

## CHINA'S CENSUS

# National Count Reveals Major Societal Changes

China's population is becoming older, better educated, and more transient. It is also harder to track, resulting in a big jump in the census undercount

**BEIJING**—When China's National Bureau of Statistics declared this spring that it had counted 1.266 billion people in the country's fifth national census, it confirmed China's status as the world's most populous nation. But another number—the estimated 22 million people the census missed—may provide a better indicator of how China has changed. Experts say that the undercount, some 30 times larger than that in the last census a decade ago, reflects the impact of a rising standard of living, growing concern about privacy, and a large but elusive migrant population. In addition, the process of allocating it demonstrates how politics interacts with statistics in China's socialist bureaucracy.

Demographers say that the overall count rings true, based on predictions of 1.27 or 1.28 billion (*Science*, 17 November 2000, p. 1288). "It's a little bit lower than our projection, but it's basically accurate," says Zhai Zhenwu, a demographer at People's University of China in Beijing. Even so, the net undercount of 1.81%, based on postcensus sampling, is a huge jump from the official rates of 0.06% in the 1990 census and 0.015% in 1982. The current number falls within international standards—2% is considered "acceptable," says Y. C. Yu, former head of demographic and social statistics at the United Nations—and is not far above the 1.6% in the 1990 U.S. census. Still, the number may be squishy. Last month the director of the statistics bureau surprised a group of demographers by telling them that government officials are "increasingly doubting" its accuracy.

The exact size of the undercount isn't the only problem. When the central bureau tried to assign portions of the missing 22 million to subtotals from the different provinces, provincial officials balked. Population figures reflect how well officials have enforced China's strict birth control policies. In addition,

a larger population means a lower per capita gross domestic product. Finally, a big undercount means that the province did a poor job with the census. "American states would rather be larger. Chinese provinces would rather their population be smaller," explains Zhai.

The result, say demographers who attended a recent lecture by the statistics bureau's director, was a set of negotiations between the central bureau and the provincial officials. Even then, the bureau wound up with 1.05 million people that no one would accept, a group the bureau labeled "awaiting decision."

Politics was supposed to be kept out of the fifth census. Central govern-

ment officials swore that there would be no recriminations for discoveries that could reflect poorly on individuals or local officials—like extra children born in violation of the birth control policy. But the past decade of economic development has transformed Chinese society and loosened the government's control of people's lives. One result is a flow of up to 100 million rural workers into cities. At the same time, the established urban population has become wealthier, freer, and more protective of its privacy.

Those trends complicated the 2000 census. The 10-day count was extended by weeks in some provinces after census takers had problems tracking down migrants and preliminary totals were unrealistically low. "There was a lot of difficulty this time," acknowledges Sun Jingxin, the former deputy

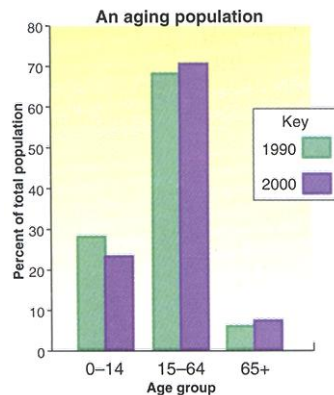
director of the statistics bureau and an adviser on the 2000 census.

Demographers won't be able to assess the true quality of the census until next year, when the bureau releases full results. But they are already beginning to draw conclusions about important changes in Chinese society.

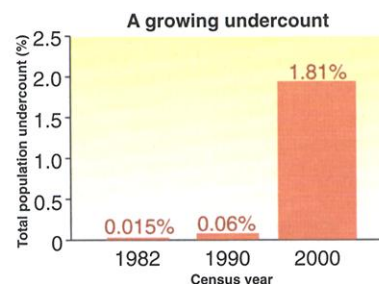
For example, the bureau has revealed that nearly 7% of the population is 65 or older, meeting the U.N. criterion for an "aging population" and the resulting social burdens. That situation will only grow worse, says Tian Xueyuan, a demographer with the Chinese Academy of Social Sciences in Beijing, citing estimates that the percentage will grow to 22% by 2050. Family patterns are changing, too, notes demographer Jiang Leiwen of Beijing University, with the average family size dropping from 3.96 in 1990 to 3.44. Fewer extended families could intensify the plight of the elderly in a society where the young traditionally care for the old.

The Chinese population also appears better educated. The bureau says that 6.7% of the population over 15 is illiterate, compared with 15.9% in 1990, and that 3.6% were enrolled in or had completed higher education, compared with 1.4% in 1990. Although some of that rise is undoubtedly due to a recent drive to broaden enrollment in higher education, Jiang says that the jump might also reflect the prevalence of fake degrees.

One eagerly awaited statistic is the sex ratio at birth; recent sample surveys have indicated that male babies might outnumber females by as much as 119 to 100. One number already reported—a rise in the total sex ratio, from 1.066 to 1.067, in favor of males—is cause for alarm, says Jiang, who notes that the number should have shrunk as the population aged, because women live longer than men.



**Longer life.** China's population is aging, with a smaller share of children and more elderly.



**Missing persons.** A flood of migrant workers into cities like Beijing (inset) contributed to a soaring undercount in the 2000 census.



Chinese demographers are not happy about it, but most would probably agree with Jiang when he says that "politics does affect the accuracy of the census." For despite its limitations, the census is still the best tool they have for painting a picture of Chinese society.

—DANIEL WALFISH

Daniel Walfish writes from Beijing.