now you’re talking about a lost generation due to AIDS,” said Alan W. Whiteside, who runs an AIDS-economics research division at the University of Natal in Durban, South Africa.

The infection is mainly transmitted by heterosexual sex in Africa.

The large-scale movement of people — either refugees or jobseekers forced by poverty — help spread the disease, along with the practice of having multiple sex partners in some cultures. Lack of education and the high rate of sexually transmitted disease also are factors.

Countries in southern Africa are slowly moving into action, partly inspired by Uganda — the continent’s only success story in fighting AIDS, where the infection rate is declining because of a public information campaign and broad consensus on tackling the problem.

South Africa introduced a $13 million initiative in September designed to push government ministries and private businesses to come up with their own ways to deal with AIDS.

Zimbabwe has a female condom program. Zambia has introduced the subject of AIDS in school curriculums.

The epidemic is “killing off a lot of young people, leaving behind orphans, destroying small businesses, taking its toll on most (institutions) and leaving a lot of grief behind,” said Owen Kalua, planning director for Malawi’s National AIDS Control Program.

Malawi’s population of 10 million is roughly that of Belgium, but it has 100 times the number of people infected with the AIDS virus or sick with AIDS — 710,000.

Like most public hospitals in the region, Lilongwe Central Hospital in Malawi sends its terminal patients home, unable to cope with the sheer numbers. That compounds the tragedy for many, whose families reject them because of the strong stigma AIDS carries in Africa.

In Durban, South Africa, many of those unfortunate end up in the Ark Christian Ministry shelter.

It is one of the few refuges for homeless AIDS sufferers in the city, site of the next World AIDS Congress in 2000.

Ivan Tennunson, 28, diagnosed in 1994, moved to the shelter when his father refused to take him in.

“Sometimes you want to scream about it; sometimes you want to cry about it,” said Tennunson, a cigarette in his trembling hand.

“In the end you just want to be alone. You just want to sit on a beach and think, when is this going to come to an end?”

Roy James
How global aging will challenge the world’s economic well-being

By Phillip J. Longman

From his office high above Park Avenue, Peter Peterson surveys a booming city of leveraged deals and paper profits that, almost every day, add to his bounty. As the Dow rallies once again beneath the fading winter sky to the south, this son of Greek immigrants can only count his blessings, which range from a summer home in the exclusive Hamptons whose inflating value he can scarcely believe, to a secure position as the chairman of the Blackstone Group, a prestigious New York investment bank.

Yet Peterson, 72, is worried about the future. These days, as most, he’s thinking about aging—and not just his own. The world is going gray, and one day soon, the implications of that trend could unnerve today’s boom psychology. “The scenario I see is that one or more developed countries, say Italy, is going to decide that the political cost of reforming their pension systems is just too high,” says Peterson. “Then they will try running high deficits—much higher than limits set by the European Union’s monetary authorities—in an attempt to finance their way out of the problem. When the financial markets wake up to this news, there will be a broad realization that we have a global aging crisis that is going to be unremitting in its economic consequences.”

The bull brought to its knees by too many Italian retirees? In some ways, the world should be so lucky. Not long ago, experts worried not about how to finance a world going gray but about a cresting wave of kids. And for good reason. Worldwide, as recently as 1972, a woman gave birth to an average of 5.6 children over her lifetime. Global population, as a result, was doubling every generation. Citing the trend, Asia is aging rapidly. Japan, for example, will suffer a 25 PERCENT DECLINE over the next decade in the number of workers under 30.

The developed world at least became RICH before it became old. The Third World will become OLD before it becomes rich.
Moreover, benefit eligibility rules are broad, with special regimes for certain occupations and other groups; the statutory retirement age is typically still 60 for men and 55 for women. Benefits are based on complicated formulas and are only weakly linked to contributions. The lack of clear relation between years of contribution and pension benefits, loose eligibility criteria, and low retirement ages add to the distortionary nature of the current pension systems.

Following significant increases, payroll tax rates are now in general in excess of 30 percent, and they were as high as 52 percent in Ukraine in 1996. Reflecting differences in old-age dependency ratios, income levels, initial systems, and policy responses, substantial variations across countries emerged in the ratio of public pension payments to GDP.

Public Pension Systems in Countries in Transition
(In percent)

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<th>Country</th>
<th>Dependency Ratio 1990</th>
<th>Dependency Ratio 1993</th>
<th>Dependency Ratio 1996</th>
<th>Average Replacement Rate 1990</th>
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Major advanced economies | ... | 39.2 | ... | 37.5 |

Sources: Andrews and Rashid, "The Financing of Pension Systems in Central and Eastern Europe"; Castello Branco, "Pension Reform in the Baltics, Russia, and Other Countries of the Former Soviet Union"; The Vienna Institute for Comparative Economic Studies; and IMF staff estimates.

1Pensioners as a percent of the number of people employed.
2The average pension in terms of the average wage.
3The system dependency ratios for the Czech Republic and

Countries in Transition: Public Pension Expenditure, 1993 and 1996
(In percent of GDP)

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Memorandum

France                      | 14.4  |      |
Germany                     | 14.3  |      |
Italy                       | 17.1  |      |
Spain                       | 11.2  |      |
United States               |       | 4.6   |

Sources: Andrews and Rashid, "The Financing of Pension Systems in Central and Eastern Europe"; Castello Branco, "Pension Reform in the Baltics, Russia, and Other Countries of the Former Soviet Union"; Eurostat; and IMF staff estimates.

From: World Economic Outlook, May 1998 by International Monetary Fund
Birth Control in Japan: Realities and Prognosis
Mariko Jitsukawa and Carl Djerassi

Why does Japan not legalize the use of steroid oral contraceptives (OCs)? In early 1992 (1), Koseiho (the Ministry of Health and Welfare) indefinitely postponed approval of the internationally used low-dose OCs (consisting of a synthetic progestin and the estrogen 17a-ethinylestradiol) despite the positive recommendation in 1986 of its own medical advisory committee and the completion of the requisite clinical trials (2) among some 5000 Japanese volunteers, which replicated earlier findings accumulated among millions of women abroad.

The continuing ban has been attributed to concern that legalization of OCs would degrade sexual mores and to the medical community's fear of losing several hundred million dollars derived from performing abortions (3)—income that is frequently undisclosed to tax authorities by evasion of legally required reports of abortions to Koseiho. Yet 0.5 to 0.8 million Japanese women are estimated to use high-dose therapeutic Pills (approved for menstrual disorders) for contraceptive purposes (4). Because of the ban on low-dose contraceptive Pills, these women are risking negative side effects (particularly in the cardiovascular system) that could be minimized with the legalization of the low-dose formulation (5). Worse, no package inserts on the consequences of long-term consumption are furnished, because manufacturers are legally prohibited from providing such information about unauthorized (that is, contraceptive) use (6).

AIDS and Oral Contraceptives

Despite convincingly satisfactory clinical tests (2), the anticipated approval of OCs was suspended because of the Japanese government's alarmed response to Koseiho's AIDS Surveillance Committee's report (7) of 238 new HIV-positive cases in 1991. The government concluded that legalization of OCs would discourage condom use, in spite of data (8) that unexpectedly showed that many Japanese do not use condoms in a way that would prevent the spread of sexually transmitted diseases. In May of 1993, in response to appeals by several medical organizations, Health and Welfare Minister Yuuya Niwa concurred that there was no direct relationship between AIDS and OCs (9). However, his promise to resolve the stalemate was lost in the political turmoil of July 1993, when the Liberal Democratic Party lost power.

Some Japanese critics of Koseiho's decision to table indefinitely the anticipated OC approval cite as the real reason "a mood in the government that any contraceptives should be blocked because of worries regarding the aging of the Japanese population" (9). Other recent examples (10) strongly support the idea that Japan's present policies on reproduction overwhelmingly focus on procreation rather than contraception, in spite of the fact that there is no industrialized country where the introduction of OCs per se significantly reduced births when abortion was also widely practiced. Given the powerful motives of Japanese citizens to limit fertility, which have accompanied Japan's development toward an industrialized, urbanized, and egalitarian society, the claim that OCs will reduce Japan's birthrate is without merit. In our opinion, suppressing more efficacious contraceptives makes the Japanese government look as if it desired an increase of unwanted pregnancies, hoping that women would not terminate them.

Political and Cultural Background

Before World War II, all birth control methods other than condoms, which were distributed for hygienic purposes to soldiers sent overseas, were prohibited by the Japanese government. As a result, illegal abortions with their dire consequences were rampant, which prompted the Diet to pass the Eugenic Protection Law (EPL, 1948), giving legal grounds for abortion (11)—"economic hardship" being added in 1949, although Chapter 29 of the Penal Code (1907), defining abortion as a crime, remained formally intact.

For the first dozen years following the implementation of the EPL, the drop in annual births mirrored the rise in annual abortions (Fig. 1) (12). In the 1960s, the direct cause-and-effect relation became less clear, presumably because of increasing use of contraceptive methods, primarily condoms and the Ogino calendar rhythm method (the name is that of a Japanese physician) or a combination thereof (13-15). Another consequence of the prewar government policy was the suppression of IUD research in Japan (16) until the postwar government established new regulations for contraceptives in 1952 (17). The 4-year time lag between the availability of legal abortion (1949) and the approval of contraceptive marketing (1952) proved to be critical in Japanese acceptance of abortion as a key component of birth control.

There have been two major attempts (1972 to 1983) to eliminate the economic hardship justification of the EPL. A nationalistic religious organization, Seicho no Ie, claimed that this provision gave "irresponsible" women free access to abortion. With its strong political clout, the organization almost got its amendment passed on the second try, but the bill collapsed in chaos after many members of the ruling Liberal Democratic Party signed petitions both for and against the amendment (18).

Women's Attitudes Toward the Pill

Seicho no Ie's challenge prompted Japanese feminists to enter public debate on reproductive rights. Their emphasis on abortion

![Graph showing trends of births and abortions](image)
THE POPULATION SLIDE

Fertility in some poor countries is taking a nosedive

In 1975 a typical Bangladeshi woman would have had seven children in her lifetime; today she would probably have three. This sudden decline, known as a fertility transition, is the most extreme case in a pattern that has emerged throughout South Asia. It occurred first in Sri Lanka, then in India and most recently in Bangladesh and Nepal.

The drop has demographers baffled. In the West, fertility started falling after an advanced stage of development had been reached. But the new declines are not directly correlated with such commonly cited factors as increased literacy or alleviation of poverty: Bangladesh remains one of the 20 poorest countries in the world.

Some observers, such as Sajeda Amin of the Population Council in New York City, credit the Bangladeshi success to the government’s intensive family-planning program. It includes a cadre of 24,000 women, often covered from head to toe in traditional Islamic robes, who penetrate the innermost sanctums of rural homes with supplies of contraceptives and advice about health.

But although such efforts have provided essential access to contraception, they are working because Bangladeshis have also decided to have fewer children. In 1975, when asked how many children she wanted, a typical woman would reply four. Today she would say two. And back then, she was four times more likely to offer a fatalistic response, such as, “It is up to God.” Now she is confident that it is up to her.

(If her two children are both girls, however, a woman is likely to have another child. Under Islamic law, she gets no inheritance from her husband unless she has borne him a male child, and without one she will most likely end up impoverished and homeless.)

Demographers agree that the fertility transition is ultimately caused by a drop in mortality. Once a couple realizes that their children are likely to survive, they can give birth to fewer infants and still be sure of being cared for in their old age. But according to Sonalde Desai of the University of Maryland, it used to be 50 years before a mortality drop led to fertility transition; now it is taking barely 10. And in Bangladesh, the connection is especially weak: infant mortality had remained at the rather high level of about 14 per 100 live births for two decades preceding the fertility transition.

Another oft-cited trigger for the transition is microcredit, an idea pioneered by Bangladeshi economist Muhammad Yunus. Since the 1970s, his Grameen Bank of Bangladesh and another private organization, the Bangladesh Rural Advancement Committee (BRAC), have been making small loans to poor rural men and women. Monitoring by peers replaces collateral, leading to a repayment rate of more than 90 percent. Currently three million Bangladeshis, mostly women, have access to such credit, which they use to set up small ventures.

Although the programs have clearly been beneficial, their impact on fertility is hard to decipher. Both Grameen and BRAC require grantees to take a set of resolutions, one of which is to have small families. Women do use contraceptives more consistently when they belong to Grameen. More curiously,

that the bank’s messages are diffusing throughout the community. Amin points out that microcredit programs were too small in the late 1970s, when the fertility transition began, to have been directly responsible for it. They might, she concedes, have had a catalytic effect.

Another factor for the transition, cited by Moni Nag of Columbia University, is less pleasant. The early 1970s were traumatic for Bangladesh. A bloody war with Pakistan led to the nation’s birth, which was followed by severe floods, crop failures and famines. These events highlighted the vulnerability of women: many were raped in the war, and many more women than men died in the floods and famines. The resulting upheaval in the social order—large numbers of women left their homes to become manual laborers—may, in a bizarre twist, have forced women to take more control of their fates.

But Adrienne Germain of the International Women’s Health Coalition in New York City takes issue with such poverty-driven reasoning for the drop. Bangladesh, she points out, is no longer the “basket case” it was once labeled by former U.S. secretary of state Henry Kissinger: it has seen quite a bit of development. “Even though demographers can’t seem to measure it,” Germain adds, “there’s been an enormous change in the status of women.” She holds that such empowerment, combined with better health care and education, will be essential to Bangladesh’s maintaining its momentum.

The final explanation for the population puzzle may lie in the information age. Bangladesh radio provides six hours of health and family-planning programming a day. “People seem to think it is irresponsible to have large numbers of children because of overpopulation,” Amin remarks. Such awareness, remarkable in a people that cannot be sure of getting two square meals a day, suggests that media messages can on occasion replace literacy. Across the border in the Indian state of West Bengal, fertility has also dropped, in a radial pattern around the city of Calcutta. Evidently, urban centers serve to somehow disseminate the idea that small families are better.

Ultimately, Bangladesh offers few lessons that policy makers can apply to other regions of the world; everything seems to have played a role. Perhaps the good news is that even the simplest ideas are worth trying.

LESSONS IN FAMILY PLANNING, provided by female workers of the Bangladesh government, have contributed to a fertility drop.

women in villages where Grameen operates are more likely to use contraceptives than women in other villages, even if they are not Grameen members.

Such an effect may come from an unconscious bias in Grameen’s choice of villages. On the other hand, it could be
Children of immigrants grow

KIDS from Page 22A

represented 15 percent of the total since 1980, a share that is not projected to change, while Asians doubled from 2 percent in 1980 to 4 percent in 1990 and are projected to reach 6 percent in 2020.

The Census Bureau projects that children of immigrants will account for 88 percent of the increase in the under-18 population between 2000 and 2050. Without immigration, the bureau says, the population of children would decrease slightly from 2000 to 2015.

The Census Bureau identified the current population of children in a midyear projection for 1998.

An actual estimate of the current population will not be released for a year, Bryson said, although projections have proved highly accurate.

Perhaps the most visible and audible reflection of the population trend is an explosion of marketing to children, particularly those age 6 to 12, who have unusually strong influence over how their parents spend money.

According to Michael Kitel, president of Small Talk, a marketing consulting firm that specializes in swaying children, studies show that children now spend or influence the spending of $500 billion a year.

“When was the last time you said to your kids, ‘Where do you want to go for dinner?’ ” asked Kitel. “That’s exactly how it works.”

Such a large generation of children marching toward adulthood has provoked intense interest among adults — particularly business and political leaders — in how today's children may run the world when they take over.

Celente, of Trends Research Institute, has a grim forecast for the existing power structure.

“The Millennium Generation has no loyalty of any kind — no family loyalty, no corporate loyalty. Party loyalty? Are you kidding?”
Immigrants Go from Health to Worse

People from around the world flock to the United States expecting to find a better life. But to scientists' surprise, a growing body of evidence indicates that increasing familiarity with U.S. culture and society renders immigrants and their children far more susceptible to many mental and physical ailments, even if they attain financial success.

The latest study of this phenomenon, directed by epidemiologist William A. Vega of the University of Texas, San Antonio, finds much higher rates of major depression, substance abuse, and other mental disorders in U.S.-born Mexican-Americans compared with both recent and long-standing Mexican-American immigrants. This pattern held regardless of education or income levels.

Vega's results, published in the September Archives of General Psychiatry, appear at the same time as the release of a national report on declining physical and mental health in children of immigrant families. A panel convened by the National Research Council and the Institute of Medicine, both in Washington, D.C., reviewed previous studies and concluded that assimilation into a U.S. lifestyle may undermine the overall health of immigrant children much more than being poor does.

In contrast, studies of nonimmigrant U.S. residents usually link poverty to poor physical and mental health. "The material on immigrant health shocked me when we first reviewed it," says panel member Arthur M. Kleinman, a psychiatrist and anthropologist at Harvard Medical School in Boston. "Vega's study is consistent with the panel's conclusion that immigrants' health deteriorates with assimilation to U.S. society," declining toward general U.S. norms, says Kleinman. Other studies have indicated that citizens of many countries, including Mexico, are healthier overall than U.S. citizens.

Vega's team interviewed 3,012 adults of Mexican origin, ages 18 to 59, living in Fresno County, Calif. Of that number, 1,810 people identified themselves as immigrants. Interviews were in English or Spanish. Interviewers expressed an interest in health issues only and tried to minimize any tendency of participants to lie—due to U.S. residency concerns—about having immigrated.

Nearly one-half of U.S.-born Mexican-Americans had suffered from at least one of 12 psychiatric disorders at some time in their lives, compared with only one-quarter of the immigrants. Common mental conditions in U.S.-born individuals included major depression, phobias and other anxiety disorders, and substance abuse and dependence.

Prevalence rates for mental disorders were lowest for those who had immigrated within the past 13 years. The higher rates found among immigrants of 13 or more years still fell considerably below those for the native-born group.

Imigrants may constitute a hardy group willing to carve out new lives in a foreign land. However, immigrants in Vega's study showed mental-disorder rates similar to those of Mexican residents.

A related study of 1,500 public health care users in California, conducted by psychiatrist Javier I. Escobar of the RWJ Medical School in Piscataway, N.J., reports lower rates of depression and post-traumatic stress disorder, as well as better physical health, in Mexican and Central American immigrants than in U.S.-born Hispanics. Nonetheless, immigrants were poorer than the U.S. natives, Escobar's team reports in an upcoming British Journal of Psychiatry.

Physical and mental health advantages for immigrant families vanish by the third generation of children born in the United States, according to the panel report. Reasons for the initial strength and later decline of immigrants' health are not clear, says Vega's group.

Close-knit extended families and cultural injunctions to eat nutritious foods and avoid drugs and divorce may safeguard the health of recent immigrants from Mexico, Escobar suggests. Increasing social isolation and the loss of stable religious affiliations may later herald health declines, Kleinman proposes. —B. Bower
World Population Projections
1994-95 Edition

Estimates and Projections with Related Demographic Statistics

Eduard Bos
My T. Vu
Ernest Massiah
Rodolfo A. Bulatao

Published for The World Bank
The Johns Hopkins University Press
Baltimore and London
among regions than among income groups, in part because of the inclusion of China in the low-income category.

The fertility transition groups, defined by the level and trend in fertility, show the TFR in pre-transitional countries at 6.3, whereas in late-transitional countries the TFR has dropped to below replacement. The fertility projections assume that in the future the TFR will decline toward replacement level (about 2.1 in low mortality countries) when the current level is higher or increase toward replacement when the current level is below that level (see Projection Methodology section).

Among the regions, East and West Africa stand out as having the highest fertility—over 6.0 during 1990–95. This is 1.6 children per woman above the next highest region, Southwest Asia, at 4.4. Currently, only the Europe region has below-replacement fertility.

Another measure sometimes used to assess fertility levels and trends is the crude birth rate (CBR), a rate that gives the number of births per 1,000 population, unadjusted for the age structure of the population. The 1990–95 CBR is 24.8 for the world as a whole. It is lowest in Europe, at 12.0, and highest in West Africa, at 44.4.

Mortality Trends

Mortality levels in all continents have decreased in the past decade—albeit at different rates—continuing a long-term trend towards longer life. Current life expectancy at birth, a measure constructed from current age-specific mortality rates applied to a cohort born this year, is estimated to be 66 years for the world in 1994. But the discrepancies among regions are large: in East and West Africa life expectancy at birth is only

Components of Population Change

Fertility Trends

Fertility has declined more rapidly and in more countries than was previously projected. While in some countries fertility remains high, many countries have experienced a trend toward smaller families as a result of changes in socioeconomic conditions that have reduced the demand for children and increased the use of contraceptives to avoid unwanted births. In 1994 the total fertility rate (TFR) for the world is just above 3 children per woman.

Table 3 summarizes the TFR estimates and projections by region, income group, and fertility transition group. The spread in fertility levels is much greater
All other continents will contain a smaller share of the world's population than today, with Europe declining from 14 to 7 percent of the world's total.

The continents are made up of countries that differ in their demographic prospects. In the African continent, the North Africa countries are projected to grow much slower than either the East or West Africa regions. In Asia, South Asia will overtake East and Southeast Asia as the continent's most populous region. Figure 3 portrays the changes in the percentage distribution of the global population by continent for three years, 1990, 2025, and 2100.

Comparison with Previous Projections

How do the projections for the world and the continents compare with those previously issued? Figure 4 compares the projection of the world's population shown in this volume with that presented in three previous editions (1992–93, 1989–90, and 1987–88). In the short run—up to 2025—the differences are small, but the projections become increasingly divergent. There are several reasons for the differences. The 1987–88 and 1989–90 projections were based on lower assumed maximum life expectancies than later editions, which accounts for the flatter curve towards the end of the projection span in the earlier editions relative to the later two. Other changes are related to different assessments of, especially, the level of fertility in some of the larger countries. Fertility in China increased in the late 1980s, as reflected in the 1992–93
Setting a bad example on AIDS

South Africa has a unique opportunity to play a key role in creating effective health-care systems in sub-Saharan Africa. It must not squander this opportunity by rejecting the help offered by science.

It is impossible to claim that South Africa has been turning its back on its AIDS problem. The disease is now so endemic, and absorbs so much of the health budget at both federal and provincial levels, that it has rapidly become one of the country’s top health priorities. All the more reason, therefore, to be concerned at the government’s recent decision not to supply the drug AZT to pregnant women infected with HIV (see Nature 396, 504; 1998). Whatever the appeal of the argument that the money for this drug could be better used on prevention, the move threatens to undermine South Africa’s credibility as an effective platform for improving the health of the whole of sub-Saharan Africa.

The statistics are horrifying enough. Nationally, officials estimate that 1,500 individuals are infected every day in South Africa, and antenatal tests have revealed that about 16 per cent of all pregnant women are HIV positive. The situation has been developing rapidly; the result, inevitably, has been an equally rapid increase in the number of children born with the infection, with the drain on both medical and social resources that this inevitably creates.

Yet Nkosazana Zuma, the country’s soft-spoken but tough-minded health minister, has steadfastly refused to use government funds to pay for AZT for infected mothers. Her reasoning has a superficial logic; even though a three-month course of AZT costs only about 1,500 rand (US$250), the same money spent on prevention could — at least in theory — save many more than one (or two) lives. But this cold calculation fails to take into account a different sum: when the cost of treating a mother for this period is compared with that of providing medical treatment for an infected child — one estimate places this at more than 50,000 rand — the savings are undeniable.

Another agenda seems to be at work, one based on an implicit distrust of certain aspects of Western biomedical practice, particularly when corporate interests (as expressed through the involvement of major pharmaceutical companies) are involved. Zuma, a physician by training, has already demonstrated her disdain for some aspects of this practice through her vigorous promotion — circumventing the country’s Medicines Control Council — of a group of researchers at the University of Pretoria who claimed last year to have produced a local cure for AIDS (see Nature 386, 6; 1997).

Such distrust is not totally without foundation; pharmaceutical companies are, after all, driven by private profit. And Zuma, an influential member of the ruling African National Congress, has many supporters who back the principles on which she has been standing firm (a ban on tobacco advertising has been another, equally controversial topic). The cabinet, for example, has publicly endorsed her decision not to provide pregnant women with AZT, which would have had to have been bought from Western drug companies.

But there is also a downside to Zuma’s rigid stance. Some argue that it could create a situation in which drug companies will be reluctant to invest in preventative strategies if these are to be given a low priority. Others point out more concretely that children who could have been saved are being condemned to a painful, untimely and unnecessary death. The situation has already enraged some Western researchers so much that they are threatening to boycott the next (13th) international AIDS conference, due to be held in Durban in 2000. This would be a mistake; boycotts by a few individuals seldom make an effective political weapon.

But the sentiment behind the threatened boycott is correct. Whatever Zuma’s suspicions of Western drugs and drug companies, withholding affordable treatment from individuals who would benefit enormously from it (a study in Thailand showed that the chance of a baby being born with HIV almost halved when the mother was given AZT) verges on the immoral. It is time for the government to rethink its stance. Little in either practical or financial terms would be lost. Much in terms of scientific and humanitarian credibility would be gained. And many lives would be saved.

Protest in Paris

The successful reform of French science needs a greater commitment to openness and consultation.

No one can simply bring together a country that has 265 kinds of cheese; General Charles de Gaulle’s exasperation with the French is probably shared this week by Claude Allègre, the country’s science minister. This follows a rebellion in the scientific community over plans to put the country’s fundamental research agency — the Centre National de la Recherche Scientifique (CNRS) — on the road to becoming primarily a funding agency for university-based research, and giving universities joint responsibility for the running of CNRS laboratories (see page 607).

But Allègre has only himself to blame for the grass-roots challenge to his reforms. Over the past year, he has repeatedly — and unfairly — attacked CNRS as being solely responsible for all the ills of French science, and unnecessarily antagonized the national committee for scientific research, a sort of parliament of scientists, by publicly describing it as a hotbed of nepotism and bureaucracy. He has also avoided direct consultation with representatives of the scientific community, pursuing reforms behind closed ministry doors.

It would be a mistake to dismiss the backlash that Allègre has provoked as merely a reflex defence of the status quo. It is not. The scientific community itself recognizes the need for change, and accepts that the proposed reforms contain some good ideas. But it is also worried that they smack of haste and authoritarian technocracy. In contrast, many researchers still cherish an idea of French science that involves collective input. These are making a legitimate demand for greater consultation in reaching agreement on what would constitute comprehensive and meaningful reforms.

Debate should not become an excuse for inaction, however, and Monday’s show of force needs to translate quickly into concrete proposals for change. For his part, Allègre now needs urgently to find ways of involving the scientific community more broadly and openly in dialogue on how this can be achieved. If he is unwilling, his close friend, prime minister Lionel Jospin, should find a new science minister.
World Population Profile: 1994

by Ellen Jamison and Frank Hobbs

With a Special Chapter Focusing on HIV/AIDS

by Peter O. Way and Karen A. Stanecki

February 1994
World Population Continues to Soar in Spite of Declining Growth Rates

World population has continued to increase steadily in recent decades, from 2.6 billion in 1950 to about 5.6 billion in 1994 (figure 1). During the early part of the period, growth rates were still rising, reaching a peak of about 2 percent per year during the 1960's, then declining to about 1.5 percent at present. According to the latest projections, the world population growth rate will decrease to just over 1 percent annually during the first quarter of the next century, while the population itself will increase to almost 8 billion in the year 2020. A population with a declining growth rate grows more slowly but nevertheless continues to get larger as long as the growth rate remains positive. The amount of the projected increase, of course, is only as "accurate" as the assumptions upon which it is based.

Most of the world population growth takes place in the developing countries of Africa, Asia, and Latin America, whose combined population grew from 1.7 billion in 1950 to about 4.4 billion in 1994; it is expected to reach 6.5 billion by the year 2020. Meanwhile, the combined population of the developed countries increased from 0.8 billion in 1950 to about 1.2 billion in 1994; it is expected to increase only modestly, to almost 1.4 billion, by the year 2020.

Source: Table 1 and U.S. Bureau of the Census, International Data Base.
Table 1.
World Population and Average Annual Rates of Growth,
by Region and Development Category: 1950 to 2020

[Figures may not add to totals because of rounding]

<table>
<thead>
<tr>
<th>Region</th>
<th>Midyear population (millions)</th>
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<td>Developing</td>
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<tr>
<td>Developed</td>
<td>832</td>
</tr>
<tr>
<td>Africa</td>
<td></td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>228</td>
</tr>
<tr>
<td>North Africa</td>
<td>185</td>
</tr>
<tr>
<td>Africa</td>
<td></td>
</tr>
<tr>
<td>Asia</td>
<td>1,411</td>
</tr>
<tr>
<td>Asia, excluding Near East</td>
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<tr>
<td>Near East</td>
<td>43</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>166</td>
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<tr>
<td>North America</td>
<td>166</td>
</tr>
<tr>
<td>Europe</td>
<td>392</td>
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<tr>
<td>(Former) Soviet Union</td>
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<td>Baltics</td>
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<tr>
<td>Commonwealth of Independent States</td>
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<tr>
<td>Georgia</td>
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<td>Oceania</td>
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Excluding China:

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<th>Region</th>
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<td>Asia</td>
<td>848</td>
</tr>
<tr>
<td>Excluding Near East</td>
<td>805</td>
</tr>
</tbody>
</table>
Years of Potential Life Lost Will Be Greatest in Countries Where Non-AIDS Life Expectancy Is Higher

Because AIDS deaths are concentrated in the childhood and middle adult ages, several countries show a relatively larger impact on life expectancy in 2010 than indicated by other measures (figure 63). These are generally countries where the non-AIDS life expectancy is higher. Under such circumstances, each AIDS death represents a relatively greater loss of potential years of life than is the case where the underlying non-AIDS life expectancy is shorter. Thus, the impact of AIDS on life expectancy, measured as years of potential life lost, is greater in Zimbabwe than in Malawi, despite the fact that the projected AIDS epidemic in Malawi is more severe than in Zimbabwe. At this peak point in the projected AIDS epidemics, AIDS has reduced the projected life expectancy at birth by 9 years (Zaire) to more than 25 years in a number of countries.

Source: Center for International Research, U.S. Bureau of the Census.
Projected HIV Seroprevalence Among Adults for Selected Countries: 1990 to 2010

Figure B-4.

A shorter line with markers (△), indicating annual estimates for the 1990 to 2010 period. By inspection, the spreadsheet calculated the offset, that is, the number of years between the start of the scenarios and the reference date. In this example, total seroprevalence in 1990 is 3 percent, a level that the interpolated epidemic reaches between the seventh and the eighth year of the projection. Thus, in this case, the offset is 7.65 years.

Projected adult epidemics for each country are shown in figure B-4. The method incorporates the variation in the speed of the empirical epidemics into the projected epidemics. For example, epidemics for Burundi and Malawi began in 1990 at similar levels of adult infection (around 10 percent). By 2010, however, HIV seroprevalence was projected to increase to over 20 percent of adults in Malawi, but to only about 14 percent in Burundi. The projected increase in infection levels in the 14 countries ranges from about half to more than triple during the two decades from 1990 to 2010.

AIDS-Related Mortality Rates

For each of the three scenarios, annual AIDS-related age-sex-specific mortality rates (\(m_x\) values) were derived and combined into a second spreadsheet. The "interpolation factor" and the "offset" described above were entered into this second spreadsheet. Based on these two values, AIDS-related age-sex-specific \(n_{mx}\) values at 5-year intervals from 1990 to 2010 were interpolated and added to non-AIDS \(n_{mx}\) values for the same period. Population projections were prepared with the combined \(n_{mx}\) values as input, using the rural/urban projection program of the U.S. Bureau of the Census.

Source: Center for International Research, U.S. Bureau of the Census.

\[\text{Source: Center for International Research, U.S. Bureau of the Census.}\]