

Slowing population growth by force seemed a no-brainer to the tough, pragmatic heirs to Mao, who were determined to bring China into the modern age. Little did they foresee the mess this policy would create for their heirs.



Mis-Planned Parenthood: The Unintended Consequences of China's One-Child Policy

by **NICHOLAS EBERSTADT**

Over the next generation, China's changing landscape – political, economic and perhaps social as well – will have profound and far-reaching implications for the rest of the world. Yet in most important respects, the future face of this rising power is obscure. China's economy, for example, will surely be large: By the World Bank's "purchasing power" method of calculation, it is already the second largest in the world. But the economy's productivity and global standing are deeply uncertain. Much the same can be said for such basic matters as system of government and the character of its foreign policy. There is one important aspect of China's future, though, that can be described with some accuracy: the makeup of the population a generation down the road.

In the next several decades, China's demographic patterns will be driven by two fundamental realities. First, despite relatively low living standards, contemporary China has attained long life expectancy. Second, and even more important, fertility is now remarkably low – below the level necessary for long-term population replacement – and unlikely to increase substantially.

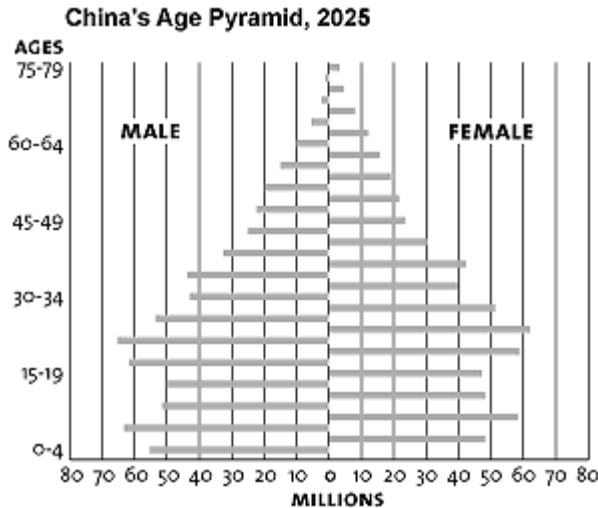
Contemporary China's mortality and fertility patterns have been strongly influenced by the persistent and often muscular interventions of its Communist Government, the most notable being the "One Child Norm" campaign ostracizing larger families and penalizing them financially. More so perhaps than anywhere else on the globe, planners in China have presided over a reconstruction of their country's demographic rhythms.

There is considerable irony here. For in laboring to avoid one set of population problems, Beijing has insured that another, arguably more daunting, set will emerge in the decades ahead. These problems will be without precedent in the Chinese experience.

Some, in fact, have no precedent anywhere. And at this point it is impossible to foretell their impact.

Enlightened policies or cultural change could soften the blow. But there is little doubt these remarkable demographic problems will impede economic growth, exacerbate social tensions and complicate Beijing's quest for national power and security.

THE SHAPE OF THINGS TO COME



How is it that we can already have a clear impression of China's demographic profile a quarter-century from now?

Like a supertanker at full steam in open seas, large populations cannot change course swiftly. Thus, even when patterns of childbearing or longevity shift suddenly and radically, it takes many years for the changes to alter a population appreciably.

Moreover, thanks to the particulars of its present age structure, fertility levels and mortality outlook, we can peer deep into China's demographic future. The reason, quite simply, is that most of the people who will probably be living in China a generation from now are already alive. Of the one and a quarter billion Chinese on the mainland today, roughly four-fifths will probably still be around in a quarter century. And that billion will account for the overwhelming majority of China's population in 2025. In fact, since the projected population won't be much larger than it is today, these survivors will constitute between two-thirds and three-fourths of China's total citizenry.

PROJECTING CHINA'S POPULATION TO 2025



In mid-1998, China's population (including Hong Kong, but not Taiwan) totaled 1.24 billion people. The United States Census Bureau estimates life expectancy at birth in China at just under 70 years.

China's fertility was no higher than the replacement level in the early 1990's.

Indeed, the Census Bureau suggests that the fertility rate is currently about 1.8 births per woman per lifetime, about 15 percent lower than the 2.1 births necessary for long-term population stability. This means that China's fertility is about the same as that of Taiwan and South Korea – Asian countries whose birth rates have tumbled as they urbanized and grew rich.

What's more, the averages mask dramatic regional differences. Studies by demographers Judith Banister, Barbara Hammer and Loraine A. West indicate that the total fertility rate for urban Chinese may have been 1.3 or lower in a number of provinces by 1995 – lower than the current fertility in the European Union, known for its exceptionally low birth rate. In the great metropolises of Beijing and Shanghai, fertility rates may actually have fallen below 1.

Since China's population presumably will not be strongly affected by international migration, the rates of mortality and fertility will largely shape the country's demographic dimensions in 2025. The Census Bureau expects a gradual increase in Chinese life expectancy to about 75 years. The projection of fertility is more problematic.

The Census Bureau assumes that fertility will remain close to 1.8 births per woman per lifetime. But today's childbearing patterns exist under the shadow of the state's severe anti-natal population campaign. Would fertility rise if that program were discarded or reversed?

While China's population-control policies are clearly intended to limit reproduction, their current impact is unclear. Various bits of evidence support the conjecture that a revolution in attitudes about family size has swept China since Chairman Mao's death – and that this shift would prevent fertility from returning to traditional rates even if controls were lifted.

Most people who will probably be living in China a generation from now are already alive.

The United Nations' most recent "high variant" population scenario for China imagined only a modest increase in fertility from the current 1.8 up to 2.4 – not far above replacement. But even this scenario would not drastically alter our picture of China in 2025, raising the projected population by just 10 percent.

If demographic events unfold as expected, China's population (excluding Taiwan) will total just over 1.4 billion people in 2025. At that juncture, China may no longer even be the most populous country in the world: Recent U.S. Census Bureau projections place India's total population slightly higher a quarter century out.

If these projections prove correct, China's population will be approaching equilibrium in 2025, with a growth rate of just a tenth of 1 percent. That compares with the 1 percent pace of the 1990's and the rate of 1.5 percent of the late 1970's, when the One Child policy was unveiled. Between 1998 and 2025, under these projections, China's population growth will total just over 170 million.

That is an enormous number, but modest by modern China's experience. China's population rose by nearly 170 million in the 1960's alone. And in the 27 years between 1970 and 1997 (a span comparable to 1998-2025), the gain exceeded 400 million.

China's age structure in 2025 will look quite different than today's. While the total population is expected to grow by about 14 percent between now and the year 2025, this future China will have fewer children than the current one. Indeed, the number of Chinese under the age of 15 will be almost one-fourth smaller.

In all, the group 15 to 64 years of age – conventionally termed the working-age population – will be roughly 20 percent larger, but the changes within this group will be extremely uneven. While, for example, the number of people in their late 20's will drop by 30 percent, the cohort in their late 50's will expand by a

staggering 150 percent. In fact, more people will be between the ages of 55 and 59 than in any other five-year age group.

The most explosive growth in China, however, will occur among the elderly, with the number over 65 likely to increase by 3.5 percent a year between now and 2025. China's age structure is thus about to shift radically from the "Christmas tree" shape so familiar among contemporary populations to something more like an inverted Christmas tree. Whereas in 1997 there were about 125 Chinese children under 5 for every 100 persons over 65, in 2025 China will have more than 250 elderly for every 100 youngsters. China will almost certainly be home to more grandparents than toddlers.

NON-PROBLEMS

What does this transformation augur? Start with the problems it will not create.

Like Beijing's leaders, foreign observers have been obsessed by the race between food and population in China. In an essay in 1995 in *Foreign Policy* titled "China's Coming Collapse," Jack A. Goldstone of the University of California at Davis warned that providing for an expected increase of 300 million to 400 million people in the next 20 years "is the largest problem facing China today," adding that this was "a development problem without parallel in recent history."

That same year Lester Brown, the president of the Worldwatch Institute, a Washington think tank had explained to readers of *The Washington Post* "How China Could Starve the World." By his account, burgeoning population would collide with faltering domestic agricultural capacity, creating havoc worldwide as China met an ever-greater share of its food needs with imports.

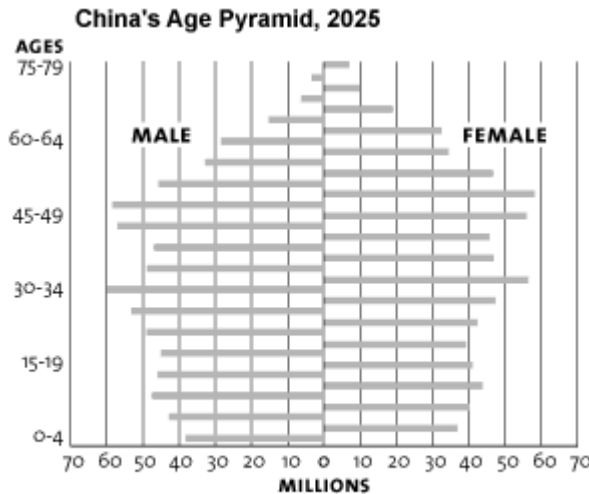
Malthusian worries, of course, are not new. But contemporary evidence suggests they are misplaced. China's population growth has thus far not compromised the agricultural potential of its land. Working with Chinese colleagues, Peter H. Lindert (also of the University of California at Davis) found no pattern of change in the country's soil quality in the past 60 years, even though China's population had almost tripled and grain production had probably more than tripled.

Perhaps the most careful assessment of China's prospective impact on world food markets was offered last year in a study for the International Food Policy Research Institute by Jikun Huang, Scott Rozelle and Mark W. Rosegrant.

In all likelihood, they suggested, China will continue to rely on world markets for only a small percentage of food needs. Chinese grain imports might double or even triple in the next two decades. However, it is by no means clear that the additional consumption will reverse the long-term decline in real grain prices linked to rapidly rising agricultural productivity.

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Nor does China face the personnel shortages that bedeviled Soviet military planners in the last years of the empire. By the 1980's the imperative of fielding an enormous army clashed with the manpower needs of the Soviet Union's



Source: U.S. Census Bureau International Programs Center Database

planned economy. Complicating the problem, shifts in Soviet ethnic composition made Russians a minority within the pool of potential recruits.

By contrast, China's generals do not face these difficulties. Though China is a multi-ethnic empire, and ethnic Chinese have virtually the lowest fertility levels among the many nationalities within China's borders, Han Chinese men will still constitute nearly 90 percent of total candidates for military duty around 2025.

Nor will China be pinched for cannon fodder: In 2025 the country will still be home to 90 million men between 15 and 24.

LOOMING POPULATION PROBLEMS

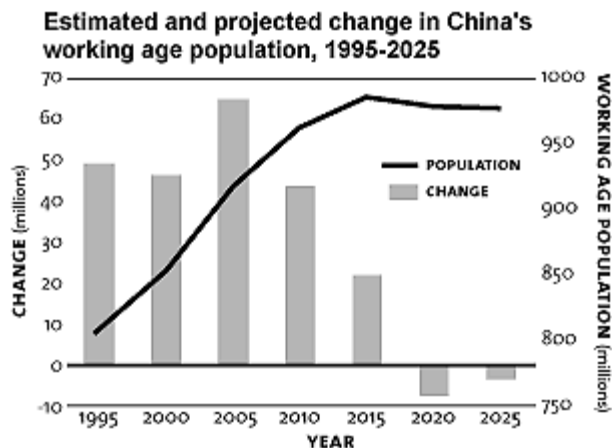
What, then, are China's population problems likely to be? Three in particular deserve mention: rapid aging, declining civilian manpower and a shortage of brides.

AGING: Thanks to both rising life expectancy and extremely low fertility levels, China's population is about to age drastically. The aging, in fact, will proceed as swiftly as any in recorded history. In 1995, the median age in China was 27 years – slightly lower than that of the United States in 1970. In the 20 years between 1970 and 1990, America's population aged by about four and a half years. By contrast, between 1995 and 2015 China's median age will jump by nine years. And by 2025, nearly half of China's population will be 40 or older.

Although Europe's affluent industrialized societies have had long life expectancies and small families for decades, none of them have witnessed the tempo of aging in store for China. Today Germany is Europe's most elderly nation, with a median age of 40, or roughly that of China in 2025. In the past 30 years, however, Germany's median age increased by just five years.

Perhaps the only parallel for the aging that awaits China is to be found in contemporary Japan, which has enjoyed exceptional longevity and experienced sub-replacement fertility for the past four decades. This graying of Japan has suddenly emerged as an issue of intense interest and concern to policymakers in Tokyo, who are now wondering just how their country should manage its growing public and private pension burden. Japan today, however, is vastly richer than China could hope to be by 2025.

Although estimates of per capita income remain problematic for China, World Bank calculations suggest that real output per head in China in 1995 stood at one-eighth the Japanese level and one-seventh the German level – eastern Germany included. Even if the brisk pace of material advance achieved in the



Source: U.S. Census Bureau, International Programs Center Database

past two decades continues unabated, China will still be the lowest-income country by far to cope with the sort of old-age burden it will face.

National income averages, furthermore, understate the magnitude of China's looming dependency problem. For despite its recent material progress, China remains a land of daunting economic disparities and crushing poverty. According to the World Bank's *World Development Report 1997*, China's income distribution is almost as skewed as the hard-

case countries of Latin America, where inequality is generally viewed as a far more serious problem than in Asia. While the Bank numbers probably exaggerate inequality in China, they do suggest that China's lowest fifth was subsisting on barely a quarter of the country's none-too-high average income. Other research from the World Bank indicates that 30 percent of Chinese suffered "absolute poverty" (defined by the Bank as living on less than \$1 a day) in the period 1981-95 – twice the incidence for Indonesia and almost three times that for Pakistan. The proportion in poverty, of course, is lower today. Even so, it is very likely that in 2025 a substantial portion of Chinese will be poor by any standard. How will this impoverished group care for its elderly?

Today, the only real social safety net in China is the family: there are scarcely any public or private pension funds in the remote rural areas, where the bulk of China's poor reside. In the decades ahead, however, the family will become an increasingly problematic mechanism for meeting the needs of elders.

The grandparents of 2025 will, by and large, be parents from the "One Child Norm" era who will have to contend with the delayed consequences of their own low fertility. Even if China's poorest grandparents in 2025 have had an average of more than two children (as now seems likely), a small but not insignificant fraction will have no surviving offspring. A much larger fraction – a fourth or more – will have no surviving sons. Thus they will find themselves in the unenviable position (at least in China) of depending on the largesse of their sons-in-laws – or even worse, competing for family resources against their sons-in-law's blood parents.

For now, China's patchwork pension system is of little help. Most plans are actuarially unsound and none offer generous coverage. Chinese policymakers have begun to grapple with comprehensive pension reform. But they have far to go and not much time to get there. Under the best of circumstances, meeting the old-age burdens of 2025 will be expensive and challenging.

DECLINING MANPOWER AVAILABILITY: In the past generation, China's brisk growth in living standards was driven in part by an extraordinary increase in manpower. Indeed, between 1975 and 1995 about one-fifth of the increase in the gross domestic product can be attributed to the disproportionate growth of

working-age Chinese.

This, however, is a once-only event. In 2025, the fraction of working-age people within the Chinese population will be about the same as today – 69 percent, according to the Census Bureau's projections. Indeed, the absolute size of the potential Chinese labor force is likely to peak in the next few decades and decline thereafter.

In the 1990's, China's working-age group was growing by just under 10 million people a year. In the first half of the next decade, it will grow by 12 million annually. Around 2015, however, the potential work force will peak at just under one billion. By 2025, in fact, China's working-age population is projected to be 10 million smaller than it will be in 2015. After 2025 this decline will accelerate, with the working-age group falling by about 70 million over 15 years.

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Zero (or even negative) growth for a country's potential work force need not constrain labor productivity or impede development. In China's particular case, however, the manpower decline may complicate the quest for economic growth and enhanced productivity in two important ways.

For one thing, China's adult population has already been mobilized to a degree that Western countries have experienced only in wartime. According to the State Statistical Bureau in Beijing, nearly 700 million Chinese were employed in 1997 – 71 percent of all Chinese 15 years of age and older. Compare that number with Greece's reported 50 percent, Turkey's 53 percent and Russia's 60 percent (all in 1995). Even South Korea's labor force participation rate in 1995 was almost 10 percentage points lower than China's today.

China's employment numbers may conceal the underemployment common in predominantly rural societies. But it is still hard to argue that China will be able to harness huge reserves of manpower in the years ahead.

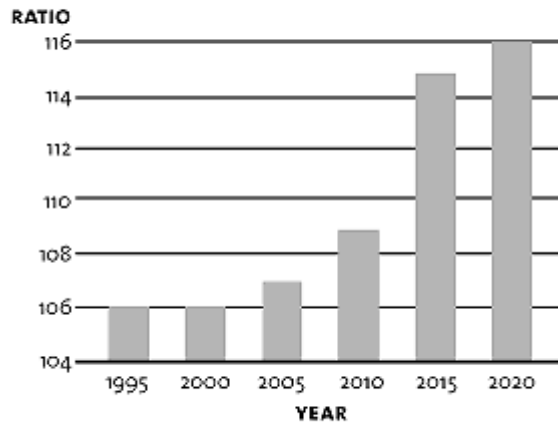
In fact, regression to rates of labor-force participation normal in other countries could eliminate the entire expected increase in working-age population in the next decade and a half.

Second, improvements in labor productivity will depend upon training. And despite the Government's longstanding emphasis on mass schooling, China remains a poorly educated nation. Estimates by Robert Barro of Harvard University and Jong-hwa Lee of Korea University suggest that average educational attainment for the population 15 years and older in China was under six years in 1990. That is a year more than the comparable figures for India and Indonesia. But it is a year less than in the Philippines (whose per capita output is roughly equal to China's) and four years less than in South Korea.

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ed than their elders. But China's demographic trends slow the pace at which educational attainment percolates through the working-age population. In late 1970's, the cohort of 10-year-olds was over a fifth the the country's entire working-population. Today that is less than a seventh the China's working-age group, and it will be only a twelfth as large in 2015. Other things equal, this presages a slowdown in the pace of education-based improvements in productivity.

Estimated and projected sex ratios, 20 to 24 age group, 1995-2020 (men per women of same age group)



Source: U.S. Census Bureau, International Programs Center, specially requested projection March 1998.

Younger people in China are generally better educated will

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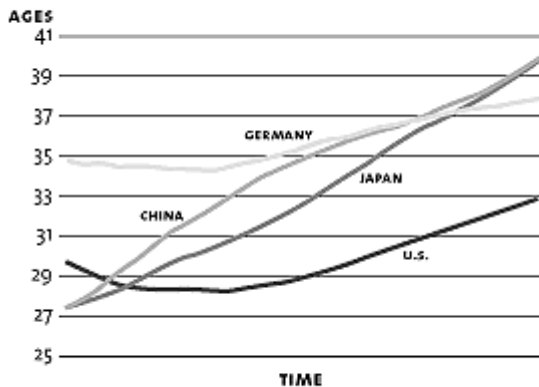
The challenges posed by declining manpower are surmountable. A more flexible labor market would permit today's workers to transfer to higher productivity employment. The education system could upgrade the skills of the adult population along with the young. Such changes, however, would require political will, and would generate risks as well as opportunities for hundreds of millions of Chinese displaced from the jobs they knew.

THE BRIDE SHORTAGE: China will not, of course, be the first country to experience rapid aging or a shrinking of its potential work force. One impending demographic trend for China, however, looks unprecedented in scale and scope: the imbalance between men and women of marriageable age.

The sex ratio for babies has exhibited a strong biological predictability worldwide, with 105 to 107 boys for every 100 girls. After the advent of China's "One Child Norm," however, the reported Chinese sex ratio at birth began a steady, eerie, rise. In 1995, a Chinese national sample census counted 118 boys under age 5 for every 100 girls. In part this imbalance was probably a statistical artifact: Faced with state-enforced birth quotas, some parents hid their daughters so that they might try again for a boy. However, most of the reported imbalance appears to be real, the consequence of sex-selective abortion and, to a much lesser extent, female infanticide.

Today's striking imbalance among infants means there will be a corresponding mismatch between prospective husbands and brides two decades hence. The dimensions of this mismatch are illustrated in the chart to the right, which shows the Census Bureau's projections for the sex ratio for Chinese in their early 20's. Between 1995 and 2020, the number of young Chinese men for every 100 young Chinese women is expected to increase from 105 to 116. A slight decline

China's aging process in international perspective: Projected median age for China in comparison with past experience in selected countries



Source: U.S. Census Bureau International Programs Center Database

Maoist political economy, not the population surge, was the primary productivity killer.

– to 114 – is projected for the following five years. But that decline is simply an assumption: The girls and boys in question have not yet been born.

By tradition, virtually all Chinese men and women able to marry ultimately do marry. In theory, the impending bride shortage could be finessed if men married outside their cohorts – specifically, by marrying younger women. Indeed, in China's past this was the solution to the more modest problem of "excess" males, since each new cohort was larger than the one before it. In the coming decades, by

contrast, low fertility will mean that each birth cohort is smaller than the one before it.

Thus, to the degree that China's young men in the coming century solve their mating problem by marrying younger women they will intensify the marriage crisis for younger men. Searching abroad for Chinese wives will be a dead end: By 2020 the surplus of China's males in their 20's will likely

exceed the entire female population of the island of Taiwan. So unless China accommodates a radical change in cultural attitudes toward marriage, the stage will be set for an increasingly intense competition for brides.

What forms will this competition take, and how will Chinese society be affected? A 1997 essay in the journal *Renmin Luntan* direly predicted "such sexual crimes as forced marriages, girls stolen for wives, bigamy, visiting prostitutes, rape, adultery" as well as homosexuality "and weird sexual habits."

The assessment seems overwrought. Yet even if one dismisses the posited social degeneration, the coming bride shortage in China is likely to create extraordinary tensions. And a significant fraction of China's young men will have to make do without marriage and children. Not a few of them will be struck by the bitter irony of their circumstance. At a time that China's wealth and power will be greater than ever before, their prospects for social fulfillment are dwindling. How they cope remains to be seen – and may bear directly on the character and behavior of the China that awaits us.

In using coercion to slow population growth, China's leadership was guided by a simplistic Malthusian vision of the country's prospects. Cutting growth, in this view, would directly ease the race between food and mouths, and stimulate material advance.

If they had been right, the end might, arguably, have justified the means; however, they badly misdiagnosed the dynamic at play. Maoist political economy, not the population surge, was the primary productivity killer. Indeed,

what economists call total factor productivity may actually have been falling in China – that ever greater amounts of capital and natural resources as well as labor were needed to produce a constant amount of output during the Great Leap Forward.

Only in China have leaders demanded such broad and immediate sacrifices in the hope of such distant and debatable benefits. In the final analysis, their hubris may be the most striking feature of modern China's demographic predicament.

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