

China's Population: New Trends and Challenges

by Nancy E. Riley

China's low fertility rate ensures rapid population aging in this century.

Open markets and trade have widened income and health gaps in China.

Policy changes and economic growth have spurred labor migration in China.

Population Reference Bureau (PRB)

Founded in 1929, the Population Reference Bureau is the leader in providing timely and objective information on U.S. and international population trends and their implications. PRB informs policymakers, educators, the media, and concerned citizens working in the public interest around the world through a broad range of activities, including publications, information services, seminars and workshops, and technical support. Our efforts are supported by government contracts, foundation grants, individual and corporate contributions, and the sale of publications. PRB is governed by a Board of Trustees representing diverse community and professional interests.

Officers

Douglas Richardson, *Chairman of the Board,*

Executive Director, Association of American Geographers, Washington, D.C.

Terry D. Peigh, *Vice Chair of the Board*

Executive Vice President and Director of Corporate Operations, Foote, Cone & Belding, Chicago, Illinois

William P. Butz, *President and Chief Executive Officer,*

Population Reference Bureau, Washington, D.C.

Michael P. Bentzen, *Secretary of the Board,*

Partner, Hughes and Bentzen, PLLC, Washington, D.C.

Richard F. Hokenson, *Treasurer of the Board,*

Director, Hokenson and Company, Lawrenceville, New Jersey

Trustees

Patty Perkins Andringa, *Consultant and Facilitator, Bethesda, Maryland*

Suzanne M. Bianchi, *Professor of Sociology and Director of the Population Research Center, University of Maryland, College Park*

Joel Cohen, *Abby Rockefeller Mauzé Professor of Populations, Rockefeller University and Head,*

Laboratory of Populations, Rockefeller and Columbia Universities, New York

Bert T. Edwards, *Executive Director, Office of Historical Trust Accounting, Office of the Secretary, U.S.*

Department of the Interior, Washington, D.C.

James H. Johnson Jr., *William Rand Kenan Jr. Distinguished Professor and Director, Urban Investment*

Strategies Center, University of North Carolina, Chapel Hill

Wolfgang Lutz, *Leader, World Population Project, International Institute for Applied Systems Analysis*

and Director, Vienna Institute of Demography of the Austrian Academy of Sciences, Vienna, Austria.

Elizabeth Maguire, *President and Chief Executive Officer, Ipas, Chapel Hill, North Carolina*

Faith Mitchell, *Deputy Director, Division of Behavioral and Social Sciences and Education, National Research Council/National Academy of Sciences, Washington D.C.*

Gary B. Schermerhorn, *Managing Director of Technology, Goldman, Sachs & Company, New York*

Barbara Boyle Torrey, *Independent Writer and Consultant, Washington, D.C.*

Leela Visaria, *Professor, Gujarat Institute of Development Research, Ahmedabad, India*

Montague Yudelman, *Senior Fellow, World Wildlife Fund, Washington, D.C.*

Mildred Marcy, *Chairwoman Emerita*

Editor: Mary Mederios Kent

Production/Design: Heather Lilley

The *Population Bulletin* is published four times a year and distributed to members of the Population Reference Bureau. *Population Bulletins* are also available for \$7 (discounts for bulk orders). To become a PRB member or to order PRB materials, contact PRB, 1875 Connecticut Ave., NW, Suite 520, Washington, DC 20009-5728; Tel.: 800-877-9881; Fax: 202-328-3937; E-mail: popref@prb.org; Website: www.prb.org.

The suggested citation, if you quote from this publication, is: Nancy E. Riley, "China's Population: New Trends and Challenges," *Population Bulletin* 59, no. 2 (Washington, DC: Population Reference Bureau, 2004). For permission to reproduce portions from the *Population Bulletin*, write to PRB, Attn: Permissions.

© 2004 by the Population Reference Bureau
ISSN 0032-468X

 Printed on recycled paper

China's Population: New Trends and Challenges

Introduction	3
<i>Box 1. The Study of Population in China.</i>	4
Mortality Decline	5
<i>Figure 1. Birth and Death Rates in China, 1949 to 2003.</i>	6
<i>Table 1. Population Indicators for China, 1950, 2003,</i> <i>and Projection to 2050</i>	6
<i>Figure 2. Child Immunization in China, Selected Years, 1984 to 2001.</i>	7
<i>Box 2. China's Looming AIDS Crisis.</i>	8
<i>Box 3. Tobacco Use in China</i>	10
Fertility Decline	10
<i>Figure 3. Total Fertility Rate for China, 1949 to 2001</i>	11
<i>Figure 4. Share of First, Second, and Third or Higher-Order Births in</i> <i>China, Selected Years, 1973 to 2000</i>	16
<i>Figure 5. Sex Ratio at Birth by Birth Order in China, 1982, 1989,</i> <i>and 2000</i>	18
<i>Box 4. Birth Restrictions, Son Preference, and Women's Status</i>	19
Changing Shape of China's Population	20
<i>Figure 6. China's Population by Age and Sex, 1964, 1982, and 2000.</i>	21
<i>Table 2. Expected Years Living With Dependents, Chinese Age 40</i> <i>in 1990 and Projection for 2030</i>	22
<i>Figure 7. Chinese by Age Group, Selected Years, 1953 to 2000</i> <i>and Projections to 2050</i>	22
<i>Figure 8. China's Birth Rates by Mother's Age, 1964, 1982, and 2001</i>	24
Population and the Environment	24
Ethnic Identity in Modern China	26
<i>Figure 9. Growth of Selected Ethnic Groups in China, 1982 to 2000.</i>	26
Migration	27
<i>Figure 10. Chinese Provinces</i>	27
<i>Box 5. The Floating Population of China.</i>	28
Growing Inequality	29
<i>Box 6. Poverty in Rural China</i>	30

<i>Figure 11. Health Indicators in Rural and Urban Areas in China, 1991, 1995, and 2000</i>	32
China's Future	32
References	33
Suggested Resources	36

About the Author

Nancy E. Riley is a professor in the Sociology/Anthropology Department at Bowdoin College, Maine. Her research interests include feminist and social demography and issues related to gender, family, and population in China. She recently published Demography in the Age of the Postmodern, with James McCarthy, and is writing a new book, Laboring in Paradise: Gender, Work, and Family in a Chinese Economic Zone, about the experience of rural migrants working in Dalian, China.

This Bulletin was written while the author was a visiting scholar at the East-West Center, Honolulu. Thanks to the Center for office space and support, to the Center's library staff for help with sources, and to Bob Gardner for help with the tables and figures. Thanks to Wang Feng, Ellen Pimentel, and Dudley Poston for their helpful reviews; to Mary Mederios Kent for her patience, help, and support; and to Helena Mickle for editorial assistance. Several of the photographs in this Bulletin were taken by Emma Raynes, a student at Bowdoin College, while participating in a Bowdoin traveling seminar in China led by Nancy Riley and made possible by a grant from the Freeman Foundation.

China's Population: New Trends and Challenges

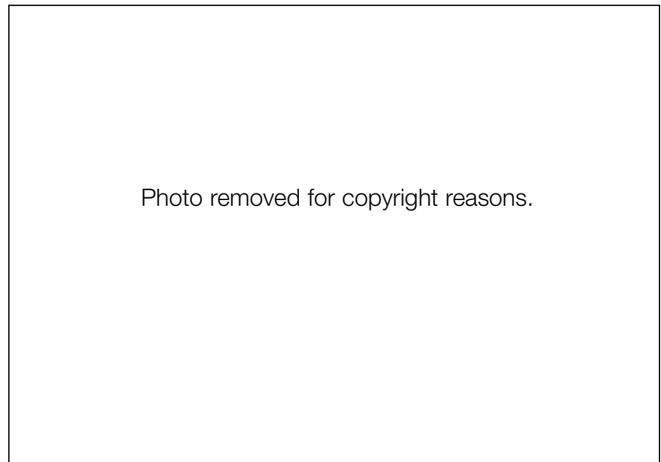
by Nancy E. Riley

China has been the world's most populous country for centuries and today makes up one-fifth of the world's population. It is no surprise that China's huge population, tumultuous demographic history, and possible future have attracted the world's attention. The country's growing economic strength, combined with its demographic might, ensures it will stay in the limelight for a long time to come.

The country has undergone enormous social, economic, and political changes over the past 50 years, but many of the issues that Chinese society faces today are also closely connected to past demographic change. Because of the rapid and extensive fertility declines in China in the past 30 years, the country's rate of population growth has slowed considerably. The country's population of 1.3 billion in the early 2000s is projected to grow by another 100 million by 2050. India—with its higher fertility levels—is forecast to move ahead of China in total population size by 2035.

China covers about the same geographic area as the United States, although its population is nearly five times greater. In addition, because of rugged mountains in the west and vast desert areas in central China, the population is concentrated within a surprisingly small area.

Rapid population growth during the 20th century helped shape China's society in myriad ways as



China's birth planning policies helped brake its rapid population growth over the last three decades. Now China faces a new series of demographic challenges.

China concurrently struggled with the breakdown of its dynastic structure, world wars, civil wars, and the founding of a new nation. The 20th century was a time of momentous changes for the Chinese people, and demographic change was very much a part of their social and political transformation.

This *Population Bulletin* draws from a growing body of statistical data and research (see Box 1, page 4) to look at some of the demographic changes that have occurred in China's recent past, beginning with a brief introduction to China's demographic history. The *Bulletin* examines government policies that

have significantly affected the country's population, and it looks at some of the current social issues that China faces and how demographic events have affected those issues.

Political Change

China's population has undergone massive change since the founding of the People's Republic of China (PRC) in 1949. When the Chinese Communists formed the new govern-

ment, there were roughly one-half billion Chinese (see Table 1, page 6). Millions of peasants lived in abject poverty, subject to unstable political conditions. Chinese had endured a civil war, war with Japan, serious flooding, famine, and social and political turmoil. China's new leaders were determined to reduce poverty and stabilize the political situation. The founders of the PRC implemented state control of the economy and all means of production in an

Box 1

The Study of Population in China

There was little organized collection of data on China's population throughout most of the 20th century. What is known about the population in the decades before and after the founding of the People's Republic in 1949 comes from a few surveys, including the Farm Survey of the late 1920s and early 1930s and the Cancer Epidemiology Survey of 1976; two national censuses conducted in 1953 and 1964; and selected registration data of uneven quality.

Demographic studies of China began in earnest in the early 1980s, just as demographers were seeking to document and describe the fertility changes that took place in the 1970s and early 1980s. In 1982, the first national census since 1964 and a National Fertility Survey were conducted, marking the beginning of an extensive program of large-scale data collection. At the same time, the government began to release data from past collection efforts. Many national population surveys have been undertaken since, including the 1985 and 1987 In-Depth Fertility Surveys; the 1987 and 1995 One-Percent Surveys (intercensus surveys that looked at a representative 1 percent of the population); the 1988 Two-per-Thousand Fertility Survey; and the 1992 National Fertility Survey.

Data Quality

Given both the size of China's population and the recency of large-scale data collections, the quality of the early data was surprisingly good.¹ For example,

the 1990 Census data were considered to be both internally consistent and consistent with the 1982 Census and fertility survey. Age reporting has been excellent in these surveys; Chinese citizens usually know their correct age, and Chinese statisticians have done an excellent job in transforming Chinese birth dates and ages into equivalent ages in the Western calendar.²

Accurate mortality statistics have been harder to obtain.³ In the 1990 Census, for example, there were more problems in mortality reporting than in the 1982 Census or the mortality survey of the mid-1970s. It is estimated that the 1990 Census underreported mortality by 15 percent in 1989 and by 3 percent in 1990. Obtaining accurate data on female infants and the elderly has been especially problematic.⁴

Many demographers believe that there are other problems with some of the data being collected in China, including the difficulty of accurately measuring the migrant population and the potential underreporting of "illegal" births in many parts of the country. Recent assessments of the 2000 Census underscore the ways that social changes occurring in China in recent years have made the collection of accurate population data increasingly difficult. Even the national headcount estimated by the census has been called into question. While some of the reasons for the deteriorating quality of Chinese population data are likely tied to changes in survey design and to what some say is insuffi-

effort to reduce poverty and expand access to the country's resources. Mortality and fertility declines after 1950 were remarkable and swift (see Figure 1, page 6). Some of the demographic change can be attributed to the transition from the social, political, and economic unrest of the early 20th century to relative stability. But much of the mortality and fertility change emanated from government actions that directly or indirectly initiated demographic change.

cient financial support, other reasons are tied to changes in Chinese society. The Chinese population is "a freer, and more diverse and mobile population in 2000 than in 1990. Instead of the population obediently queuing up to be counted, as perhaps occurred in 1982 to achieve an amazingly high accuracy of headcount, an increasing but still small population of people probably reacted to the census in 2000 in a less cooperative way. They gave inaccurate answers unintentionally or intentionally, or simply refused to answer some questions."⁵ Demographers are still assessing and adjusting the figures from the 2000 Census to account for these changes and inaccuracies.

Demographic Study

In the late 1970s, after 20 years of uncertainty and instability that made formal studies difficult, the field of demography began to assume professional status in China and to receive government support. In 1974, the first department of population opened at the Renmin ("People's") University of China. By 1978, there were 22 centers for demographic research and training, and the number of such institutions has continued to grow.⁶

In the early days of Chinese demography, few Chinese scholars had the training necessary for high quality academic work. But many current demographers have had excellent training, either overseas or in Chinese institutions that now offer undergraduate,

Mortality Decline

China's mortality has declined dramatically over the past 50 years, especially in the early years of the People's Republic. The official death rate in 1953 was 14 deaths per 1,000 people, but it was probably much higher because mortality was chronically underestimated.¹ The official death rate had dropped below 8 by 1970 and below 7 by 2000. China's mortality fell in part thanks to

masters, and doctoral degrees in the field. Chinese demography also benefits from continuing exchanges and collaboration between demographers in China and other countries.

These changes in available data, scholarly resources, and the presence of trained researchers have brought demographers and other researchers a clearer understanding of Chinese population dynamics, which helps observers and policymakers understand the demographic changes that have occurred and extrapolate lessons from China to other societies.

References

1. Ansley J. Coale, *Rapid Population Change in China, 1952-1982* (Washington, DC: National Academy Press, 1984); and Judith Banister, *China's Changing Population* (Stanford, CA: Stanford University Press, 1984).
2. Zhang Sai et al., eds., *1990 Population Census of China: Proceedings of International Seminar* (Beijing: China Statistical Publishing House, 1994): 208-38 and 253-80.
3. Kam Wing Chan, "Chinese Census 2000: New Opportunities and Challenges," *The China Review* 3, no. 2 (2003): 1-12.
4. Zhang Sai et al., eds., *1990 Population Census of China*: 208-38 and 253-88.
5. Chan, "Chinese Census 2000: New Opportunities and Challenges."
6. Susan Greenhalgh, "Population Studies in China: Privileged Past, Uncertain Future," in *The Population of Modern China*, ed. Dudley L. Poston Jr. and David Yaukey (New York: Plenum Press, 1993): 19-46.

Much of the mortality and fertility change emanated from government actions.

Table 1

Population Indicators for China, 1950, 2003, and Projection to 2050

Year	Population ^a (millions)	Percent urban	Life expectancy at birth (years)	Total Fertility rate ^b (children/ woman)	Infant mortality rate ^c
1950	565.0	13	40.1	6.2	195
2003	1,292.3	41	71.4	1.7	23
2050	1,394.4	—	81.0	1.7	6

^a Population figures are for mainland China.

^b The average number of children a woman would have, given current age-specific birth rates.

^c Deaths to infants under age 1 per 1,000 live births.

Sources: United Nations (UN), *World Population Prospects: The 2002 Revision* (2003); UN, *World Urbanization Prospects: The 2001 Revision* (2002); U.S. Census Bureau, International Data Base (www.census.gov/ipc/www, accessed April 7, 2004); and National Bureau of Statistics of China, Statistical Communique, 2003 (www.stats.gov.cn/english/newrelease/index.htm, accessed April 7, 2004).

Figure 1

Birth and Death Rates in China, 1949 to 2003



Sources: China Population Information and Research Center (www.cpirc.org.cn, accessed May 13, 2003); and National Bureau of Statistics of China, *Statistical Reports* (www.stats.gov.cn/english/newrelease.htm, accessed April 7, 2004).

increased stability and public order following the turmoil of civil wars, World War II, and partial Japanese occupation in the 1930s and 1940s. The new government began to purchase, store, and distribute grain to alleviate local famines and to develop the national infrastructure so that food could reach those in need. The government was particularly interested in narrowing disparities in income and resources, and it devised programs to redistribute

land and other resources to help ensure access by even the poorest citizens. The new government also began to develop massive public health programs. Early programs focused on relatively inexpensive goals and campaigns—such as local environmental clean-up programs and training programs for local health personnel—that contributed to lower mortality. China’s mortality decline was interrupted at several points by temporary but often severe disruptions tied to political, economic, or social changes. The most notable was the Great Leap Forward.

The Great Leap Forward

In 1958, the Chinese government launched the Great Leap Forward, a massive effort to rapidly increase agricultural and industrial production. The program was a colossal failure and, ironically, caused one of the largest famines in human history. The Chinese government kept the details of the era secret for many years, releasing some data only in the 1980s. Demographers and others who pieced together the available information have estimated that more than 30 million people died between 1958 and 1961 as a result of the Great Leap Forward.² Infants were especially vulnerable. Infant mortality rates spiked in 1958 and again in 1961.³ Adult mortality surged in 1960. As the country recovered, mortality levels declined and life expectancy at birth increased—from 35 years in 1949 to 72 years in 2001.⁴

Expanding Health Care

While much of the mortality decline can be attributed to rising living standards, the extensive public health system underwritten and organized by the government also helped reduce illness and death. “Barefoot doctors,” peasants who received rudimentary medical training, brought preventive and basic health care to millions of rural Chinese. Immunization programs were

widespread; by 1990, 98 percent of infants had been immunized against polio and measles.⁵ The PRC's socialist government also financed all health services and made health care affordable for all citizens. Since the economic reforms of the 1980s, however, fewer citizens have had access to public health care, contributing to a rise in illness and death among some groups.

Health Care After Market Reform

The economic reforms of the 1980s that pushed China toward a market economy altered China's health care system in ways that may widen mortality gaps among population groups. In the PRC's early years, universal access to health care was a top priority. But the shift toward a market-oriented system since the early 1980s has meant the demise of guaranteed access to health care. Poor people may not be able to pay for health care, and rural residents may not have access to health services, making those groups particularly vulnerable. Regional, gender, and other differences in mortality are increasingly visible.

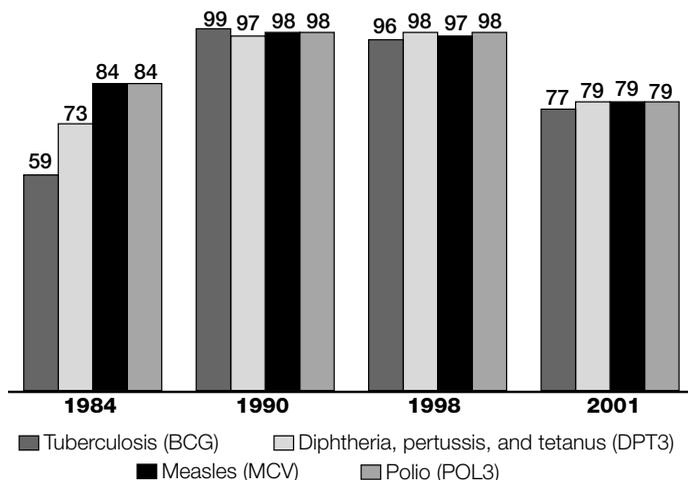
During the 1960s and 1970s, 90 percent of the rural population received at least basic health care; in recent years, an estimated 90 percent of rural dwellers lack medical coverage.⁶ With fewer public health subsidies, people increasingly turn to private fee-for-service medical care. But these services are concentrated in urban areas, and many rural residents could not afford them if they were available. A single visit to a medical facility may cost US\$20, or about 15 percent of an average farm worker's yearly cash income. About 60 percent of total public spending on health is consumed by 15 percent of the population—primarily those living in urban areas along the eastern coast.⁷

With medical care out of reach, rural and poor populations face rising numbers of medical and public health problems, including increases in the

Figure 2

Child Immunization in China, Selected Years, 1984 to 2001

Percent of children under 5 vaccinated



Source: WHO, *WHO Vaccine-Preventable Disease Monitoring Systems 2003 Global Summary* (www.who.int/vaccines-documents/Global_Summary.pdf, accessed Feb. 25, 2004).

prevalence of some diseases, decreases in immunization rates, and higher infant mortality rates. During the 1980s, childhood immunization coverage reached 98 percent in many areas. By 1990, at least 97 percent of all children had received the bacillus Calmette-Guerin vaccine (BCG) against tuberculosis (TB) as well as the DPT vaccine against diphtheria, pertussis, and tetanus; the Polio3 vaccine; and the measles-containing vaccine (MCV) against measles. But immunization rates for these diseases had begun to decline by 1999; the World Health Organization (WHO) estimated that BCG coverage dropped to 77 percent and Polio3 to 79 percent by 2001 (see Figure 2).

The number of TB cases rose dramatically in the 1980s. A 1990 survey found that six of every 1,000 people in China had some form of the disease. Only half of those who started treatment were cured, and the cost of long-term treatment hampered efforts to reduce the disease's prevalence and spread. TB prevention and control efforts, aided by WHO and the World Bank, helped stem the resurgence of

TB in some provinces, providing a successful model for combating other infectious diseases. Their program involved diagnosing and treating cases at the village level with affordable drugs. The subsidized treatment and concerted effort helped bring TB under control in provinces served by the program, but the disease is still widespread in many areas in China.⁸ The intractability of TB in under-served areas highlights the problems involved in the country's shift from a government-supported approach to health care to a market approach. The recent outbreak of severe acute respiratory syndrome (SARS) in China also underscores the problems facing the country's public health system. Even more ominous is the growing HIV/AIDS epidemic in China (see Box 2). The country's experience

with TB provides a valuable lesson about the importance of public health programs in dealing with infectious diseases.

Disparities in Health and Mortality

Mortality rates are notably higher in rural than in urban areas, among the poor, ethnic minorities, and among women.⁹ Some of these groups have seen increases in mortality in recent years.

Rural-Urban Gap

The rural-urban mortality gap is persistent and growing. Rural health problems and higher mortality are tied to lower living standards and inadequate health services. Malnutrition, preventable and treatable diseases of infancy,

Box 2

China's Looming AIDS Crisis

China is facing a potential AIDS crisis, as the prevalence of HIV spreads through groups at most risk for contracting AIDS (such as sex workers and intravenous drug users) and into the general population. The official estimate of the number of people living with HIV/AIDS in China rose from less than 600,000 in 2000 to 1 million in 2002, and the United Nations estimated there may be as many as 2 million. The number of cases is projected to exceed 10 million and afflict nearly 2 percent of China's adult population by 2010. The estimates span a wide range largely because China lacks a reporting system that could provide accurate data on the number of people infected with HIV.¹

As in other countries, HIV is highest among certain social groups. Injecting drug users who share contaminated needles have the highest infection rates. Such drug use is mainly clustered along drug trafficking routes in southwestern China that lead into central Asia and Europe. HIV prevalence among intravenous drug users may be as high as 80 percent in parts of Xinjiang province and 20 percent in Guangdong province.²

HIV rates also are usually high among commercial sex workers, but because commercial sex is illegal in China, reliable prevalence estimates are hard to find. In addition, some people work as prostitutes for only a short time and then return to legal work. Many sex workers are recent migrants from rural to urban areas and are likely to return to their rural homes or to leave the commercial sex industry when they can.

People who receive blood transfusions in many countries are at high risk of contracting HIV. People who donate blood are not at risk of contracting HIV—except in China. Thousands of people in rural China, mostly in the central provinces, were infected with HIV when selling blood to commercial blood banks that used unsafe methods of collecting plasma. The clinics mixed the blood from many donors before separating the plasma and infusing the remaining red blood cells back into the donors. The cells were returned to the donors to prevent anemia and to allow them to sell more plasma. If any donor to the pooled blood was carrying the virus, the entire group became infected. In some villages, up to 80 percent of the residents contracted HIV through reinfusions of contaminated blood.³ HIV's relatively long incubation period and the widespread ignorance about the disease exacerbated the problem: Donors often did not know that they were ill, so they continued to sell their blood and infect more people. New legislation has made the practice illegal, but prevalence rates in Henan and other central provinces are already high.

People outside these high-risk groups are also vulnerable to a major AIDS epidemic. The Joint United Nations Programme on HIV/AIDS (UNAIDS) argues that to prevent widespread infection, China must address the underlying factors that encourage risk-taking behaviors, such as unsafe sex and sharing needles.⁴ People who lack status and power, including young people, women, the poor,

and serious gynecological conditions are much more common in rural areas than in cities. In general, an area's mortality rate is closely related to its per capita net income and its per capita industrial and agricultural output—and many rural areas rank poorly on these indicators. The differences in the leading causes of death reflect the gaps in living standards. In the 1990s, for example, respiratory diseases were the leading cause of death in rural areas; these often preventable deaths accounted for more than 25 percent of all rural deaths, compared with 16 percent of all urban deaths. In contrast, cerebrovascular diseases—associated with older adults—are the leading cause of death in urban areas. They caused 22 percent of all deaths in urban areas in the 1990s, but just 16 percent of deaths in rural areas.¹⁰

Gender and Life Expectancy

In 1980, life expectancy at birth for both sexes was 64.0 years; by 2001, it had risen to 71.8 years, according to official estimates.¹¹ Adult women have seen more rapid gains than men over the past 20 years, thanks largely to declines in maternal mortality. Lower fertility and wider access to modern contraception have helped women avoid frequent and risky pregnancies and reduced maternal mortality. But female advantage also reflects the increased health risks men now face from greater occupational hazards and decades of increasing tobacco use (see Box 3, page 10).

Mortality among the elderly has not declined significantly since the mid-1970s. The chronic diseases prevalent among this group are not easily addressed through basic health

migrants, and minority groups, are at greatest risk of infection. For example, women are more vulnerable because they may not be able to control when and with whom they have sex. Women are also vulnerable because sexually transmitted infections, which make women more susceptible to contracting HIV from infected partners, are common in China and often go untreated. Rural migrants often lack family and community resources as well as health information and services. Poverty may force people into risky work (such as commercial sex work) or behavior (such as selling blood), and poor people are less likely to have access to health care or to accurate information about HIV.

Ignorance about HIV/AIDS is perhaps the most serious problem. Most people in China do not know how HIV is transmitted or how to prevent it. A recent survey found that a fifth of the population had never heard of AIDS and that a much higher share did not know how HIV is spread. More than one-half of the survey respondents said they had not heard of AIDS. The same share could not name a single way to avoid infection and did not know that AIDS could be avoided.

The general ignorance about the disease is linked to widespread discrimination against people with AIDS, beginning with the central government. UNAIDS has argued that the government's punitive approach to people with HIV has stifled public awareness of how HIV is transmitted and how it can be prevented. UNAIDS has encouraged the Chinese

government to undertake the type of massive education and prevention campaigns that have been successful in other countries. The Chinese government has begun to act in response to the alarming increases in the number of infected citizens and to domestic and international pressure from public health officials. But crafting an effective response for such a large population will require significant financial, health, and political resources.

References

1. China Ministry of Health and UN Theme Group on HIV/AIDS in China, "A Joint Assessment of HIV/AIDS Prevention, Treatment, and Care in China" (Dec. 1, 2003), accessed online at www.casy.org/engdocs/new_joint_en.pdf, on March 17, 2004.
2. Joint United Nations Programme on HIV/AIDS (UNAIDS), *Fact Sheet: Asia and the Pacific* (December 2003), accessed online at www.unaids.org/wad/2003/Epiupdate2003_en/Epi03_06_en.htm#P145_38679, on March 16, 2004; and UN Theme Group on HIV/AIDS in China, *HIV/AIDS: China's Titanic Peril—2001 Update of the AIDS Situation and Needs Assessment Report* (Geneva: UNAIDS, 2002): 15.
3. Bates Gill et al., "China's HIV Crisis" (March/April 2002), accessed online at www.brookings.edu/dybdocroot/views/articles/gill/20020301.pdf, on Aug. 29, 2003.
4. UN Theme Group on HIV/AIDS in China, *HIV/AIDS: China's Titanic Peril*: 42.

improvements, and China does not have the extensive resources needed to deal with such diseases. Young adults have also seen little change in mortality rates over the past 20 years, primarily because their mortality was already fairly low.

Infant and Child Mortality

Infant mortality has also declined dramatically, although the actual magnitude of the decline is uncertain because data on infant deaths are incomplete. The most reliable estimates suggest that the infant mortality rate fell from 139 infant deaths per 1,000 live births in 1954 to about 41 infant deaths per 1,000 in the late 1990s.¹² China continues to combat

infectious diseases likely to strike children, and wide-reaching immunization programs have reduced the prevalence of encephalitis, meningitis, and hepatitis. In addition, improvements in water quality, especially in rural areas, have helped prevent intestinal diseases such as diarrhea, typhoid, and cholera that particularly affect children.¹³ Infant mortality has declined most sharply among rural and illiterate citizens, and it has also fallen more sharply among boys than girls. The steep declines in infant and child mortality in China resemble patterns observed in other developing countries, as preventable and curable diseases become less important than genetic problems and problems associated with childbirth.

Social and economic changes have played an important indirect role in reducing infant and child mortality and illness. Infant and child-care centers are much more widely available now, especially in cities, which may give working women access to better child care. The birth planning program also contributed to lower child mortality by encouraging women to wait longer between pregnancies, thus easing health demands on women and giving parents more time to care for each child.¹⁴ Parents with fewer children generally have more resources—including time, food, and money—to devote to each child. Social and economic changes can also put children at greater risk of social and physical problems. With more women working full time, for example, mothers may spend less time with their young children than mothers did in the past, and grandparents may have less time to care for their grandchildren.

Fertility Decline

Between the 1960s and the 1980s, China experienced one of the most rapid and impressive declines in fertility ever recorded in a national population. In just 15 years, the total fertility rate (TFR, the number of children a woman would have assum-

Box 3

Tobacco Use in China

Tobacco use has become widespread in China, reflecting the increase in discretionary income and suggesting a continuing increase in smoking-related deaths and health problems. Smoking began to rise sharply among men in the 1980s; and by 1998, at least two-thirds of adult men smoked cigarettes.¹ Because the increase in smoking is fairly recent, and because serious health effects from smoking often take decades to emerge, mortality linked to smoking has not yet begun to rise. But health experts expect the number of deaths from lung cancer, emphysema, and other smoking-related diseases to rise noticeably around 2010.² In 1990, tobacco use caused 13 percent of all deaths in men and 3 percent of deaths in women. Given the smoking rates of recent years, 33 percent of male deaths in 2040 will be linked to cigarette smoking. This is similar to tobacco's share of male deaths in the United States during the 1990s. An estimated 1 percent of female deaths will be linked to smoking.³ About 100 million of the 300 million Chinese males who were between the ages of 25 and 29 in 1990 will eventually die from tobacco-related causes, according to these estimates.

References

1. Bo-Qi Liu et al., "Emerging Tobacco Hazards in China I: Retrospective Mortality Study of One Million Deaths," *British Medical Journal* 317, no. 7170 (1998): 1411-22.
2. Liu Zheng and Li Jianbao, "Characteristics and Priorities of China's Population Control From an International Perspective," *Chinese Journal of Population Science* 5, no. 2 (1993): 107-18; and Shi-Ru Niu et al., "Emerging Tobacco Hazards in China 2: Early Mortality Results From a Prospective Study," *British Medical Journal* 317, no. 7170 (1998): 1423-24.
3. Dan Rutz, "Researchers Sound Alarm About Increase in Chinese Smoking" (Nov. 19, 1998), accessed online at www.cnn.com/HEALTH/9811/19/china.usa.smoking/, on Aug. 29, 2003.

ing current age-specific birth rates) fell from around six children per woman to just over two children per woman (see Figure 3). Other Asian countries—including Thailand and South Korea—have also seen dramatic fertility declines, but stretched over some 40 years. The decline is even more astonishing given China’s relatively low gross national product (GNP) and a low level of urbanization. Among all countries with a TFR below 2.5, China has the lowest GNP and second-lowest level of urbanization (behind Thailand).¹⁵

Fertility began to decline in the 1950s and 1960s, probably because the Chinese government began to pay attention to urban fertility rates, and because couples began to want fewer children.¹⁶ Fertility declines accelerated in the 1970s and early 1980s, influenced by government birth planning policies that began in the 1970s and became more restrictive by 1980. Although the number of annual births continued to increase because ever-larger cohorts of young women were entering childbearing ages during these years, the average number of children per woman has remained low for more than a decade. In 2001, the average was estimated at 1.98 in rural areas and 1.22 in urban areas.¹⁷

Birth Planning Policies

China’s fertility decline has been supported by some of the world’s most restrictive national birth planning policies. The most strict and controversial policy (the “one-child campaign”) began in 1979, but the Chinese government was involved in birth planning beginning in the 1950s. In the early days of the PRC, the government argued that China needed a large population to bolster its political strength and provide labor for economic development. In the mid-1950s, fears that excessive growth would hinder economic development and a desire to improve maternal and child health led the government to reverse its position

Figure 3

Total Fertility Rate for China, 1949 to 2001



Note: Total fertility rate is the total average number of children a woman would have, given current birth rates.

Sources: China Population Information and Research Center (www.cpirc.org.cn, accessed May 13, 2003); and U.S. Census Bureau, International Data Base (www.census.gov/ipc/www/idbnew.html, accessed April 7, 2004).

and look for ways to control population growth.

The first birth planning campaign, in the 1950s, extolled fertility control in the name of maternal and infant well-being.¹⁸ During the second family planning campaign, which began in 1962 and lasted until the start of the Cultural Revolution in 1966, the government sought to lower fertility, especially in rural areas. Much of this campaign was educational; it attempted to teach rural families about the benefits of smaller families. The government encouraged later marriage, longer intervals between births, and smaller families. To this end, the government tried to increase access to contraceptives and abortions. Fertility in some urban areas declined remarkably during this period, but the campaign had little effect on most rural areas, which were ill-equipped to provide family planning services to large numbers of women.

By the end of the 1960s, few people in the central government doubted the importance of birth planning and population control for economic development. China began

Photo removed for copyright reasons.

Birth planning policies encouraged couples to stop after one child, but many couples with girls have more children in hopes of having a son.

to produce its own contraceptive devices and, by 1972, was considered self-sufficient.¹⁹ The third population campaign—*wan, xi, shao* (“later, longer, fewer”)—also emphasized later marriage, longer intervals between births, and fewer births. It began in 1971 and continued until the end of the decade. The campaign had far wider geographic and demographic impacts than any earlier efforts. Rural health services were expanded and contraceptive and abortion services were made available throughout most of the country. The campaign was the first to establish national and provincial-level targets for births and—at least in principle—was the basis for targets at local levels. At the start of the campaign, couples were discouraged from having more than two children; by the end of the campaign, in the late 1970s, couples were encouraged to stop after one child.

By the end of the 1970s, the government had begun to believe that population control would require extreme measures. This conviction came partly from a new understanding of the demographic consequences of large birth cohorts; such cohorts would have an echo effect for generations to come, fueling

population growth even if fertility fell immediately to replacement level. In addition, the new regime of Deng Xiaoping staked its legitimacy on achieving prosperity by the end of the 20th century—a goal that could be derailed by excessive population growth. “Having seen rampant population growth eat up economic gains in the past, China’s leaders were convinced that their economic project would fail if it could not staunch the growth of the population.”²⁰ Rural areas were of particular concern because they accounted for more than 75 percent of all population growth.

These concerns frame the backdrop of China’s notorious one-child campaign, launched in 1979.²¹ The campaign initially required that all couples have no more than one child and that couples apply for official approval before conceiving a child. Compliance was encouraged through a system of rewards and punishments. Couples who stopped after one child might get preference in educational opportunities, health care, housing, and job assignments. Couples bearing an “out-of-quota” child might be fined or lose access to education or other privileges granted the rest of the populace. The government hoped these methods would hold the overall population size to 1.2 billion by the year 2000.

Birth planning policies have changed significantly since the start of the one-child campaign. The campaign has gone through four distinct phases.²² In the first phase, the government maintained ambitious goals and employed particularly harsh methods to enforce the birth planning policy throughout the country. Rules of contraceptive use were strictly enforced. Incentives and penalties encouraged women to undergo sterilization after two births. After several years, the government relaxed some of its policies, and ushered in the campaign’s second phase. The policy shift was announced in April 1984 in the famous “Document

7.” The document encouraged officials to adapt policy to local circumstances and to avoid heavy-handed enforcement methods. The government sought to make the policy more realistic and easier for local cadres (government and party officials) to enforce, while still meeting the 1.2 billion total population goal for 2000.²³

One of the most significant shifts was in response to strong resistance to the one-child limit among China’s peasants. The government sought to “open a small hole to close a large one” by allowing families in rural areas to have a second child if the local quotas could still be met. Officials hoped that this concession would mollify some of the overall resistance to the policy and allow the policy to succeed even in those areas where peasant families had a strong desire for more than one child. In addition, by 1985 the central government had quietly changed its population goal from “no more” than 1.2 billion in 2000 to “about” 1.2 billion.

At the end of the 1980s, new data indicated that fertility levels were still unacceptably high, and the policies were again tightened. Under this third phase of China’s birth policies, local efforts were strengthened through changes in incentives and disincentives, the organization of family planning work, and the allocation of resources. By 1993, the director of the State Family Planning Commission declared that these new efforts and methods had succeeded and that fertility was again under control.²⁴

The fourth stage, initiated in 2000 and 2001, marked another shift away from the more stringent measures. While adhering to previous birth planning goals, the new approach authorizes more client-centered services. Nevertheless, while these recent measures “stress citizens’ rights ... those rights are mostly to receive services, not to reject them.”²⁵ Chinese citizens are still obliged to strictly limit the number of children they bear.

Criticism and Resistance

The birth planning program has come under fire from critics within and outside of China on the grounds that the program disregards human rights, and many Chinese citizens continue to resist the policy. Most critics acknowledge that fertility control is necessary to limit population growth, but insist that such control does not have to be as harsh as it is now. Even the Chinese government admits there have been instances and periods of coercion surrounding women’s reproductive decisions. But some also stress that the Chinese view of population control differs from the Western perspective, and should not be judged by Western values.

In many countries, programs are called “family planning” programs to emphasize the dissemination of information and technology that allows couples or individuals to plan how many children to have and when to have them. China’s program is more accurately named a “birth planning” or “population planning” program, reflecting the theory that human procreation and material production (the two kinds of production often referred to in Chinese discussions of birth planning) must be in balance in a socialist society. Birth planning is thus considered a societal effort rather than an individualized process.

By the late 1970s, Chinese leaders saw population control as a central part of economic growth planning. The state’s role in birth planning is not viewed as an invasion into private matters because private and public interests are considered inseparable.

Some Chinese citizens, especially in rural areas, have chafed under the restrictions on the number of births they can have. Villagers often see children (especially sons) as vital to the very meaning of family and necessary for economic and cultural survival.²⁶ Most rural Chinese accept the state’s jurisdiction in their private lives if it is necessary to meet the needs of all citizens, but resist having their own behavior restricted.

Despite strong disagreement, citizens have not openly resisted state policy.

China's strong birth planning program has tempered socioeconomic influences on fertility.

Despite strong disagreement with state policy and birth restrictions, citizens have not openly resisted them. One deterrent to organized resistance may be a feeling that citizens should not speak out against state policy, but the lack of collective action may also reflect the widespread acceptance of state birth planning in China. At the same time, women and their families find ways to circumvent the birth control policies at the individual and family level by hiding their children from authorities, moving to areas where they are unknown to have their children, hiding female infants so that parents can try to have a male child, or surreptitiously removing or not using required contraceptives. The program's success in the face of ongoing resistance suggests the existence of considerable tensions within China regarding birth planning restrictions.

Fertility Levels

Fertility rates have declined in all areas and among all groups within China and are now among the lowest found in less developed countries. But how quickly, when, and how far fertility has declined differ among population groups. Fertility has fallen much faster and farther in urban than in rural areas. Urban and rural patterns diverged in the 1960s, as urban rates headed downward throughout the country. Rural rates did not begin to decline until the 1970s and lagged behind urban declines by as much as 10 years in some areas, especially in western provinces.²⁷ Despite the eventual decline in rural fertility, urban marital fertility has remained 30 percent to 50 percent lower than rural fertility. Rural fertility has remained higher, in part, because the government has allowed many rural families to have a second child.²⁸

A 2001 survey showed that the TFR in urban areas was 1.22 children per woman, significantly lower than the rural TFR of 1.98. Fertility levels

also varied more among rural areas than among urban areas.

Policy and Fertility Decline

Socioeconomic factors—including women's education, family income, marriage and childbearing patterns, and women's roles in the family and the labor force—can have a strong influence on fertility. Such factors also affect fertility in China, but the country's strong birth planning program has tempered some of those socioeconomic influences. China's experience gives demographers a unique opportunity to evaluate the effects of tough policies and birth planning in addition to socioeconomic influences on fertility.

There have always been marked regional differences in fertility in China. Before fertility began to decline, regions with higher levels of socioeconomic development had better health and higher fertility. Fertility began to fall earlier in the eastern, more developed provinces.²⁹ In the late 1970s, when some of China's biggest fertility declines occurred, less developed regions had higher fertility.³⁰

Economic development has been associated with fertility declines in many countries, but China is an especially interesting case because it allows researchers to see how the fertility-development relationship changed after the onset of a strong government program to control fertility. As fertility fell, the influence of economic measures on fertility weakened. Early in the decline, income levels had a significant influence on fertility even within provinces. By the mid-1970s, however, individual and community socioeconomic factors had become less important.³¹ A study in Liaoning and Sichuan provinces found that a community's average level of education was one of the strongest influences on fertility levels before the one-child policy: Areas with a larger percentage of illiterate citizens were more likely to

have higher fertility.³² But by the early 1980s, as the one-child policy took effect, community education and illiteracy no longer affected fertility levels. Other factors, such as the spread of education, probably had some effect on fertility, but the program's growing strength and effectiveness may have overwhelmed the effects of other socioeconomic factors.³³

Despite the increasing strength of the birth planning program and the weakening effects of socioeconomic factors, there are still significant regional, provincial, and local differences in fertility (and in mortality). Provincial fertility levels have changed markedly over time but have not converged. In 2000, provincial fertility rates ranged from 0.9 and 1.0 children per woman in Guangdong and Liaoning, respectively, to 1.7 in Ningxia and 2.2 in Guizhou.

The variation is even greater within provinces than among them.³⁴ In general, rural areas have much higher fertility than urban areas, for example. These continuing regional differences in fertility have attracted considerable interest from researchers.³⁵ Infant mortality has been an especially important indicator of fertility. Chinese counties with low infant mortality rates also had lower fertility. Other socioeconomic indicators were even more strongly linked to fertility in some parts of the country. Community literacy had the greatest effect in the northern and southwestern parts of China, for example, while agricultural and industrial output per capita had the strongest effect on fertility levels in eastern and southern China.

The resources available for birth planning programs also play an important role. Programs may be more effective at lowering fertility in some areas than in others either because they have more resources or use resources more effectively. Wealthier areas have more resources to strengthen their programs by hiring more personnel or providing more attractive incentives for compliance

with birth limits. Programs appear to be more effective in areas with certain socioeconomic characteristics, such as high levels of education.³⁶ The wide differences in culture, norms, and fertility preferences among China's heterogeneous population can also affect fertility. Accordingly, birth planning programs are increasingly being adapted to local needs.

Marriage and Fertility Decline

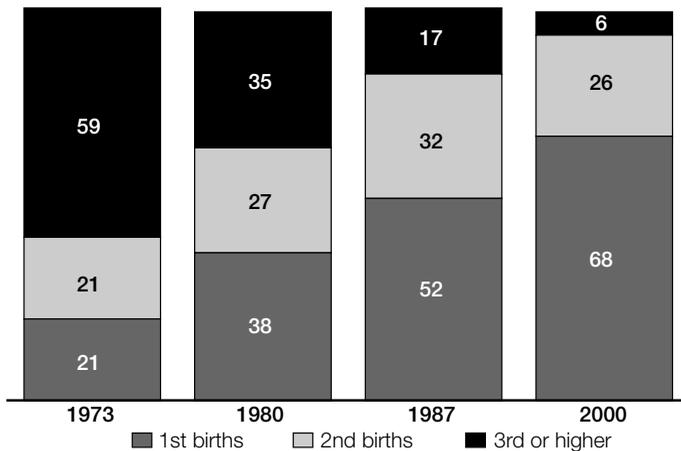
Marriage has always been a significant institution in China: It establishes or strengthens new political connections, marks the beginning of a new family or (more accurately) a new generation in an existing family, and is recognized as the legitimate start of sexual relations. Marriage has changed profoundly in China in recent years. Marriage continues to be nearly universal in China, especially for women, but women's average age at marriage has increased fairly steadily since the late 1940s, rising from 18.2 years in 1940 to 22.0 years in 2000. Changes were particularly apparent during the Cultural Revolution in the late 1960s and early 1970s, and during the late-marriage campaigns of the late 1970s and early 1980s.³⁷

Not only has women's age at marriage increased, but the timing of marriage in women's lives has also become more concentrated within a narrow age range.³⁸ Women who were 14 in 1967 were not subject to marriage restrictions. Members of this cohort married sometime in their late teens to early 20s, while most women who were age 14 in 1974 married when they were between ages 21 and 23; many fewer married before or after those ages. Members of the 1974 cohort were subject to strict controls over minimum age at marriage, and the concentration of marriage in the early 20s suggests a rush to marry as soon as government regulations allowed. This early marriage peak continues to predominate among women in China today.

Figure 4

Share of First, Second, and Third or Higher-Order Births in China, Selected Years, 1973 to 2000

Percent of all births



Note: Totals may not equal 100 due to rounding.

Sources: S. Greenhalgh, *Population Council Research Division Working Paper*, no. 8 (1989); and special tabulations, China 2000 Census.

The experience of these cohorts of women suggests the strength of government restrictions on marriage age. Indeed, the Chinese government encouraged—and now mandates—late marriage as a way to lower fertility and slow population growth. These changes have had a fundamental role in reducing China's fertility, especially in the 1970s and 1980s, since most women in the country have their first birth soon after they marry. By delaying marriage and childbearing, the state has been able to lengthen the gap between generations, lower national fertility, and slow overall population growth. One study estimated that the rise in age at marriage accounted for 8 percent of the reduction in the number of births between 1950 and 1970 and 19 percent of the reduction between 1971 and 1980, avoiding about 100 million births.³⁹

Assessing China's Policies

China's birth planning program had clear demographic goals: to limit the overall size of the population by the year 2000 to 1.2 billion by reducing

fertility. The strategy for lowering fertility was to avoid third or higher-order births. The program has had mixed success. China's 2000 population exceeded the 1.2 billion mark, but most demographers, even within China, recognized the 1.2 billion figure was an ambitious goal. Some researchers believe that the government set the goal at an unreasonably low level to encourage vigorous efforts to reduce population growth. The fertility decline may be a more useful measure of the program's success. Fertility fell dramatically, from a national TFR of nearly 6 children per woman in the early 1960s to 1.7 in 2001; no other society has reduced fertility so sharply in such a short period, regardless of goals or means.

Reducing the proportion of higher-order births was also extremely successful. In 1973, nearly 60 percent of all births were at least the third child born to a couple. By 2000, just 6 percent were third or higher-order births (see Figure 4). About 21 percent of births were first births in 1973; by 2000 that had risen to 68 percent. Second births accounted for about one-fourth of births in 2000, about the same as in the 1970s.

China has been able to reduce its fertility and population growth to an extent many did not believe possible. But the country has not met all of its population goals. The difference between the goals and the current situation reflects both the unrealistic nature of some of the goals and the limits to what even a very strong government program can do to reduce fertility in a short period.

There is considerable debate about how much of China's phenomenal fertility decline can be directly attributed to the birth planning policies. Even in a society with a strong government birth control program, concomitant social and economic changes also influence fertility. The Chinese government launched a series of effective economic reforms around the time that the most restrictive birth policies took effect.⁴⁰ Gov-

ernment officials have argued that extensive socioeconomic changes accounted for 46 percent of the fertility decline between 1971 and 1998 and that the program accounted for 54 percent of the decline.⁴¹ While researchers debate exactly how much of the change was due to the program, most agree that the program reinforced and even encouraged already budding changes in family size preferences during the 1980s and 1990s. As economic changes made middle-class lifestyles, consumer and luxury products, and higher education more readily available, many parents began to scale back the number of children they wanted. One study done in several Chinese provinces, for example, found that most couples do not want three or more children, suggesting that the government has succeeded in reducing fertility desires.⁴² But the study also found that most couples wanted two children. Researchers argue that it is more complicated than a desire for two children; most couples want at least one son and at least one daughter.⁴³ This finding suggests that in the absence of government restrictions, many couples would choose to continue bearing children until they reach this desired family size and shape.

Fallout of Demographic Changes and Policies

The Chinese program can also be evaluated according to its direct and indirect outcomes, and by its strengths and weaknesses. Some researchers argue that China's fertility fell so fast that the society has not been able to adapt to the consequences of the sharp decline, including rapid population aging and a dwindling proportion of the population in the active work force. Some of the most serious criticism has been reserved for the program's effects on women and girls.

Women have borne more of the immediate consequences of the program than men, because the program

has focused on female contraceptive methods, including intrauterine devices (IUDs), abortion, and female sterilization. It is interesting that the Chinese government initially argued that its birth planning program would benefit women by freeing them from the physical dangers and exhaustion of multiple births and the risks of ineffective birth control and unsafe abortion to avoid unwanted pregnancies. In fact, neither child-bearing nor birth planning frees women from physical or emotional trauma. Women's health can be affected by the methods used to implement the birth control policy and by potential abuses associated with the policy. Women may risk retribution if they do not strictly adhere to the policies. The Chinese media has reported cases of women being beaten by husbands or other family members because they did not produce the desired sons.⁴⁴

The 'Missing Girls'

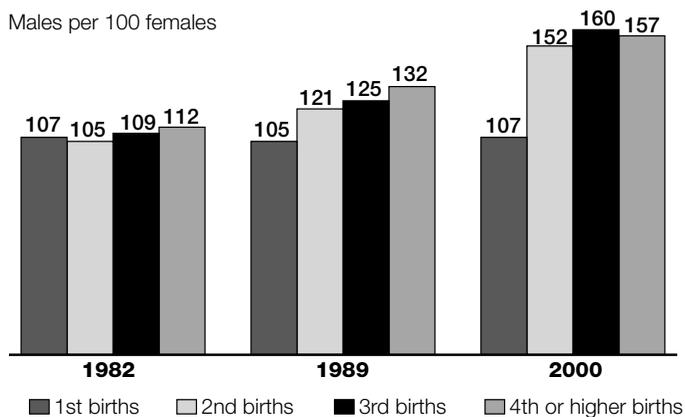
One of the most worrisome effects of the birth planning program is the "missing girls" phenomenon.⁴⁵ Changes in China's sex ratio at birth, or the number of males per 100 females, reveal that millions of girls were "missing" from China's population registers in the early 1980s. These sex ratios have risen to alarming levels, especially for higher-order births. In 1989, the ratio was close to normal (roughly 105 boys for every 100 girls) for first births, but rose progressively with each additional child (see Figure 5, page 18). According to 2000 Census data, recent sex ratios at birth are at least as high as they were in the 1980s: The estimated sex ratio for all births in 2000 was 120, the highest in the world. The sex ratio was above the normal level in every province except Tibet and Xinjiang and was especially high in Hainan and Guangdong provinces: 135 and 138, respectively. The sex ratio for first births in 2000 was closer to normal, at 107, but it jumped markedly to unprecedented

Sex ratios have risen to alarming levels, especially for higher-order births.

Figure 5

Sex Ratio at Birth by Birth Order in China, 1982, 1989, and 2000

Males per 100 females



Sources: Zeng Yi et al., *Population and Development Review* 19, no. 2 (1993): table 1; and unpublished data from the China 2000 Census.

levels for higher-order births: 152 for second births and 160 for third births.

As these unnaturally high sex ratios first became known to demographers outside China, many wondered if the ratios were real or reflected problems with the underlying data. By the early 1990s, most demographers had accepted the overwhelming evidence that the ratios were real and that millions of Chinese girls were “missing.” There is still considerable disagreement about how many girls are missing and why.⁴⁶ Some believe that the counts from censuses and surveys are incomplete and have tried to adjust the official figures.

Four possible explanations of the high sex ratios have received most attention: excess deaths of female babies through infanticide, neglect, or abandonment; underreporting of female births; adoption of female children; and sex-selective abortions. Statistics on these different practices are not available. Even statistics on formal adoption are not easy to obtain, and many adoptions are conducted through unofficial channels. Although officials know that thousands of infant girls are abandoned, they do not know

the girls’ fate. Recent research suggests that many abandoned infants die and others enter the Chinese welfare system, but many others are adopted by local families.⁴⁷ Underreporting of female births—by definition, difficult to measure—is most likely occur in families hoping to hide a birth from authorities, usually so that the couple can try again to have a son. Demographers are particularly concerned that there may be an increase in underreporting of births around the 2000 Census. Female infanticide has been reported in China for centuries, but it is strongly forbidden by law. While it may still be practiced, it is probably relatively rare. Some observers have argued that it would be difficult to get away with such a crime in a society where neighbors and officials are aware of most daily activities.⁴⁸ Furthermore, they say, few parents would be able to bear the psychological and moral pain of abandoning or killing a child.

One of the most likely causes of the skewed sex ratios at birth is the increasing use of prenatal sex determination and subsequent sex-selective abortion. Some researchers even argue that sex-selective abortion and the underreporting of female births together account for nearly all of the missing girls. Evidence for sex-selective abortions is scattered. Parents’ ability to determine the sex of a fetus was bolstered by the increasing availability of ultrasound B machines. The machines were introduced widely beginning in 1982, and nearly every county had one by the early 1990s.⁴⁹ The average was four machines per county. Although the government prohibits their use to detect a fetus’ sex, many ultrasound machines are privately owned and can escape government regulations.

Sex of the fetus is not recorded for most induced abortions; however, several special studies have investigated this issue. A study of hospital births in 29 provinces found that sex ratios at birth rose through the late 1980s and early 1990s, from 108 in 1988 to 110

in 1991.⁵⁰ Because the hospital setting ruled out other suspected causes of the high sex ratio—underreporting of female births and female infanticide—sex-selective abortion is viewed as the cause of the missing baby girls. Another study collected data on more than 10,000 abortions in the early 1990s in southern Zhejiang province—which had a sex ratio at birth of 120 in 1993.⁵¹ The study found that the sex ratio of the aborted fetuses was much lower for those whose mothers had no surviving sons; for mothers with at least one son, the sex ratio of the fetuses was much higher. In other words, women who had no sons were more likely to abort female fetuses than were women with at least one son.

There may be no definitive answers about the numbers and fate of the missing girls, but there is little doubt that the problem exists. Each of the factors cited above probably plays some role in China's high sex ratios at birth, but researchers do not have sufficient data to ascertain the causes. They can only try to interpret the clues. Demographers often use statistical clues; other social scientists look for clues in daily social life or hints in published reports. For example, many researchers have noted the societal climate and practices that underlie parents' desire for sons (see Box 4). Marriage practices in which daughters leave their parents' family and move to their husbands' family make peasants dependent on sons for survival; continuing discrimination against women in China gives men and boys advantages throughout their lives; and families still trace their lineage through males, making it imperative to have a son to continue the family line.⁵²

Researchers are also trying to determine whether there is a connection between the missing girls and the population planning program. The sex ratios at birth increased as the programs became stricter, which suggests a connection. Indeed, restrictions on the number of children couples can have must have entered

Box 4

Birth Restrictions, Son Preference, and Women's Status

Most Chinese accept the state's role in population control, but many disagree with the severe restrictions on the number of children they are allowed to have. The strong desire for sons is central to this resistance: Families who have had a daughter often want to try again for a son.

Son preference has a long history in China and is tied to the social and economic roles of males in Chinese families. Family lineage is traced through males, and sons are responsible for caring for their parents in their old age. Marriage practices reflect these traditions. When daughters marry, they leave their birth families to join their husbands' families. In rural areas, few peasants have retirement pensions, so aging parents depend on their children for support. Because daughters have traditionally married out of the family, a couple with no son may end up without financial and personal support. Thus, regardless of their acceptance of the state's control of population growth, most Chinese citizens want at least one son. Many couples would like a daughter as well.

The specter of not having a son has fueled resistance to China's birth planning policies, especially among peasants. This resistance has taken three main routes: confrontation, evasion, and accommodation. Confrontation is often at the local level, where birth planning officials in charge of enforcing birth policies have sometimes been threatened and beaten, their property attacked, and their farm animals killed. More often, women and their families evade restrictions by avoiding birth planning officials, fleeing to another village to avoid discovery, hiding a pregnancy from officials, or discarding birth control methods (removing IUDs, for example) without the knowledge of officials. Women or their family members sometimes use bribes or other ways to persuade local officials to allow an "unofficial" pregnancy. Local officials often sidestep the rules by underreporting the number of births in their jurisdiction. Local officials are part of the village kin network and understand and often sympathize with a family's desire for another child.

Women, their families, and officials have pressured the state to make its policies more flexible, and the government has made some concessions to meet their demands. The official accommodations to the highly valued birth planning policies show how difficult it has been for China to implement a birth planning policy that challenges a strongly patriarchal culture. Perhaps the best example is how the state attempted to deal with the incompatibility of patriarchal attitudes with the one-child policy. In 1984, in response to peasant resistance to the one-child policy, the government decided to allow rural couples with only a daughter to have a second child. This decision reinforced patriarchal attitudes by recognizing and honoring the desire for male children. The change also underscored and strengthened the gender bias apparent throughout Chinese society and involved the state in perpetuating that gender bias. By allowing parents of a daughter to have a second child, the state was effectively admitting that sons are worth more than

continued on page 20

continued from page 19

daughters—despite the gender equality guaranteed by the Chinese constitution. As China experts Susan Greenhalgh and Jiali Li explained it, “son preference moved from being a peasant value (deeply embedded, of course, in social institutions) to becoming a component of informal reproductive policy in the villages, to being incorporated into the formal population policy of the province.”¹

Accommodation at the state level is not the only factor that has reinforced the patriarchal underpinnings of Chinese society. Researcher Tyrene White has shown how women’s resistance to the birth planning policy often means accommodating the cultural norms of male superiority and value.² Women may abort or abandon female offspring, despite official disapproval of sex-specific abortion and infanticide, participating in a silent but powerful resistance to the state’s policies. But their resistance further strengthens the value Chinese society places on males, which reinforces male domination and undermines women’s efforts to achieve gender equality. China’s official policies and its citizens’ reactions to those policies illustrate how birth planning policy is deeply embedded in social institutions, especially family and gender relations.

References

1. Susan Greenhalgh and Jiali Li, “Engendering Reproductive Policy and Practice in Peasant China: For a Feminist Demography of Reproduction,” *Signs* 20, no. 3 (1995): 601-41.
2. Tyrene White, “Domination, Resistance, and Accommodation in China’s One-Child Campaign,” in *Chinese Society: Change, Conflict, and Resistance*, ed. Elizabeth J. Perry and Mark Selden (New York: Routledge, 2000): 102-99.

into their decisions about how to shape their families within those constraints. However, the experience of neighboring countries that do not have similar planning programs shows how difficult it is to draw a straight line between high sex ratios and a strict population planning program.

A comparative study of the missing girls phenomenon in Korea, Taiwan, and mainland China underscores the complexity of this issue.⁵³ These societies share many features, including a strong preference for sons and rapid fertility declines that coincided with an increase in sex ratios. The ratios increased at about the same time in all three populations. Some researchers attribute the high sex ratios to the combination of rapidly falling fertility, continuing preference for sons, and the availability of technology to detect

the sex of the fetus.⁵⁴ In contrast, the sex ratio at birth did not increase in Japan as that country’s fertility fell. Demographer Judith Banister argues that “In areas where there is little or no son preference, fertility decline does not bring it on. But where son preference existed alongside high to moderately high fertility, even a modest decline in fertility may exacerbate the existing discrimination against female babies, children, and now fetuses.”⁵⁵

This research suggests that it might be more accurate to attribute the treatment of girls in China today to the fertility decline that was strongly promoted by the state’s family planning program, but not to the program by itself. Sex ratios might be higher than normal even if fertility had declined because of socioeconomic changes or a more lenient birth planning program. Nevertheless, China’s program does seem implicated in several ways. Researchers have found that girls fared better before the policy was implemented and during more lenient policy periods, while girls fared less well during the early (strict) years and the early 1990s.⁵⁶ There is also some question about why the powerful Chinese government did little to prevent or mitigate some of the program’s negative consequences.

Changing Shape of China’s Population

China’s demographic changes have coincided with fundamental social and economic changes. China is experiencing increasing levels of migration, the growing importance of ethnicity, population aging, environmental degradation, and increasing social and economic inequality. Some of these trends, such as population aging, are largely the result of demographic changes; others, such as issues involving the environment and ethnic identity, are affected by demographic changes; and still others, such as

increased consumer spending on children or new living arrangements for elderly family members, create or amplify demographic changes.

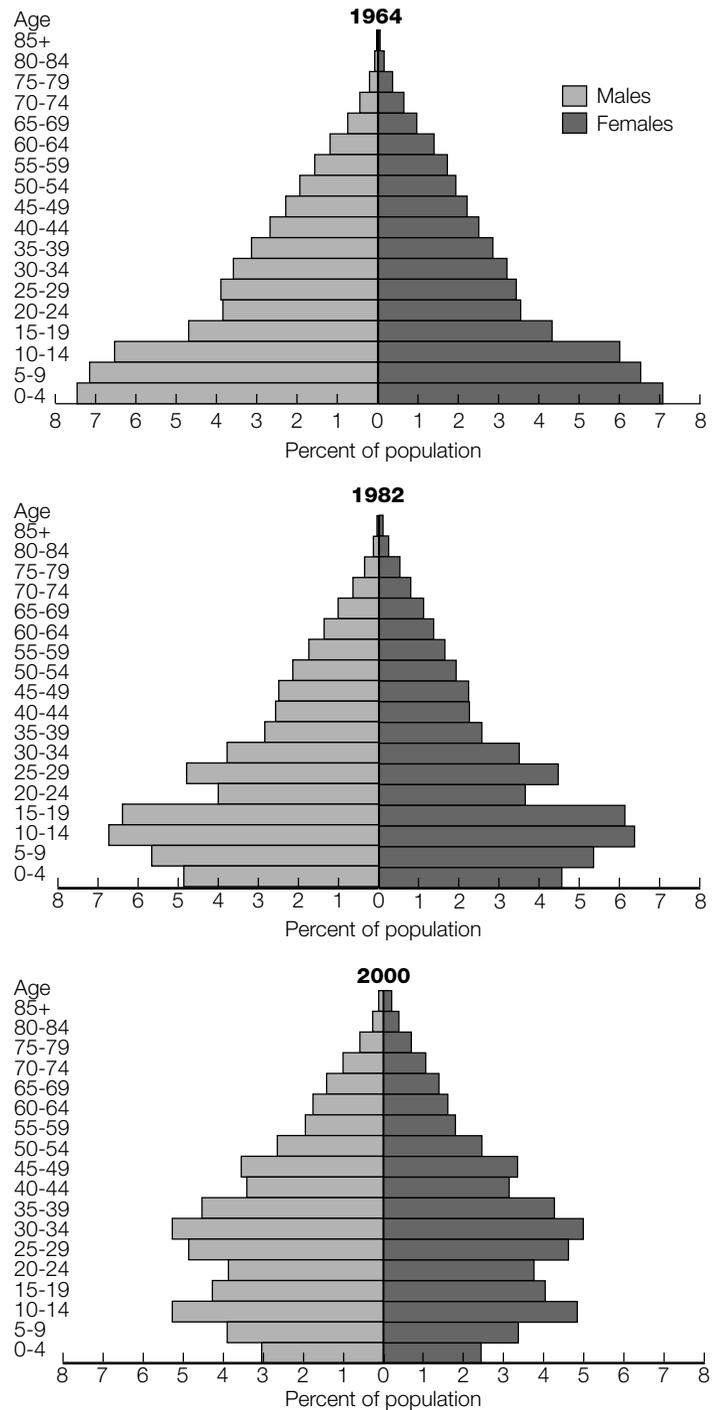
Changes in Age Structure

The dramatic changes in China's population structure are clearly visible in China's age and sex profiles since 1964 (see Figure 6). The profiles show the effects of such events as the Great Leap Forward in the late 1950s, when birth cohorts were drastically reduced. Declines in mortality and especially fertility have had more lasting effects on the shape of the population. In 1964, with fertility levels still high and mortality just beginning to fall, the population structure had a classic pyramid shape, with a wide base and narrow top. But the population profile reveals the dramatic drop in fertility and surge in infant mortality during the famine spawned by the Great Leap Forward—which took a bite out of the 15-to-24-year-olds in 1964 and the 35-to-44-year-olds in 1982. The 1982 pyramid's narrowing base reveals the effect of sharp fertility declines in the 1970s. The fertility declines are even more evident in the 2000 pyramid.

China's population is aging because of the dramatic fertility declines. The proportion of the population age 60 or older increased from just over 7 percent in 1953 to more than 10 percent in 2000. The elderly share is projected to reach 27 percent in 2050 (see Figure 7, page 22). The oldest groups are growing rapidly in sheer numbers and as a proportion of the total population.

One effect of such rapid aging is that dependency ratios will change; there will be fewer young people to support the country's growing elderly population. In Chinese society, families provide much of the support for elderly family members, and young people are likely to feel the strain of these demographic changes. In fact, many researchers foresee one unintended consequence of a one-child

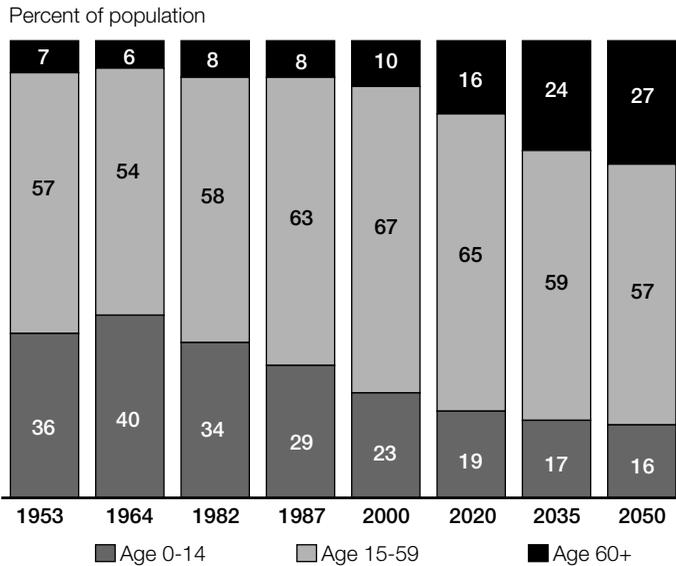
Figure 6
China's Population by Age and Sex, 1964, 1982, and 2000



Sources: U.S. Census Bureau, International Data Base (www.census.gov/ipc/www/idbnew.html, accessed April 7, 2004); and tabulations from the China 2000 Census.

Figure 7

Chinese by Age Group, Selected Years, 1953 to 2000 and Projections to 2050



Sources: W. Canping, *The Aging of China* (1991); *China Population Today: Special Issue on Aging* 15 (1998): 18-23; and tabulations from the China 2000 Census.

With smaller families and a more mobile population, the government may have to provide more care for the elderly in the future, but the government still relies on families to support elderly relatives. Recent government campaigns have emphasized the duty of daughters as well as sons to care for their parents.

State support for the elderly is more widely available—and socially acceptable—in urban than in rural areas. The stream of young migrants into urban areas from the countryside has not significantly slowed the aging. Higher rural fertility rates may help to alleviate some of the pressure for rural families to care for elderly relatives by slowing population aging. But caring for the elderly is likely to become an increasingly heavy burden in the countryside, and a growing challenge for urban areas.⁵⁷

Family Size and Structure

Even without the enormous social, economic, and political changes of the past 50 years, China’s demographic changes would have affected families in fundamental and far-reaching ways. Birth planning policies have reduced the number of children in a family and thus changed the relative size of different cohorts. Children are more likely to grow up without siblings, and increasingly, without aunts or uncles. At the same time, improvements in childhood survival and adult health have extended the life expectancy of the oldest generation. Grandparents are now much more likely to be alive at the same time as their grandchildren.

There are at least three ways that demographic change might affect the size and structure of families in a society like China’s.⁵⁸ First, if the oldest generation lives longer, there will be a higher proportion of stem or joint families—those involving more than two generations living in a single household—because there will be more families with living relatives from three generations. A rise in the

Table 2
Expected Years Living With Dependents, Chinese Age 40 in 1990 and Projection for 2030

Dependents under age 18 or age 65+	Urban		Rural	
	1990	2030	1990	2030
Children under age 18	4.2	2.5	6.5	6.2
Parents ages 65+	10.8	16.9	10.5	15.1
Either children or parents	12.5	17.2	13.2	16.2
Both children and parents	2.6	2.2	3.8	5.1

Source: Lin Jiang, *Population Studies* 49, no. 1 (1995): 143.

policy: As only children, married couples will have to take responsibility for both the husband’s and the wife’s parents. Given the increases in life expectancy, people are also likely to spend more years caring for elderly parents (see Table 2). In 1990, a 40-year-old urban resident would expect to live an average of 12.5 years with either younger dependents (children) or older dependents (parents). In 2030, an urban 40-year-old can expect to live an average of 17.2 years supporting older or younger dependents.

age at marriage, however, could reduce the proportion of joint families in a population, since later marriage means later childbearing, decreasing the chance that three generations would be alive at the same time. Third, a smaller number of children born to each couple could affect proportions of stem and nuclear families because there would be fewer children likely to establish separate nuclear families, other things being equal. If each couple has two or more children, at least one child is likely to form a new nuclear family. With just one child, the parents and adult child may remain in the same household as a joint family.

These demographic influences have had visible effects on Chinese family structure in recent decades. Researchers have noted that, although household size has decreased over the past several decades, household structure has not always followed suit. The 2000 Census indicates that about one-fifth of all households include three or more generations, roughly the same proportion counted in the 1982 Census. In some provinces, including Gansu and Qinghai, more than 30 percent of rural households include three or more generations. But households' sleeping arrangements do not capture the full picture of family life; family members may have frequent contacts and interactions even if they live in separate households.⁵⁹

Three-generation households make up between 10 percent and 15 percent of all households. As would be expected, they are much less common in urban areas than in rural areas. Nevertheless, there has not been as great a shift toward nuclear families as seen in many other cultures. Several factors help account for the continuing presence and acceptance of multi-generational households in urban China.⁶⁰ Housing shortages, for example, sometimes force young married couples to reside with their parents until separate housing can be found.

Family living arrangements often change when family members enter a

new stage in their lives. People may make their decisions about whether to stay within their joint families based on employment or other opportunities.⁶¹ Family structure is affected by "the number of adult children per older couple and the propensity for older couples and one of their married children to live together."⁶² When fertility falls below replacement level, the number of family members in the children's generation is smaller than that in the parents' generation, so some parents must live apart from their children even if they would prefer not to. Such a situation might mean an increase in the number of nuclear families because many older couples will not have an adult child to live with.

Other demographic changes may affect Chinese families in other ways. Below-replacement fertility has profound effects on family members and on the society as a whole. China is one of the few societies facing a future in which many children (and nearly all urban children) will grow up as only children, a significant change for a society that has traditionally placed a high value on large extended families.⁶³ The next generation, who will grow up without aunts and uncles, will experience a different family life as well.⁶⁴

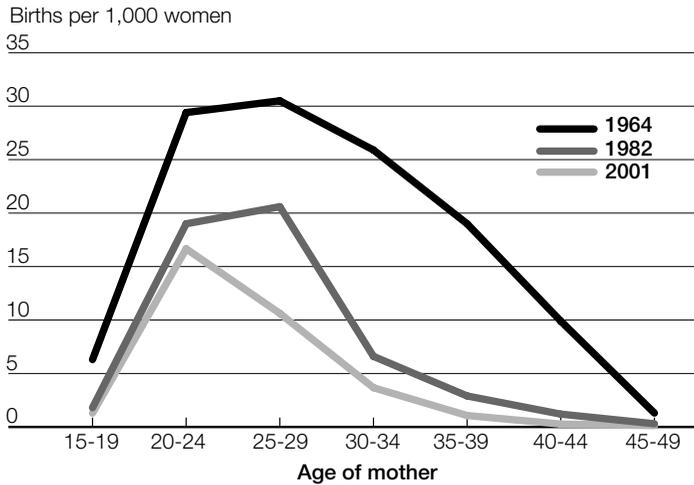
Marriage age has increased in recent decades, but children are still expected to live with their parents until they marry. Accordingly, children are living longer with their parents. This is a new trend, especially for girls, who traditionally married young and then moved in with their husbands' families. As adult children live more years with their parents, parent-child relations are changing. Some research suggests that relations between daughters and their parents have been strengthened and that these relationships are now more likely to continue after the daughters marry.⁶⁵

Along with changes in marriage timing have come changes in divorce. Divorce, once extremely rare in China, has been increasing over the

Below-replacement fertility has profound effects on family and society.

Figure 8

China's Birth Rates by Mother's Age, 1964, 1982, and 2001



Sources: A.J. Coale and C.S. Li, *Basic Data on Fertility in the Provinces of China, 1940-1982* (1987); and U.S. Census Bureau, International Data Base (www.census.gov, accessed Feb. 26, 2004).

last 20 years. Although divorce rates are higher in some urban areas, however, they remain quite low for the country as a whole. The national divorce rate increased from 0.9 divorces per 1,000 people in 1985 to 1.9 per 1,000 in 1998.⁶⁶ Marriages in China are generally expected to last, and most do.

Women's lives have changed in many ways over the past half-century, and these changes are closely connected to their family life. Women in China today are likely to spend much less time raising children than their mothers or, especially, their grandmothers did. As Figure 8 shows, women in the 1960s bore children throughout their adult years, but childbearing has become increasingly concentrated within a very small range of years as women married later and had fewer children. Women in China generally begin having children soon after getting married; now that most women have only one or two children, they finish having children by the time they are 30 years old. Women no longer spend as much of their adult lives caring for children,

which gives them more opportunities to pursue other activities, including work outside the home.

Increased migration is also affecting families, as young people move away from their families to take jobs in other areas. Indeed, the pull of urban jobs for men has been the key factor in the increasing number of female-headed households in rural areas.⁶⁷ Migration in search of jobs is more likely to break up households than are domestic issues such as family conflicts or family size.

Demographic change has clearly played a role in family structure and size in China, but other aspects of the Chinese social landscape also contributed to these changes. The size and complexity of Chinese families may change not only in response to the country's birth planning policy, but also because of the availability of housing, increases in per capita living space, social services (such as pensions and support for the elderly), the preferences of and social pressures faced by parents and children, and changes in the economy. Research in urban China shows that Chinese families do not live according to a cultural imperative that insists on a particular family form; rather, they adapt to the social and economic situation around them.⁶⁸ Expectations about living arrangements may differ from those in Europe or the United States, but family members make decisions that allow them to balance those expectations with the realities of daily life.

Population and the Environment

China will face serious environmental challenges in the decades ahead. Many of the potential problems are connected to the size and distribution of China's population, but the links between environment and population are neither straightforward nor completely understood.

How people interact with the environment can have as much effect as the number of people interacting with the environment.

Air and water pollution, potential shortages of fresh water, and the loss of arable land to soil degradation, erosion, and contamination are some of China's most serious environmental problems, many of which are related to the country's rapid industrialization. China, like most industrializing countries throughout history, has focused on expanding the economy, paying little attention to the environmental impacts of economic development.

China is the world's largest producer and consumer of bituminous coal. Most of the coal is burned without emission treatment and is often burned inefficiently, notably in indoor stoves, causing serious environmental damage and contributing to high levels of outdoor and indoor air pollutants.⁶⁹ China's high level of chronic lung diseases, which account for 25 percent of all deaths, is partly attributable to the serious air pollution in urban areas and in homes throughout the country. (Increases in cigarette smoking also contribute to China's high rates of lung disease.)

Water pollution is also a serious problem throughout China. In most of the country, human and industrial waste is dumped untreated into rivers, lakes, and the ocean. Alarming high levels of fecal and toxic pollutants in many areas render the water unsafe for drinking and for many other uses. More than 20 percent of China's nearly 880 major rivers are so polluted that they cannot be used for irrigation, and more than 5 percent have no living fish. The quality of drinking water in many cities is far below state standards for human consumption. Only six of China's 27 largest cities had safe drinking water, according to a 1996 study.⁷⁰

The shortage of useable water throughout China is getting worse. Water tables are rapidly declining, and some areas of China are likely to

Photo removed for copyright reasons.

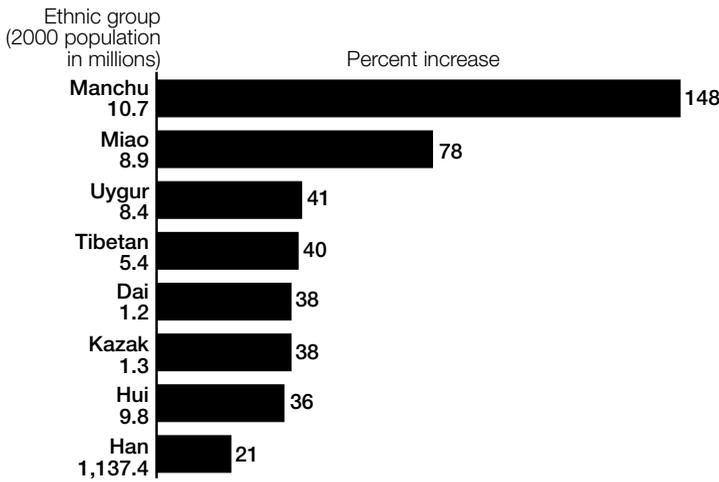
An increase in motor vehicles, a reliance on coal for fuel, and industrialization have contributed to urban air pollution, which has become a major health problem.

face severe water shortages in the future, with serious health consequences. Water pollution has been cited as a major factor contributing to increases in liver and stomach cancers, skin diseases, congenital deformities, and waterborne infectious diseases such as dysentery.

As cities and industries expand and as soil erosion, deforestation, and desertification become more widespread, China is losing farmland and grasslands. This loss of arable land poses serious challenges to the country's ability to feed itself in the future. The question of how to feed China's huge population has been the focus of much scholarship and debate in recent decades.⁷¹ Increases in living standards and purchasing power are also likely to boost demand for foodstuffs that require greater grain production such as meat, eggs, and milk. Some researchers have argued that the combination of pollution, desertification, population growth, and rising food consumption will inevitably produce a food crisis in China that will affect the entire world.⁷² Others argue that grain production continues to rise and that China will be able to feed itself for the foreseeable future. In any

Figure 9

Growth of Selected Ethnic Groups in China, 1982 to 2000



Sources: China 1982, 1990, and 2000 Censuses.

case, it is clear that China must pay more attention to environmental issues. Population increase by itself is not responsible for China's environmental problems; rather, the way resources have been used accounts for most of the environmental outcomes.

Ethnic Identity in Modern China

Although China is often described as being ethnically homogenous, there is considerable ethnic diversity within the country's borders. China's government recognizes 56 official "nationalities"—ethnic groups eligible for special considerations that may include subsidies for certain foods, special consideration on national university exams, more lenient birth planning policies, and other dispensations. These 56 nationalities make up 9 percent of the country's total population, or about 105 million people; the remaining 91 percent are Han Chinese. In addition to these 56 nationalities, however, many more ethnic groups have petitioned for official recognition.

Most ethnic groups have been growing both in numbers and in proportion to the Han majority (see Figure 9). Some of this growth can be attributed to more lenient birth planning policies for these groups. Many minorities are allowed to have two or sometimes even three children, compared with one or two permitted for the Han. But most of the growth stems from the rising number of people choosing to identify themselves as members of ethnic minorities. This shift reflects several factors. Some people want to claim ethnic identity because there are now some advantages to that status, including an allowance for more children. But the greater official acceptance of ethnic diversity in China and an increased interest in ethnic identity throughout the country have also contributed to the rise in ethnic minority affiliation.

Many minority groups have increasing contact with counterpart minority communities who live outside China's borders. For example, Muslims in northwestern China have strong ties with Muslims in Kazakhstan, Tajikistan, and other countries along the border. Hmong groups in Laos, Thailand, and other countries in Southeast Asia have regular contact with the Hmong (called Miao) within China (see Figure 10).

The significance of these growing ethnic and linguistic groups goes beyond sheer population numbers; they also have challenged China's national identity in new ways. China's central government has struggled to balance the advantages of a multiethnic society with the possibility that these groups and their international contacts might pose a threat to Beijing's hold on the nation. People who identify with an ethnic group outside of the country may be less loyal to China, and international contacts make China's borders more porous than the government would prefer. China once projected an image of a united homogenous nation, but these growing minority groups have begun to challenge that picture.

Figure 10

Chinese Provinces



Issues of ethnic identification have begun to emerge among even the Han. The Han comprise eight distinct linguistic groups, including Mandarin, Cantonese, and Hokkien-Taiwanese. Even though the government classifies all of them as Han, these groups increasingly see themselves as separate from other Han groups. More people are using their group's local languages rather than the national *putonghua* (Mandarin). The Cantonese, Hakka, Fujianese Min (Hokkien), Swatow, and other groups are taking more pride in their distinct ethnic identities. These differences have always been evident, but their greater recognition by the groups themselves and Chinese authorities represents an important change. A seeming semantic shift,

from referring to local differences as “ethnic” rather than as “regional” reflects a growing recognition of how deep the distinctions can be.⁷³ Cantonese in Guangdong Province have greater access to investments by Cantonese Chinese overseas and to other economic resources, for example, and they regularly assert their own interests, even if they conflict with the interests of the national government.

Migration

One of the most important issues facing China today is the growing number of people on the move, especially those moving from rural to urban areas. Between 30 million and 100

million Chinese from rural areas were living in cities by the mid-1990s. An agricultural census during this period estimated there were 56 million rural workers engaged in non-

Box 5

The Floating Population of China

The language used to describe a group sometimes reveals important insights about the group's status. Such is the case for internal migrants in China. In most of the world, the term "migrant" describes anyone who has moved from one place to another for a specified length of time. In China, however, migrants are officially divided into two distinct groups according to their legal status. The Chinese word for migrant (*qianyi*) refers only to people who have been given government permission to permanently resettle in a new location. China's well-developed system of household registration effectively binds people to the locality in which they hold official household registration (*hukou*). Legal migrants have officially changed their *hukou* and have the state's permission to use all social services, such as health care and schooling, and other privileges enjoyed by residents of the new location.

"*Hukou* migrants"—those who change residence with official approval—make up a sizeable share of Chinese migration, but most migrants are non-*hukou*. Unlike *hukou* migrants, non-*hukou* migrants tend to move from poorer areas, often in the interior, to richer coastal areas. Non-*hukou* migrants are willing to travel great distances and risk official penalties for the possibility of earning higher incomes.

The Chinese state refers to non-*hukou* migrants as the "floating population."¹ The term implies this migration is temporary. Unsanctioned migrants do not have access to schools, health care, and other necessary social and economic services. While some of these migrants are not planning to become permanent residents in their new locations, many others intend to remain.

Life for the floating population is often harsh and subject to discrimination. These migrants are perceived as a drain on urban resources and as being unruly and difficult to control; they are treated as second-class citizens by other urban residents.

China's system for tracking citizens is heavily dependent on household registration; people who move away from their official locality are difficult to monitor or even count. There are no good estimates of the size of China's floating population. Official policy attempts to control people's movement between areas, especially between rural and urban areas, and exacerbates the difficulties that floaters face by denying them access to social services. Without the support and institutional access granted regular urban dwellers (or legal migrants), floaters have a particularly difficult time making a life for themselves in urban areas. Nevertheless, these "floaters" have become a fixture in urban life and an increasing slice of modern Chinese society.

Reference

1. Kam Wing Chan, "Internal Migration in China: A Dualistic Approach," in *Internal and International Migration: Chinese Perspectives*, ed. Frank Pieke and Hein Malley (Richmond, England: Curzon Press, 1999): 49-71.

agricultural work in urban areas in one year alone. Many researchers argue that these estimates are much too low and do not account for temporary or seasonal migrants, who are often less visible. This population is difficult to measure, but the numbers appear to be increasing every year (see Box 5).

This increasing internal migration contrasts sharply with China's population history. For many years after the founding of the People's Republic, urban growth rates were extremely low for an industrializing country. The share of the population considered urban remained below 20 percent until the end of the 1970s. Urban growth and internal migration accelerated rapidly beginning in the early 1980s, as China implemented broad economic reforms.

Although some researchers attribute the increase in migration to the relaxation of government control over citizens' movement, others argue for a more complex explanation. Prior to the early 1980s, the government enforced restrictive labor policies, tied distribution of food to official residence, and maintained a household registration system to strictly control the movement of all citizens, making it difficult for people to move away from their permanent address without permission.

In urban areas, most workers depended on their *danwei* (work unit) for their livelihood. The *danwei* distributed vital resources—housing, food, and salaries—and issued permission for workers to buy special items such as refrigerators, to marry, or to bear a child. Rural workers were tied to their farm collectives, through which jobs and food were allocated. The government's control of jobs, grain, and housing made it nearly impossible for migrants to survive in a new place without the government support given only to approved migrants. Migrants without official sanction had trouble securing a place to live, a job, and even food. Many regulations affecting

migrants were designed to diminish and discourage flows from the countryside to the city because the government has long been concerned about migrants disrupting the state-controlled economy and society.

Many of these constraints have eased under economic reform, and peasants can move away from their rural homes to seek jobs and new lives in urban areas. Food is no longer rationed and can be bought on the open market. Jobs are no longer assigned by the state. Jobs now are under the control of local authorities and even the heads of enterprises. Because of these changes and the continuing inequalities between rural and urban areas, huge numbers of rural residents are moving to cities, where many take jobs as construction workers, nannies, and factory workers. One government official estimated that 40 percent of the construction workers in Beijing in the mid-1990s were migrants.⁷⁴

Even as it changed the regulations, however, the state did not relinquish its role in controlling migration. State regulations on hiring, salaries, housing costs, and other aspects of life continue to dampen migration from rural to urban areas, often by making it difficult for migrants to survive in the cities. The Chinese state still sees migration as potentially disruptive to both the sending and receiving communities; officials worry about migration's effects on the health care system, urban employment, public safety, schools, and taxation and about how a large exodus of farmers might affect farm production. New regulations designed to control migration and migrants in cities are meant to address such concerns. These new state controls combined with existing advantages given to long-term urban residents have created what some call a two-tiered system within urban areas, in which migrants make up a lower class of citizens.⁷⁵

Because migrants often find it difficult to establish new lives in the city,

Photo removed for copyright reasons.

Urban areas are attracting millions of unofficial migrants from rural areas, who are willing to live in harsh conditions to earn some income.

much rural-to-urban migration in China is “circular migration”; that is, migrants move back and forth between their home villages and urban areas. Many migrants permanently return to their village after a few years of working in the city. Circular and return migration have very different effects on the home villages, compared with permanent outmigration. Peasants who have lived in the city bring back new ideas, information, skills, and capital to their local villages. There is still a deep divide between rural and urban life in China, but migrants often help tie the different areas together and narrow the gap.

Growing Inequality

In addition to facing enormous population changes, China has experienced major economic change over the past half-century. For three decades after the establishment of the People's Republic in 1949, China's economy grew and stabilized, and the living standards of most Chinese citizens greatly improved. But China remained a very poor country and most rural Chinese lived in poverty.⁷⁶ In 1978, when economic reform began, China was one of the world's poorest countries. Between

Poverty in Rural China

Even as average incomes increase in China, the gap between the richest and poorest segments of the population is growing, especially in rural areas. The World Bank estimated that 11.5 percent of China's rural population lived below the poverty line in 1998, and many believe that this figure underestimates the scope of the problem. Not only are income gaps between urban and rural residents growing, the income disparity is increasing within rural China. Although the percentage of all rural residents in poverty dropped from 9 percent to 5 percent between 1988 and 1995, the percentage in poverty increased from 27 percent to 31 percent for rural Chinese in the western region.¹

Why have some rural families prospered under economic reform while others have lost ground? Rural households with members who work in nonagricultural enterprises are more likely to do well financially than those who are totally reliant on farm income. This is especially true for rural families in western interior China, which has little nonfarm employment. While rural residents in the eastern and southern parts of China have been able to move to jobs in urban centers, fewer residents in western China have had that option. Farmers' profits from agriculture declined significantly during the 1990s. As tax burdens grew, the costs of agricultural input expanded, and prices of farm products did not keep pace with these increased expenditures. Between 1997 and 2000, the price of farm products dropped about 30 percent.

Researchers have described two different kinds of rural poor. The first group includes people who are poor because they have been caught between falling farm prices and rising farm expenditures; they have access to land capable of producing more than the owners need, but they cannot make a profit in the current economic conditions. The second group of poor farmers live on marginal land and struggle to raise enough to feed even themselves; they are the poorest of all rural residents. Many of these farmers live in China's western and southwestern provinces, often on land with poor soil and little access to water.

This second group of farmers will almost certainly require government action to ease their plight. These rural residents have few options for improving their lives financially; schools and government-sponsored infrastructure and public services in these districts are vastly underfunded relative to other areas of China. Health care is grossly inadequate, and disease and mortality rates are relatively high. Children, especially girls, are often not sent to school or are taken out at young ages so that they can help on family farms. The education provided for those who do attend school is often of poor quality. Residents in such areas are effectively cut off from many of the opportunities available in the wealthier regions of China.

Reference

1. Jonathan Unger, *The Transformation of Rural China* (Armonk, NY: M.E. Sharpe, 2002): 171.

1978 and 1996, per capita disposable income tripled in urban areas and quadrupled in rural areas.⁷⁷ Much of this change has been attributed to the new opportunities created by the massive economic reforms of the early 1980s, as the country adopted aspects of a market economy.

But economic expansion and reforms have also brought inequality among Chinese citizens. Inequality is visible throughout China, and some groups are particularly vulnerable (see Box 6). Regional, occupational, gender, ethnic, educational, and other differences are all tied to socioeconomic inequalities. The growth of these inequalities, now that "to get rich is glorious," as China's leader Deng Xiaoping proclaimed in 1984, is particularly notable given the government's long-term focus on eliminating economic differences among social classes. Most observers argue that China never actually eliminated class differences. There were always significant differences between urban and rural citizens, between people working in state and collective enterprises, between cadres and workers, and between citizens with different political characteristics.⁷⁸ Gender and ethnicity also continued to be dividing lines within the social fabric of China after 1949. And although provided with basic necessities, most Chinese were extremely poor by international standards. Nevertheless, China achieved relative equality among people involved in a variety of occupations and was able to realize a basic income level for nearly all citizens. After 1978, however, socioeconomic equality was no longer a primary goal of the state; economic development and growth became the new targets, and socioeconomic differences became more apparent.

Some observers have noted that some of the biggest differences today are regional. Western and southwestern areas are much poorer than are eastern provinces, for example. These regional differences reflect, in part,

greater state investment in some areas. For decades, the Chinese state has focused on developing industry, infrastructure, communications, schools, and other institutions to strengthen the country as a whole. But most of these investments were made in urban and eastern parts of China. The government believed that the benefits from these investments would “trickle down” to other areas, but this failed to occur. Western and southwestern provinces remain relatively poor, and parts of these provinces are among the poorest areas in China.

One of the largest income gaps is between rural and urban residents (see Box 6), which helped spur mass rural-to-urban migration. The economic reforms of the 1980s freed people to pursue new sources of income and made them less beholden to the state for jobs, subsidies, or other basic necessities of life. In rural areas today, there are clear differences between poor and rich peasants, with the latter in control of land and surplus labor.⁷⁹ These rural class differences and the labor surplus itself have also spurred rural-to-urban migration.

In urban areas, too, class differences are developing and deepening. Managers and professionals have been able to strengthen their position in the stratified economy. Some, especially business people involved in international trade, have benefited from China’s new open-door policies and the export-oriented development strategies, and many have attained enormous wealth. At the same time, many urban residents are barely scraping by. The economic and social standing of workers, who were once honored as the “vanguard of the revolution,” has eroded, although urban Chinese (excluding migrants) suffer less inequality than rural Chinese and residents of other Asian cities. Migrants who live in the city temporarily or without official permission often lead separate and more difficult lives than other urban residents.

The government has made enormous progress in reducing poverty in

Photo removed for copyright reasons.

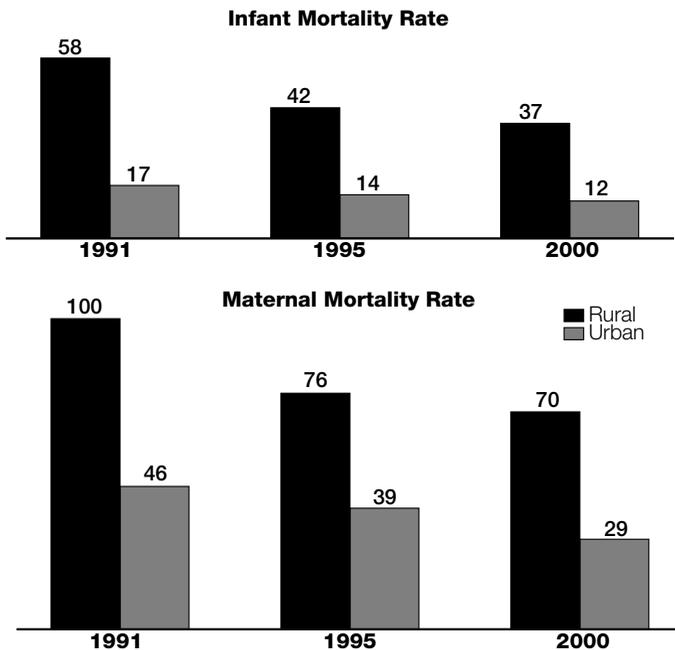
While China’s economy is booming, the gap between rich and poor is growing. Poverty is most evident in rural areas.

China, but not everyone has shared in the country’s recent economic success. An estimated 170 million rural residents still live in poverty. Their lives have not improved much, if at all, during the recent growth of China’s economy.⁸⁰ Rising inequality can counter the positive effects of rising income on alleviating poverty.⁸¹ Many health issues, such as decreasing levels of immunization and lack of access to adequate health care, have been caused or exacerbated by these new inequalities and the government’s withdrawal from these programs. The continuing and even growing inequality across China is evident in health and mortality measures. Rural poverty is the major reason why infant and maternal mortality has remained much higher in rural than in urban areas (see Figure 11, page 32).

Now under the leadership of Hu Jintao, the government has announced plans to address poverty in China. These plans include economic development in the western parts of the country, but will especially focus on growing the economy with the hope that this will improve living standards for all citizens.⁸² Government attention and intervention might help alleviate poverty in some areas, but the current focus on a market economy and overall economic

Figure 11

Health Indicators in Rural and Urban Areas in China, 1991, 1995, and 2000



Notes: The infant mortality rate measures deaths to infants under age 1 per 1,000 live births. The maternal mortality rate measures deaths of women due to pregnancy or childbirth per 100,000 live births.

Source: World Bank, *China: Promoting Growth With Equity* (report no. 24169-CHA, Oct. 15, 2003); table 1.9.

growth makes it clear that China has moved away from its earlier promises of economic equality for all citizens.

China's Future

China has experienced dramatic economic growth and success since moving toward a market economy and opening up to international trade, but the changes have also brought enormous challenges, including growing social and economic inequality, environmental damage, and mass labor migration. The sharp decline in Chinese fertility, combined with other demographic shifts, has added to the challenges. Limiting population growth may have a positive effect on the environment by reducing the number of people vying for water,

land, and air, but because fertility has fallen just as economic growth is rising, most of the positive effects from slower population growth are masked by the enormous impact of new industry on the environment.

Family structures have also been affected by changes in fertility, marriage, and life expectancies, leading to another set of complications. People are living longer, and the growing proportion of elderly in China is beginning to strain both national and family resources. The lower fertility levels mean that fewer children—and sometimes only one child—will be available to care for elderly family members. It is often difficult to disentangle the effects of demographic changes on families from the equally powerful—and sometimes contradictory—effects of changing economic and societal conditions. For example, mortality levels are declining for many people, especially those who can buy the better health care available through the private sector, but other people no longer receive even the basic care once provided by the state. People who cannot obtain private health care are more likely to suffer illness and to die earlier than people covered by government health care. China's fertility is expected to remain low, but it is not clear whether the government will continue to enforce a one-child policy or will allow parents to have two children.

It is impossible to predict exactly what will happen in China in the next 50 years, but the effects of the dramatic changes on China's fertility, health, and government in the 20th century will doubtless continue to ripple through the society for the foreseeable future. China's recent history shows how population change is an integral part of a country's experience, both affecting and subject to a variety of factors. Given China's enormous political, economic, and demographic importance to the world, the country's demographic future will be of interest to all of us.

References

1. Ansley J. Coale, *Rapid Population Change in China, 1952-1982* (Washington, DC: National Academy Press, 1984); and China Population and Information Research Center (CPIRC), "Total population, CBR, CDR, NIR and TFR of China (1949-2000)," accessed online at www.cpirc.org.cn, on March 24, 2004.
2. Jasper Becker, *Hungry Ghosts: Mao's Secret Famine* (New York: Free Press, 1996); and Penny Kane, *Famine in China, 1959-61: Demographic and Social Implications* (New York: St. Martin's Press, 1988).
3. Peng Xizhe, "Demographic Consequences of the Great Leap Forward in China's Provinces," *Population and Development Review* 13, no. 4 (1987): 639-70.
4. "China's Life Expectancy Averaged 71.8 Years," *People's Daily* (March 28, 2002), accessed online at http://english.peopledaily.com.cn/200203/28/eng20020328_93017.shtml, on March 13, 2003.
5. James P. Grant, *The State of the World's Children* (Oxford, England: Oxford University Press, 1992).
6. Marilyn Beach, "China's Rural Health Care Gradually Worsens," *The Lancet* 358, no. 9281 (2001): 567.
7. Beach, "China's Rural Health Care Gradually Worsens."
8. World Health Organization, "China Halves TB Deaths Through DOTS," accessed online at www.who.int/inf-new/tuber2.htm, on July 31, 2003.
9. Men Lili, "Analysis of Social and Economic Factors Affecting Mortality in China," *Chinese Journal of Population Science* 5, no. 2 (1993): 119-32.
10. Men Lili, "Analysis of Social and Economic Factors Affecting Mortality in China."
11. United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), "Asia and the Pacific in Figures 2001: China," accessed online at www.unescap.org/stat/statdata/china.xls, on Aug. 22, 2003.
12. China Financial Economic Publishing House, *New China's Population* (New York: Macmillan Publishing Company, 1982); and UNESCAP, "Infant Mortality Rates, 1985-1990, 1990-1995, and 1995-2000, and Mortality Under Age 5 Years, 1990-1995 and 1995-2000," accessed online at www.unescap.org/wid/04widresources/01statistic/table2.4.pdf, on July 29, 2003.
13. Judith Banister, "China: Recent Mortality Levels and Trends" (paper prepared for the annual meeting of the Population Association of America, Denver, May 1992).
14. Xinhua Steve Ren, "Birth Spacing Dynamics in China: The Cases of Hebei and Shaanxi Provinces," *Population Research and Policy Review* 14 (1995): 411-25; and Maureen J. Graham, Ulla Larsen, and Xiping Xu, "Son Preference in Anhui Province, China," *International Family Planning Perspectives* 24, no. 2 (1998): 72-77.
15. Liu Zheng and Li Jianbao, "Characteristics and Priorities of China's Population Control From an International Perspective," *Chinese Journal of Population Science* 5, no. 2 (1993): 107-18.
16. William R. Lavelly, "The Rural Chinese Fertility Transition: A Report From Shifang Xian, Sichuan," *Population Studies* 38, no. 3 (1984): 365-84.
17. CPIRC, "National Family Planning and Reproductive Health Survey (2001)," accessed online at www.cpirc.org.cn/en/enews20020710-1.htm, on March 24, 2004.
18. H. Yuan Tien et al., "China's Demographic Dilemmas," *Population Bulletin* 47, no. 1 (1992): 8-9.
19. Penny Kane, *The Second Billion: Population and Family Planning in China* (Victoria, Australia: Penguin Books, 1987): 77.
20. Susan Greenhalgh and Jiali Li, "Engendering Reproductive Policy and Practice in Peasant China: For a Feminist Demography of Reproduction," *Signs* 20, no. 3 (1995): 607.
21. Tyrene White, "Two Kinds of Production: The Evolution of China's Family Planning Policy in the 1980s," *Population and Development Review* 20, suppl. (1994): 137-58; and Susan Greenhalgh, "The Evolution of the One-Child Policy in Shaanxi, 1979-88," *China Quarterly* 122 (June 1990): 191-229.
22. Greenhalgh, "The Evolution of the One-Child Policy in Shaanxi"; and White, "Two Kinds of Production."
23. Susan Greenhalgh and Edwin Winckler, "Chinese State Birth Planning in the 1990s and Beyond" (Washington, DC: INS Resource Information Center, 2001).
24. Peng Peiyun, "Accomplishments of China's Family Planning Program: A Statement by a Chinese Official," *Population and Development Review* 19, no. 2 (1993): 399-403.
25. Edwin A. Winckler, "Chinese Reproductive Policy at the Turn of the Millennium: Dynamic Stability," *Population and Development Review* 28, no. 3 (2002): 379-418.
26. Sulamith Heins Potter and Jack M. Potter, *China's Peasants: The Anthropology of a Revolution* (Cambridge, England: Cambridge University Press, 1990).
27. Peng Xizhe, *Demographic Transition in China: Fertility Trends Since the 1950s* (Oxford, England: Clarendon Press, 1991): 228.
28. William Lavelly, "Age Patterns of Chinese Marital Fertility, 1950-1981," *Demography* 23, no. 3 (1986): 419-34.

29. Peng Xizhe, "Major Determinants of China's Fertility Transition," *China Quarterly* 117 (March 1989): 1-38.
30. Nancy Birdsall and Dean Jamison, "Income and Other Factors Influencing Fertility in China," *Population and Development Review* 9, no. 4 (1983): 651-75.
31. Peng, "Major Determinants of China's Fertility Transition"; and Birdsall and Jamison, "Income and Other Factors Influencing Fertility in China."
32. Ronald Freedman et al., "Local Area Variations in Reproductive Behavior in the People's Republic of China, 1973-1982," *Population Studies* 42 (March 1988): 39-57.
33. Peng, "Major Determinants of China's Fertility Transition."
34. Dudley L. Poston Jr., and Jia Zhongke, "Socioeconomic Structure and Fertility in China: A County-Level Investigation," *Journal of Biosocial Science* 22, no. 4 (1990): 507-15.
35. Poston and Jia, "Socioeconomic Structure and Fertility in China."
36. Poston and Jia, "Socioeconomic Structure and Fertility in China"; Birdsall and Jamison, "Income and Other Factors Influencing Fertility in China"; and H. Yuan Tien, "Induced Fertility Transition: Impact of Population Planning and Socioeconomic Change in the People's Republic of China," *Population Studies* 38, no. 3 (1984): 385-400.
37. John C. Caldwell and K. Srinivasan, "New Data on Nuptiality and Fertility in China," *Population and Development Review* 10, no. 1 (1984): 71-79; and Tien et al., "China's Demographic Dilemmas": 17-20.
38. Wang Feng and Nancy Tuma, "Changes in Chinese Marriage Patterns During the Twentieth Century," in *Proceedings of the IUSSP International Population Conference, Montreal, 1993* (Liège, Belgium: International Union for the Scientific Study of Population, 1993): 337-52.
39. Ansley Coale et al., "Recent Trends in Fertility and Nuptiality in China," *Science* 251 (Jan. 25, 1991): 389-93.
40. Dudley L. Poston Jr., and Gu Baochang, "Socioeconomic Development, Family Planning, and Fertility in China: A Subregional Analysis," *Demography* 24, no. 4 (1987): 531-51.
41. Winkler, "Chinese Reproductive Policy at the Turn of the Millennium."
42. Martin King Whyte and S.Z. Gu, "Popular Response to China's Fertility Transition," *Population and Development Review* 13, no. 3 (1987): 471-93.
43. See also Greenhalgh and Li, "Engendering Reproductive Policy and Practice in Peasant China."
44. Jeffrey Wasserstrom, "Resistance to the One-Child Family," *Modern China* 10, no. 3 (July 1984): 345-74; Tien, "Induced Fertility Transition"; Emily Honig and Gail Hershatter, *Personal Voices: Chinese Women in the 1980s* (Stanford, CA: Stanford University Press, 1988): 232-34; and Elisabeth Coll, *Changing Identities of Chinese Women* (London: Zed Books, 1995).
45. Sten Johansson and Ola Nygren, "The Missing Girls of China: A New Demographic Account," *Population and Development Review* 17, no. 1 (March 1991): 35-51; Ansley Coale and Judith Banister, "Five Decades of Missing Females in China," *Demography* 31, no. 3 (1994): 459-86; Zeng Yi et al., "Causes and Implications of the Recent Increase in the Reported Sex Ratio in China," *Population and Development Review* 19, no. 2 (1993): 283-302; and Gu Baochang and Krishna Roy, "Sex Ratio at Birth in China, With Reference to Other Areas in East Asia: What We Know," *Asia-Pacific Population Journal* 10, no. 3 (1995): 17-42.
46. Judith Banister, "Implications and Quality of China's 1990 Census Data," in *1990 Population Census of China: Proceedings of International Seminar*, ed. Zhang Sai et al. (Beijing: China Statistical Publishing House, 1994): 208-38.
47. Kay Johnson, Huang Banghan, and Wang Liyao, "Infant Abandonment and Adoption in China," *Population and Development Review* 24, no. 3 (1998): 469-510.
48. Zeng Yi et al., "Causes and Implications of the Recent Increase in the Reported Sex Ratio in China."
49. Gu Baochang and Xu Yi, "A Comprehensive Discussion of the Birth Gender Ratio in China," *Chinese Journal of Population Science* 6, no. 4 (1994): 417-31; and Zeng Yi et al., "Causes and Implications of the Recent Increase in the Reported Sex Ratio in China."
50. Zeng Yi et al., "Causes and Implications of the Recent Increase in the Reported Sex Ratio in China."
51. Gu and Roy, "Sex Ratio at Birth in China."
52. Gu and Xu, "A Comprehensive Discussion of the Birth Gender Ratio in China."
53. Gu and Roy, "Sex Ratio at Birth in China."
54. Gu and Roy, "Sex Ratio at Birth in China": 32.
55. Judith Banister, "Son Preference in Asia: A Report of a Symposium" (paper presented at the annual meeting of the Population Association of America, San Francisco, April 13-15, 1995).
56. Greenhalgh and Li, "Engendering Reproductive Policy and Practice in Peasant China"; Xinhua Steve Ren, "Sex Differences in Infant and Child Mortality in Three Provinces in China," *Social Sciences and Medicine* 40, no. 9 (May 1995): 1259-69; Coale and Banister, "Five Decades of Missing Females in China."

57. Wu Canping, *The Aging of Population in China* (Valletta, Malta: United Nations International Institute on Aging, 1991): 44.
58. Stevan Harrell, "Geography, Demography, and Family Composition in Three Southwestern Villages," in *Chinese Families in the Post-Mao Era*, ed. Deborah S. Davis and Stevan Harrell (Berkeley, CA: University of California Press, 1993): 77-102.
59. Deborah S. Davis and Stevan Harrell, "Introduction: The Impact of Post-Mao Reforms on Family Life," in *Chinese Families in the Post-Mao Era*, ed. Deborah S. Davis and Stevan Harrell (Berkeley, CA: University of California Press, 1993): 1-22.
60. Deborah Davis, "Urban Households: Supplicants to a Socialist State," in *Chinese Families in the Post-Mao Era*, ed. Deborah S. Davis and Stevan Harrell (Berkeley, CA: University of California Press, 1993): 50-66; Jonathan Unger, "Urban Families in the Eighties: An Analysis of Chinese Surveys," in *Chinese Families in the Post-Mao Era*, ed. Deborah S. Davis and Stevan Harrell (Berkeley, CA: University of California Press, 1993): 25-49; and Wu, *The Aging of Population in China*.
61. Harrell, "Geography, Demography, and Family Composition in Three Southwestern Villages": 79.
62. Zeng Yi, "Changes in Family Structure in China: A Simulation Study," *Population and Development Review* 12, no. 4 (1986): 683.
63. Potter and Potter, *China's Peasants*.
64. John Bongarts and Susan Greenhalgh, "An Alternative to the One-Child Policy in China," *Population and Development Review* 11, no. 4 (1985): 585-617.
65. Margery Wolf, *Revolution Postponed: Women in Contemporary China* (Stanford, CA: Stanford University Press, 1985).
66. CPIRC, "Number of Marriages and Divorces," accessed online at www.cpirc.org.cn/en/marriage.htm, on Aug. 19, 2003.
67. Ellen Judd, *Gender and Power in Rural North China* (Stanford, CA: Stanford University Press, 1995).
68. John R. Logan and Bian Fuqin, "Family Values and Coresidence With Married Children in Urban China," *Social Forces* 77, no. 4 (1999): 1253-82.
69. Vaclav Smil, "Environmental Problems in China: Estimates of Economic Costs," *East-West Special Report*, no. 5 (Honolulu, HI: East-West Center, 1996).
70. Smil, "Environmental Problems in China": 24.
71. Lester R. Brown, *Who Will Feed China? Wake-Up Call for a Small Planet* (New York: Norton, 1995); Jun Jing, "Environmental Protests in Rural China," in *Chinese Society: Change, Conflict, and Resistance*, ed. Elizabeth J. Perry and Mark Selden (New York: Routledge, 2000): 143-60; Judith Shapiro, *Mao's War Against Nature: Politics and the Environment in Revolutionary China* (Cambridge, England: Cambridge University Press, 2001); and Vaclav Smil, *China's Environmental Crisis: An Inquiry Into the Limits of National Development* (Armonk, NY: M.E. Sharpe, 1993).
72. Brown, *Who Will Feed China?*
73. Dru Gladney, *Ethnic Identity in China: The Making of a Muslim Minority Nationality* (Fort Worth, TX: Harcourt Brace, 1998): 23.
74. Lei Guang, "Reconstituting the Rural-Urban Divide: Peasant Migration and the Rise of 'Orderly Migration' in Contemporary China," *Journal of Contemporary China* 10, no. 28 (2001): 471-93.
75. Dorothy Solinger, *Contesting Citizenship in Urban China: Peasant Migrants, the State and the Logic of the Market* (Berkeley, CA: University of California Press, 1999).
76. Shujie Yao, "Economic Growth, Income Inequality, and Poverty in China Under Economic Reforms," *Journal of Development Studies* 35, no. 6 (1999): 104-30.
77. Yanjie Bian, "Chinese Social Stratification and Social Mobility," *Annual Review of Sociology* 28, no. 1 (2002): 91-117.
78. Bian, "Chinese Social Stratification and Social Mobility."
79. Mark Brenner, "Reexamining the Distribution of Wealth in Rural China," in *China's Retreat From Equality: Income Distribution and Economic Transition*, ed. Carl Riskin et al. (Armonk, NY: M.E. Sharpe, 2001): 245-75.
80. Yao, "Economic Growth, Income Inequality, and Poverty in China Under Economic Reforms."
81. Yao, "Economic Growth, Income Inequality, and Poverty in China Under Economic Reforms": 126. See also Carl Riskin et al., "Introduction—The Retreat from Equality: Highlights of the Findings," in *China's Retreat From Equality: Income Distribution and Economic Transition*, ed. Carl Riskin et al. (Armonk, NY: M.E. Sharpe, 2001): 3-22.
82. China, "White Paper on Rural China's Poverty Reduction," accessed online at <http://english.people.com.cn/features/PRpaper/pr1.html>, on March 25, 2004.

Suggested Resources

- Chan, Kam Wing, and Zhang Li. "The *Hukou* System and Rural-Urban Migration in China: Processes and Changes." *China Quarterly* 160 (1999): 818-55.
- Chan, Kam Wing. "Chinese Census 2000: New Opportunities and Challenges." *The China Review* 3, no. 2 (2003): 1-12.
- Gladney, Dru. *Ethnic Identity in China: The Making of a Muslim Minority Nationality*. Fort Worth, TX: Harcourt Brace, 1998.
- Greenhalgh, Susan. "Controlling Births and Bodies in Village China." *American Ethnologist* 21, no. 1 (1994): 3-30.
- Greenhalgh, Susan. "Planned Births, Unplanned Persons: 'Population' in the Making of Chinese Modernity." *American Ethnologist* 30, no. 2 (2003): 196-215.
- Gu, Baochang, and Krishna Roy. "Sex Ratio at Birth in China, With Reference to Other Areas in East Asia: What We Know." *Asia-Pacific Population Journal* 10, no. 3 (1995): 17-42.
- Ikels, Charlotte. *The Return of the God of Wealth: The Transition to a Market Economy in Urban China*. Stanford, CA: Stanford University Press, 1996.
- Lee, James Z., and Wang Feng. *One Quarter of Humanity: Malthusian Mythology and Chinese Realities, 1700-2000*. Cambridge, MA: Harvard University Press, 1999.
- Poston Jr., Dudley L., and Chengrong Charles Duan. "The Current and Projected Distribution of the Elderly and Eldercare in the People's Republic of China." *Journal of Family Issues* 21, no. 6 (2000): 714-32.
- Riskin, Carl, et al., eds. *China's Retreat From Equality: Income Distribution and Economic Transition*. Armonk, NY: M.E. Sharpe, 2001.
- Schein, Louisa. *Minority Rules: The Miao and the Feminine in China's Cultural Politics*. Durham, NC: Duke University Press, 2000.
- Sigley, Gary. "Keep It in the Family: Government, Marriage, and Sex in Contemporary China," in *Borders of Being: Citizenship, Fertility, and Sexuality in Asia and the Pacific*, ed. Margaret Anne Jolly and Kalpana Rajeswari Ram. Ann Arbor, MI: University of Michigan Press, 2001.
- Solinger, Dorothy J. *Contesting Citizenship in Urban China: Peasant Migrants, the State and the Logic of the Market*. Berkeley, CA: University of California Press, 1999.
- White, Tyrene. "Domination, Resistance, and Accommodation in China's One Child Campaign," in *Chinese Society: Change, Conflict, and Resistance*, ed. Elizabeth J. Perry and Mark Selden. New York: Routledge, 2000.

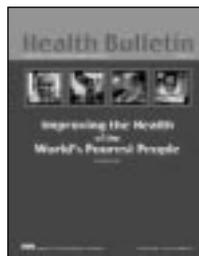
Related PRB Publications

For more information on population issues, here are several PRB publications available in print and on our website.

Improving the Health of the World's Poorest People

by Dara Carr, 2004

On average, people live longer, healthier lives than ever before. But the last century's revolution in human health and well-being is incomplete. For the estimated 1 billion or more people living on less than US\$1 per day, health services and modern medicines are still out of reach. Moreover, many initiatives to improve the health of people in extreme poverty have been unsuccessful. This PRB publication delves into the poor-rich health divide and what can be done to shrink it. IMPROHEA \$7.00



Transitions in World Population

by Population Reference Bureau staff, 2004

This *Population Bulletin* chronicles the unprecedented population changes in the last century, with a particular focus on the last 50 years. It examines the social and economic factors that affect population change, including wide disparities in income, education, and women's status within countries. It also discusses the heightened international concern since the 1950s about rapid population growth, widespread fertility declines, and the new world consensus reached in the 1990s about how best to respond to population trends. BUL59.1 \$7.00

The Wealth Gap in Health

by Lori Ashford and Haruna Kashiwase, 2004

Despite improvements in public health in the last half-century, large disparities in health exist between and within countries. A recent analysis of data from the Demographic and Health Surveys program provides clear evidence of the gap between the rich and poor in a range of health and population indicators: fertility, infant and child mortality, nutrition, and the use of family planning and other health services. IWGH \$4.50



PRB's Population Handbook

by Arthur Haupt and Thomas T. Kane, 2004

The 5th edition of this popular Population Handbook contains new data from many countries that illustrate the rates, ratios, and concepts of demography. HBINTER \$10.00

PRB Data Sheets

Published in English, French, and Spanish

• World Population Data Sheet, by Carl Haub

PRB's annual World Population Data Sheet contains the latest population estimates, projections, and other key indicators for 200 countries. DS03ENG \$4.50

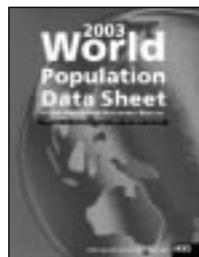
• Making the Link: Population, Health, and Environment, by

Jonathan G. Nash and Roger-Mark De Souza, 2002

IDS02ENV \$4.50

• 2002 Women of Our World, by Justine Sass and Lori Ashford, 2002

IDS02WW \$4.50



To order PRB publications (discounts available):

Population Reference Bureau

1875 Connecticut Ave., NW, Suite 520

Washington, DC 20009

Phone: 800-877-9881

Fax: 202-328-3937

E-mail: popref@prb.org

Website: www.prb.org

Recent Population Bulletins

Volume 59 (2004)

No. 1 Transitions in World Population, by *Population Reference Bureau staff*

Volume 58 (2003)

No. 4 Population: A Lively Introduction, 4th ed., by *Joseph A. McFalls Jr.*

No. 3 Critical Links: Population, Health, and the Environment, by *Roger-Mark De Souza, John S. Williams, and Frederick A.B. Meyerson*

No. 2 Immigration: Shaping and Reshaping America, by *Philip Martin and Elizabeth Midgley*

No. 1 Population Dynamics in Latin America, by *Jorge A. Brau*

Volume 57 (2002)

No. 4 What Drives U.S. Population Growth? by *Mary M. Kent and Mark Mather*

No. 3 Facing the HIV/AIDS Pandemic, by *Peter Lamptey, Merywen Wigley, Dara Carr, and Yvette Collymore*

No. 2 Poverty in America: Beyond Welfare Reform, by *Daniel T. Lichter and Martha L. Crowley*

No. 1 International Migration: Facing the Challenge, by *Philip Martin and Jonas Widgren*

Volume 56 (2001)

No. 4 Elderly Americans, by *Christine L. Himes*

No. 3 World Population Futures, by *Brian O'Neill and Deborah Balk*

No. 2 First Glimpses From the 2000 U.S. Census, by *Mary M. Kent, Kelvin M. Pollard, John Haaga, and Mark Mather*

No. 1 New Population Policies: Advancing Women's Health and Rights, by *Lori S. Ashford*

Volume 55 (2000)

No. 4 American Families, by *Suzanne M. Bianchi and Lynne M. Casper*

No. 3 An Urbanizing World, by *Martin P. Brockerhoff*

To read selected PRB publications, go to: www.prb.org

Population Reference Bureau

1875 Connecticut Avenue, NW, Suite 520
Washington, DC 20009-5728
202-483-1100
www.prb.org

China's Population: New Trends and Challenges

China experienced dramatic declines in birth and death rates over the past 50 years as the government implemented revolutionary and controversial policies to improve health and slow population growth. With 1.3 billion people, China remains the world's most populous country, but it has lower fertility than the United States and many European countries. Fewer children, later marriage, and longer life expectancy have affected family structures and created new challenges. The growing proportion of elderly in China is beginning to strain both national and family resources. Lower fertility means that fewer children—and sometimes only one child—will be available to care for elderly family members.

Movement toward a market economy and opening to international trade in the 1990s brought enormous economic growth, but also increased income and health inequalities, encouraged mass labor migration, and exacerbated environmental damage. The effects of these dramatic changes on China's fertility, health, economy, and government in the 20th century will ripple through the society for the foreseeable future, and will be felt around the world.