

# The Global War Against Baby Girls

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Over the past three decades the world has come to witness an ominous and entirely new form of gender discrimination: sex-selective feticide, implemented through the practice of surgical abortion with the assistance of information gained through prenatal gender determination technology. All around the world, the victims of this new practice are overwhelmingly female—in fact, almost universally female. The practice has become so ruthlessly routine in many contemporary societies that it has impacted their very population structures, warping the balance between male and female births and consequently skewing the sex ratios for the rising generation toward a biologically unnatural excess of males. This still-growing international predilection for sex-selective abortion is by now evident in the demographic contours of dozens of countries around the globe—and it is sufficiently severe that it has come to alter the overall sex ratio at birth of the entire planet, resulting in millions upon millions of new “missing baby girls” each year. In terms of its sheer toll in human numbers, sex-selective abortion has assumed a scale tantamount to a global war against baby girls.

## Initial Signal in China

A regular and quite predictable relationship between total numbers of male and female births is a fixed biological characteristic for human populations, as it is for other species of mammals. The discovery of the consistency, across time and space, of the sex ratio at birth (SRB) for human beings was one of the very earliest findings of the modern discipline of demography. (One of the founders of the field, the German priest and statistician Johann Peter Süssmilch, posited in 1741 that “the Creator’s reasons for ensuring four to five percent more boys than girls are born lie in the fact that it compensates for the higher male losses due to the recklessness of boys, to exhaustion, to dangerous occupations, to war, to seafaring and immigration, thus maintaining the balance between the two sexes so that everyone can find a spouse at the appropriate time for marriage.”)

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Medical and demographic research subsequently identified some differences in SRB that correspond with ethnicity, birth order, parental age, urbanization, environmental conditions, and other factors. But such differences were always quite small; until the 1980s, the SRB for large human populations tended to fall within a narrow range, usually around 103 to 106 newborn boys for every 100 newborn girls and typically centering no higher than 105. Until the 1980s, exceptions to this generality were mainly registered in small populations, and attributable to chance.

The modern phenomenon of biologically unnatural increase in the sex ratio at birth was first noticed in the 1980s for China, the world’s most populous country. In 1979, China promulgated its “One Child Policy,” a compulsory and at times coercive population-control program that continues to be enforced to this day (albeit with regional and temporal variations in severity). In 1982, China’s national population census—the first to be conducted in nearly two decades—reported an SRB of 108.5, a striking and disturbing demographic anomaly. Initially, researchers surmised that this abnormal imbalance might be in large part a statistical artifact, under the hypothesis that Chinese parents might be disposed to conceal the birth of a daughter so as to have another chance for a son, given the strict birth quotas so often decreed by the One Child Policy. But successive Chinese population censuses registered ever-higher SRBs. By the 2005 “mini-census”—a survey of 1 percent of the country’s population, conducted between the full censuses—China’s SRB approached 120, and the reported nationwide sex ratio for children under 5 was even higher (see Table 1). Although, as recently noted in a study by Daniel M. Goodkind in the journal *Demography*, there remain some discrepancies and inconsistencies among data sources (census numbers, vital registration reports, hospital delivery records, school enrollment figures, and

**Table 1. The Rise of Gender Imbalance in China**

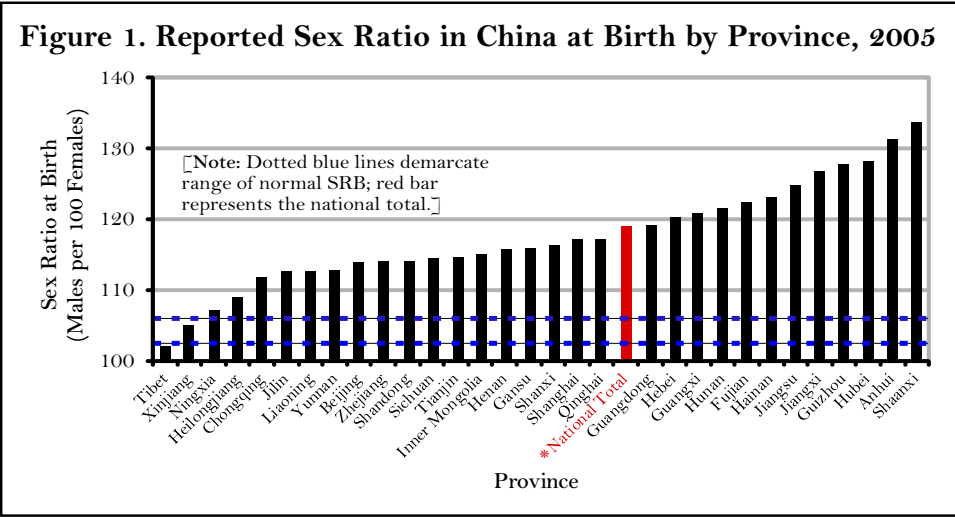
Reported Sex Ratios at Birth and Sex Ratios of the Population Age 0–4: China, 1953–2005  
(boys per 100 girls)

Year	Sex Ratio at Birth	Sex Ratio, Age 0–4
1953	--	107.0
1964	--	105.7
1982	108.5	107.1
1990	111.4	110.2
1995	115.6	118.4
1999	117.0	119.5
2005	118.9	122.7

**Sources:** William Lavery, “First Impressions of the 2000 Census of China” (<http://csde.washington.edu/pubs/wps/01-13.pdf>), as well as unpublished data from the Chinese Academy of Social Sciences, Institute for Population and Labor Economics, 2008.

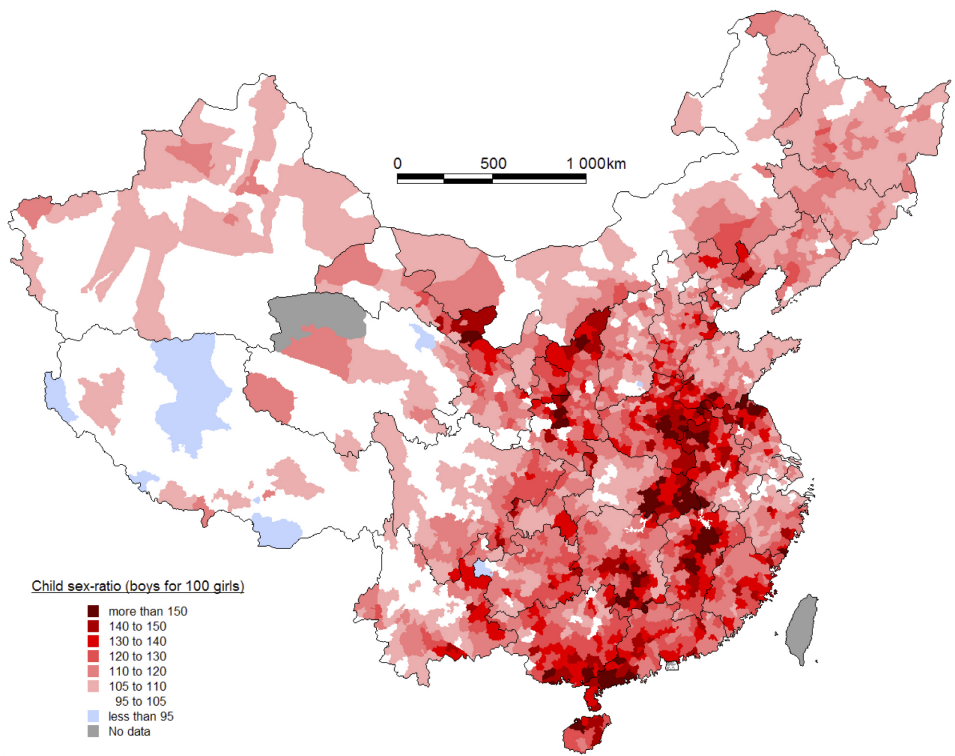
so on) concerning China’s SRBs and child sex ratios over the past two decades, there is absolutely no doubt that shockingly distorted sex ratios for newborns and children prevail in China today—and that these gender imbalances have increased dramatically during the decades of the One Child Policy.

Chinese census data outline the basic geo-demography of China’s imbalanced sex ratios at birth. For the country as a whole, SRBs since 1982 have consistently been lowest for China’s cities, and highest for rural areas; in the 2005 mini-census, reported SRBs were roughly 123 for rural areas, 120 for towns, and 115 for cities. But there are major SRB variations within China at the regional level; as of 2005, only three provinces reported essentially “normal” SRBs, while many more reported SRBs of 125 or more, with two provinces reporting levels in excess of 130 (see Figure 1). The geography of China’s gender imbalance is further highlighted by a county-level breakout of sex ratios for young children in the year 2000 (see Figure 2). As may be seen, sex ratios are essentially “normal” (105 or lower) in much of Western China and along parts of the country’s northern border—areas where non-Han ethnic minorities predominate—while unnatural gender imbalances characterize virtually the entirety of the Han-majority areas in China’s east and south. There are tremendous variations in the extremity of the condition within this Han expanse: a number of inland and coastal areas stand out as epicenters of the problem, and are marked by concentrations of counties, each encompassing millions or tens of millions of people, wherein child sex



Source: China’s 2005 “mini-census.”

**Figure 2. Reported child (0-4) sex ratio in China by county, 2000**



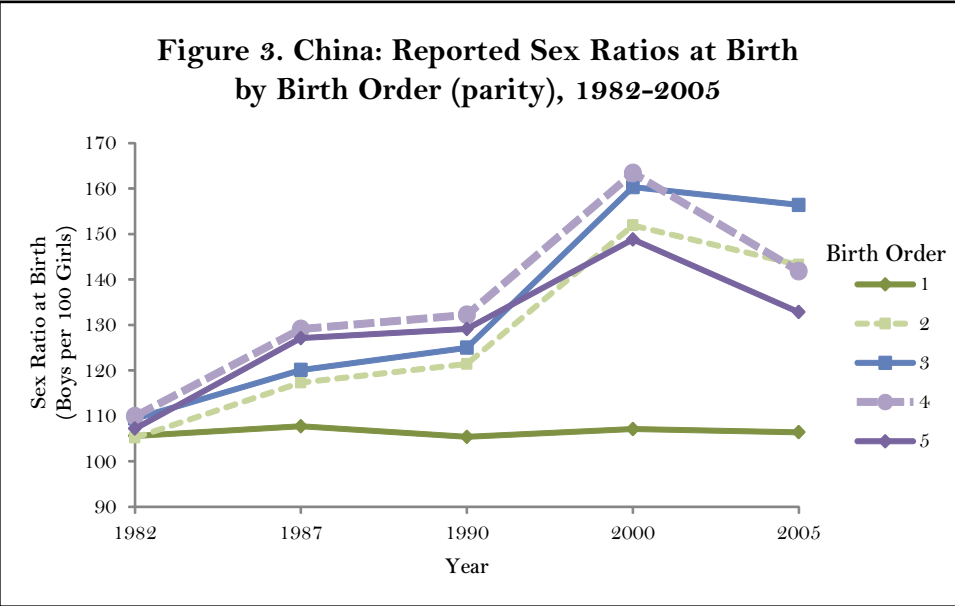
**Source:** Christophe Z. Guilmoto and Sébastien Oliveau, “Sex ratio imbalances among children at micro-level: China and India compared,” paper presented at Population Association of America 2007 annual meeting. Based on data from the National Bureau of Statistics of China (2003).

ratios of 150 or greater prevail. Demographers Christophe Z. Guilmoto and Sébastien Oliveau describe these radical-imbalance areas as “hot spots”—and since the phenomenon has spread across China’s population over the past three decades, Figure 2 may be regarded as the map of mounting national casualties.

### Parity-Specific Imbalance

Further light is cast on the cause of Chinese SRB imbalances by patterns of parity-specific SRBs—that is to say, sex ratios at birth by birth order—since 1982 (see Figure 3). Significantly, SRBs for firstborn Chinese children have remained relatively low and were actually in the biologically “normal” range around 105 until the early 1990s. By contrast, SRBs for higher-parity births (children born after the first child) from the late 1980s onward have been stratospheric and continued to rise until the year 2000, at which time the SRB for higher-parity births exceeded

150. (Higher-parity SRBs reportedly declined somewhat between 2000 and 2005—but as of 2005 nonetheless amounted to 143 for second births and to 156 for third births.) An influential 2006 Harvard dissertation by Emily Oster hypothesized that the emerging gender imbalances in China and elsewhere were primarily a consequence of the spread of the hepatitis B virus, which is known to skew SRBs in favor of male babies in maternal carriers—but clearly that theory cannot account for the extraordinary and continuing disparities between first births and higher-order births in China. Instead, it is by now widely recognized that these gender disparities are the consequence of parental intervention—namely, mass feticide, through the agency of medically induced abortion and prenatal gender determination technology. Chinese parents appear to have been generally willing to rely upon biological chance for the sex outcome of their first baby—but with increasing frequency they have been relying upon health care technology and services to ensure that any second- or higher-order baby would be a boy. (Although China’s population program is known as the “One Child Policy,” in practice it permits the birth of some second, third, and even higher-order babies. For the country as a whole, the total fertility rate, or number of births per woman per lifetime, is estimated by



**Sources:** Full Chinese population censuses in 1982, 1990, and 2000 and “mini-censuses” (1 percent population surveys) in 1987 and 2005. Adapted from Li Shuzhou, “Imbalanced sex ratio at birth and comprehensive intervention in China,” 4th Asia Pacific Conference on Reproductive and Sexual Health and Rights, United Nations Population Fund, October 2007.

the U.N. Population Division as 1.64 for the 2005-2010 period, and by the U.S. Census Bureau International Data Base at 1.54 for the year 2010.)

The critical health service elements in this tableau are China's universal and unconditional availability of abortion conjoined with access to reliable and inexpensive obstetric ultrasonography. According to Chinese researchers, in 1982 diagnostic ultrasound scanning devices were available in health clinics in about one-sixth of Chinese counties; by 1985, over half of Chinese counties had them, and by 1990 virtually all did. By 2000, sex-selective abortion had become astonishingly commonplace in China: rough calculations for that year suggest that no less than half of the nation's higher-parity female fetuses were being aborted, and that well over half of all abortions were female fetuses terminated as a consequence of prenatal gender determination. In effect, most of contemporary China's abortions are thus intentional female feticides.

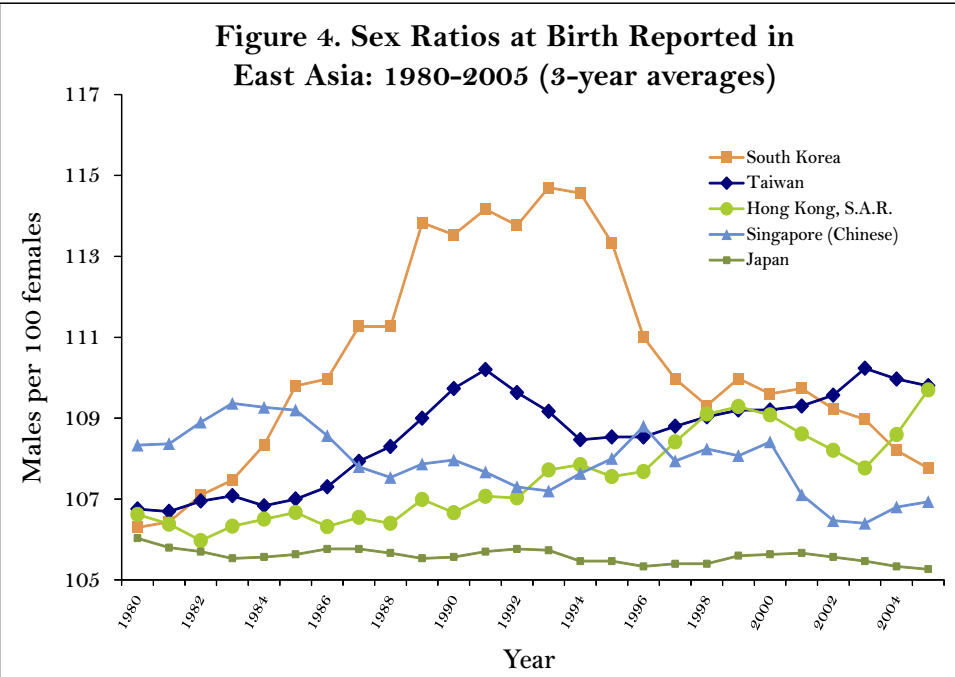
### **Drivers of Imbalance**

Though Western sensibilities may be inclined to attribute the national embrace of mass female feticide to "backward" thinking in China, important basic facts are uncomfortably inconsistent with that proposition. For one thing, abnormal sex ratios appear to be almost entirely a Han phenomenon within China—and China's Han are, generally speaking, better educated and more affluent than the country's non-Han minorities. Second, although SRBs are lower in urban than in rural China, these differences may have less to do with education and income than with fertility levels. After all, fertility levels are decidedly lower in urban than in rural China, meaning that a smaller proportion of babies born in China's cities are higher-parity births, which tend in China to be overwhelmingly male. Third, China has enjoyed a historically extraordinary surge of development and prosperity over the very years that SRBs and child sex ratios have been rising. Between the 1982 census and the 2005 mini-census, China's reported adult (15 and older) female illiteracy rate dropped from 25 percent to 4 percent, and mean years of schooling for Chinese women rose by nearly 50 percent over roughly that same period, from 5.4 to 8.0. Moreover, China's estimated per capita income jumped nearly fivefold between 1982 and 2005, while the fraction of the population living in extreme poverty (as defined by the World Bank) plummeted from roughly 75 percent in 1981 to roughly 15 percent in 2004. Despite continuing political restrictions and state-administered censorship, China is also vastly more open to the outside world today than it was in the

early 1980s (as attested by statistics on everything from international trade, investment, and finance to travel and communications). China’s increasingly unnatural sex ratios for babies and children and its growing army of “missing girls” must therefore be regarded as a feature—indeed, a defining feature—of so-called “globalization with Chinese characteristics.” (Note, incidentally, that Beijing outlawed prenatal sex determination in 1989, and criminalized sex-selective abortion in 2004—yet these legal strictures have obviously been ineffective despite the Chinese state’s considerable police powers.)

Imbalances in the “Little Dragons” and Vietnam

China’s unnatural long-term rise in SRBs emerged under a draconian state-run population-control program. But coercive family-planning programs are neither a necessary nor a sufficient condition for widespread female feticide. This much is evident from SRB trends in East Asia’s four “Little Dragons”: Hong Kong, Singapore (more specifically, Singapore’s ethnic Chinese), South Korea, and Taiwan. All of those societies maintain voluntary family-planning programs—nevertheless, each of them has



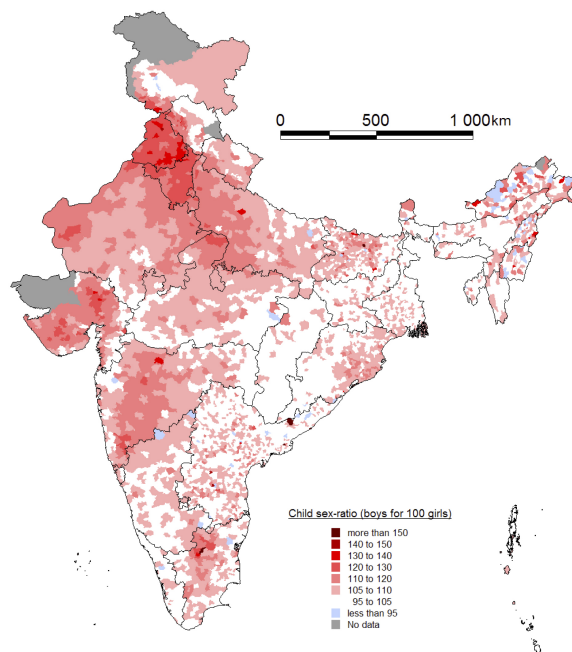
Source: Daniel Goodkind, “Child underreporting, fertility, and sex ratio imbalance in China,” *Demography* (2011) 48: 291-316.

registered eerie increases in SRBs in the era of unconditional abortion and widespread access to inexpensive obstetric ultrasonography (see Figure 4). Approaching the dawn of the twenty-first century, SRBs in all four of these affluent and highly educated populations were a naturally impossible 108 or higher; and just as in China, SRBs were typically lowest (often “normal”) for the first-born babies and suspiciously elevated for all higher-parity births, as reported by Chai Bin Park and Nam-Hoon Cho in 1995—a telltale sign of parental intervention through sex-selective abortion. Like China, these Little Dragons all had laws on their books proscribing prenatal gender determination and sex-selective abortion that did not forestall subsequent rises in their SRBs. Of all the Little Dragons, South Korea reached the most demographically disfiguring heights: an SRB of well over 114 in the early 1990s, not too different from China’s at that time. But South Korea’s SRB declined steadily thereafter, and by 2009 was, according to official state statistics, a practically “normal” 106—a matter to which we shall return.

One commonality to China and the four Little Dragons is a Confucian cultural heritage, which places an imperative on continuing a family’s lineage through the male heir as a metaphysical key to greater universal harmony and virtue. It is noteworthy that Japan—an East Asian society without a strong Confucian tradition, but with easy access to abortion and obstetric ultrasonography and with very low fertility rates, just as in China and the four Little Dragons—has always reported a sex ratio at birth well within human biological norms.

As it happens, however, a strong Confucian heritage is not a unique identifier of

**Figure 5. Reported child (0-6) sex ratio, India, re-aggregated sub-districts, 2001**



**Source:** Christophe Z. Guilmoto and Sébastien Oliveau, “Sex ratio imbalances among children at micro-level: China and India compared,” paper presented at Population Association of America 2007 annual meeting. Based on data from the 2006 Indian census.



societies at risk of mass female feticide. In Southeast Asia, Vietnam—a society with a deep Buddhist tradition—now shows strong indications of rising SRBs, as reported by Christophe Z. Guilmoto in *PLoS ONE* in 2008. Like China and the “Little Dragons,” Vietnam is a sub-replacement fertility society with easy access to abortion, and an increasing diffusion of ultrasound technology. Between 1999 (according to data from annual sample population surveys) and 2009 (the year of the country’s latest population census), Vietnam’s sex ratio at birth appears to have risen from about 105 to over 110. As in China and the Little Dragons, SRBs are markedly elevated for higher-parity births (especially for third or higher births). Vietnam’s upsurge in SRBs, it may be observed, coincided with a period of rapid material advance (between 1998 and 2008, Vietnamese per capita output is estimated to have jumped by 80 percent), and positively correlates with prosperity within Vietnam today, with the country’s lowest SRBs registered by the poorest income quintile and the highest registered by the most affluent. Like China and the Little Dragons, Vietnam also has laws on the books that make sex-selective abortion nominally illegal.

By this point in our discussion, a consistent explanation for unnaturally high SRBs (the female feticide that underpins them) can be described. These phenomena appear to arise from a collision of three forces: first, local mores that uphold a truly merciless preference for sons; second, low or sub-replacement fertility trends, which freight the gender outcome of each birth with extra significance for parents with extreme gender bias; and third, the availability of health services and technologies (easy and affordable abortion and prenatal sex diagnostics) that permit parents to engineer the sex composition of their families—and by extension, of their societies.

### India’s Imbalance

Given its history of deadly discrimination against girls and women (through its customs of female infanticide, dowry killings, and ritual *sati* immolation of widows), its pronounced and continuing fertility declines, and its past two decades of very rapid economic growth attended by increasing domestic diffusion of new technologies of every sort, India would seem poised as a likely battlefield in the new global war against baby girls. Sure enough, both SRBs and child sex ratios have risen markedly since the early 1990s for the world’s second-most populous country. According to India’s National Family Health Surveys, the nationwide SRB rose from around 105 during 1979–1992 to 109 for 2000–2006;

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more recently, the country’s National Sample Survey placed the SRB for 2004–2006 at 112. According to India’s censuses, the nationwide sex ratio for children under 7 years of age rose from 105 in 1991 to 109 in 2011. Geographically, India’s gender imbalances are most extreme in the northwest (particularly in the states of Haryana and Punjab, where the sex ratio for ages 0–6 is now close to 120, or even above 120); in Delhi, India’s capital, the sex ratio for children under 7 is currently a reported 115 (see Figure 5). Socioeconomically, SRBs and child sex ratios in India today correlate positively—not negatively—with education, income, and urbanization. Like the aforementioned countries with unnaturally high SRBs, sex-selective abortion is illegal in India.

The Imbalance Elsewhere

**Table 2. Selected countries with populations over 1 million reporting sex ratios at birth over 107 in a recent year (and near-complete vital registration)**

Country (year)	Sex ratio at birth	Midyear pop. (2010), UNPD
Albania (2004)	113	3,204,000
El Salvador (2007)	110	6,193,000
Philippines (2007)	109	93,261,000
Libya (2002)	108	6,355,000
Serbia (2008)	108	9,856,000
Austria (2008)	107	8,394,000
Cuba (2008)	107	11,258,000
Italy (2005)	107	60,551,000
Kyrgyzstan (2008)	107	5,334,000
Portugal (2008)	107	10,676,000
Spain (2008)	107	46,077,000

**Note:** All data derived from civil registration, estimated at over 90 percent complete.

**Sources:** Table 10 (“Live births by age of mother and sex of child, general and age-specific fertility rates: latest available year, 1999–2008”), *Demographic Yearbook 2008*, Statistics Division, Department of Economic and Social Affairs, U.N. Secretariat; and *World Population Prospects: The 2010 Revision* (<http://esa.un.org/unpd/wpp/index.htm>).

In West Asia, the Caucasus region has emerged since the end of the Cold War as another front in the global war against baby girls. Between the final collapse of the Soviet Union in 1991 and the year 2000, SRBs in Armenia, Azerbaijan, and Georgia all rose from about 105 to about 120. Ultrasound diagnostics were generally unavailable in these countries in the Soviet era. Inferential evidence—including increased general access to diagnostic ultrasound and newly increasing SRBs for higher-parity births, especially third and higher-order births—strongly suggests that these countries are subject to the same syndrome observed in so much of East and South Asia. Recent data indicate

that SRBs in the Caucasus have declined, but only slightly: to 116 in Armenia and Azerbaijan (as of 2008) and to 112 in Georgia (as of 2004).

The ten societies with biologically unnatural SRBs examined thus far represent most of the world’s major religious and cultural traditions: Confucianism, Buddhism, Hinduism, Islam, and Christianity. But these are by no means the only contemporary settings in which evidence of the phenomenon is emerging at a population-wide level (see Tables 2 and 3). Recent vital statistics for places with complete or near-complete registration, and census returns for other places, point to almost twenty additional countries or territories with populations of one million or greater with suspiciously high SRBs. Other places in Asia with high recent SRBs and/or child sex ratios include the Philippines, Brunei Darussalam, Papua New Guinea, Bangladesh, Kyrgyzstan, and Turkey. In North Africa and the Middle East, both Lebanon and Libya betray the same disturbing demographic characteristics. In Latin America and the Caribbean, elevated SRBs or child sex ratios are seen in Cuba, Puerto Rico, and El Salvador. But it is important to recognize that the phenomenon is also now evident in over half a dozen European countries as well. Albania’s officially reported 2004 SRB was 113. In Serbia and Montenegro—portions of the former Yugoslavia—2008 SRBs were 109 and 108, respectively. And in the nominally Catholic-majority populations of Austria, Italy, Portugal, and Spain, officially reported 2008 SRBs were all 107.

Naturally impossible SRBs are also now seen in the United States and the United Kingdom—within particular ethnic groups. In America, as Douglas Almond and Lena Edlund have reported in the *Proceedings of the National Academy of Sciences (PNAS)*, SRBs of 108 were characteristic of the “Asian-Pacific” population (Chinese-Americans, Korean-Americans, Filipino-Americans, etc.) in the 2000 census, and in vital statistics thereafter. These are all populations whose SRBs

**Table 3. Selected countries with populations over 1 million reporting child (0-4) sex ratios above 107 in a recent population census**

Country (year)	Sex ratio at birth	Midyear pop. (2010), UNPD
Lebanon (2007)	110	4,228,000
Bangladesh (2001)	108	148,692,000
Papua New Guinea (2000)	108	6,858,000
Albania (2001)	107	3,204,000
Turkey (2000)	107	72,752,000

**Note:** Lebanon data from sample survey, *de facto*; all others from census, *de facto*, complete tabulation.

**Sources:** Table 7 (“Population by age, sex and urban/rural residence: latest available year, 1999-2008”), *Demographic Yearbook 2008*, Statistics Division, Department of Economic and Social Affairs, U.N. Secretariat; and *World Population Prospects: The 2010 Revision* (<http://esa.un.org/unpd/wpp/index.htm>).

were within the natural biological range a generation ago. In England and Wales, sex ratios at birth for Indian-born mothers have also risen markedly, from 104 in the 1980s to 108 in the late 1990s, as noted by Sylvie Dubuc and David Coleman in *Population and Development Review*. In both the United States and the United Kingdom, these gender disparities were due largely to sharp increases in higher-parity SRBs, strongly suggesting that sex-selective abortions were the driver. The American and British cases also point to the possibility that sex-selective abortion may be common to other subpopulations in developed or less developed societies, even if these do not affect the overall SRB for each country as a whole.

### **The Demographic Effect**

Sex-selective abortion is by now so widespread and so frequent that it has come to distort the population composition of the entire human species: this new and medicalized war against baby girls is indeed truly global in scale and scope. Estimates by the United Nations Population Division (UNPD) and the U.S. Census Bureau's International Programs Center (IPC)—the two major organizations charged with tracking and projecting global population trends—make the point. According to estimates based on IPC data, a total of 21 countries or territories (including a number of European and Pacific Island areas) had SRBs of 107 or higher in the year 2010; the total population of the regions beset by unnaturally high SRBs amounted to 2.7 billion, or about 40 percent of the world's total population. For its part, UNPD estimates that 24 countries and territories (a slightly different roster from IPC's, including some additional European, South American, Middle Eastern, Asian, and Pacific settings) had SRBs of 107 or higher for the 2005-2010 period, for a total population similar to the IPC figure. Additionally, UNPD and IPC list several countries with child (age 0-4) sex ratios of 107 or higher; those lists partially overlap with the SRB lists. If we tally all the places that IPC and UNPD flag as having unnaturally high SRBs or child sex ratios, along with the places listed in Tables 2 and 3 whose official demographic statistics report unnaturally high SRBs or child sex ratios, we would have a total of over 50 countries and territories accounting for over 3.2 billion people, or nearly half of the world's total population.

By the reckoning of UNPD, the overall global sex ratio at birth has already assumed naturally impossible heights in the era of sex-selective abortion, rising from 105 in 1975-80 to 107 for 2005-10. By the same token, IPC puts the worldwide under-5 child sex ratio at 107 for 2010.

To go by both UNPD and IPC reconstructions of local age-sex structures, today's societies with unnaturally high SRBs and/or child sex ratios had an aggregate "boy surplus" of over 55 million males under the age of 20 by the year 2010; and if we assume that the SRBs and child/youth sex ratios in these societies should be around 105, the unnatural "girl deficit" for females 0-19 years of age as of 2010 would have totaled roughly 32-33 million by both UNPD and IPC figures. In both the UNPD and the IPC reckonings, the world's two most populous countries, China and India, would account for the overwhelming majority (31-32 million) of the world's "missing girls" under 20 years of age in our era of sex-selective abortion (although the implied UNPD and IPC totals for China and India themselves differ substantially, in accordance with their assumptions concerning such things as the extent of undercounting of girls). Note, in any case, that irrespective of differences in IPC- and UNPD-based estimates for given countries, these global estimates for missing girls under 20 are arguably conservative figures. The IPC and UNPD estimates exclude numerous countries—some of them quite populous—where, as Therese Hesketh and Zhu Wei Xing have reported in *PNAS*, evidence of unnaturally high SRBs has been emerging from vital registration or national census data. Also, the figures could be considered conservative because they only consider countries with SRBs or child sex ratios of 107 or higher, even though anything over 105 could be considered unnatural, and other research sometimes uses thresholds of 104, 103, or even lower.

### **Social Implications**

The consequences of medically abetted mass feticide are far-reaching and manifestly adverse. In populations with unnaturally skewed SRBs, the very fact that many thousands—or in some cases, millions—of prospective girls and young women have been deliberately eliminated simply because they would have been female establishes a new social reality that inescapably colors the whole realm of human relationships, redefining the role of women as the disfavored sex in nakedly utilitarian terms, and indeed signaling that their very existence is now conditional and contingent.

Moreover, enduring and extreme SRB imbalances set the demographic stage for an incipient "marriage squeeze" in affected populations, with notably reduced pools of potential future brides. China's persistently elevated SRBs, for example, stand to transform it from a country where as of 2000 nearly all males (about 96 percent) had been married by their early 40s to one in which nearly a quarter (23 percent) are projected to be never mar-

ried as of 2040, less than 30 years from now, according to a 2008 analysis by the demographer Zeng Yi and colleagues in the journal *Genus*. Such a transformation augurs ill in a number of respects. For one thing, unmarried men appear to suffer greater health risks than their married counterparts, even after controlling for exogenous social and environmental factors; a sharp increase in the proportion of essentially unmarriageable males in a society with a universal marriage norm may only accentuate those health risks. In a low-income society lacking sturdy and reliable national pension guarantees for the elderly, a steep rise in the proportion of unmarried and involuntarily childless men begs the question of old-age support for that rising cohort. Economists such as Gary Becker and Judge Richard Posner have hypothesized that mass feticide, in making women scarce, will only increase their “value”—but in settings where the legal and personal rights of the individual are not secure and inviolable, the “rising value of women” can have perverse and unexpected consequences, including increased demand for prostitution and an upsurge in the kidnapping and trafficking of women (as is now being witnessed in some women-scarce areas in Asia, as reported by Mara Hvistendahl in her new book *Unnatural Selection*).

Finally, there is the speculative question of the social impact of a sudden addition of a large cohort of young “excess males” to populations with sustained extreme SRBs: depending on a given country’s cultural and institutional capabilities for coping with this challenge, such trends could quite conceivably lead to increased crime, violence, and social tensions—or possibly even a greater proclivity for social instability. (For a decidedly pessimistic but studied assessment of these prospects, see Valerie M. Hudson and Andrea M. den Boer’s 2004 book *Bare Branches: The Security Implications of Asia’s Surplus Male Population*.)

All in all, mass sex selection can be regarded as a “tragedy of the commons” dynamic, in which the aggregation of individual (parental) choices has the inadvertent result of degrading the quality of life for all—and some much more than others.

What are the prospects for mass sex-selective feticide in the years immediately ahead? Unfortunately, there is ample room for cautious pessimism. Although biologically unnatural SRBs now characterize an expanse accounting for something approaching half of humanity, it is by no means clear that this march has yet ceased.

As we have seen, sudden steep increases in SRBs are by no means inconsistent with continuing improvements in levels of per capita income and female education—or, for that matter, with legal strictures against sex-selective abortion. Two of the key factors associated with unnat-

ural upsurges in nationwide SRBs—low or sub-replacement fertility levels and easy access to inexpensive prenatal gender-determination technology—will likely be present in an increasing number of low-income societies in the years and decades immediately ahead. The third factor critical to mass female feticide—ruthless son preference—is perhaps surprisingly difficult to identify in advance. In theory, overbearing son preference should be available from demographic and health surveys—such as India’s National Family and Health Survey, which demonstrated that prospective mothers in the state of Punjab desired their next child to be male rather than female by a ratio of 10 to 1. Yet ironically, despite the many tens of millions of dollars that international aid and development agencies have spent on the hundreds of demographic and health surveys they have supported in low-income countries over recent decades, information on sex preference is almost never collected. (Evidently, Western funders of Third World population programs are concerned about the *number* of babies local parents desire, not their *genders*.)

Differential infant and child mortality rates arguably also offer clues about son preference: societies where female rates exceed male rates (patterns arising from systemic discriminatory mistreatment of little girls) may be correspondingly disposed to prenatal gender discrimination as well. According to the World Health Organization’s 2009 Life Tables, over 60 countries currently experience higher infant or age 1–4 mortality rates for girls than for boys: a roster including much of South-Central Asia, North Africa and the Middle East, parts of Latin America and the Caribbean, and over a dozen countries in sub-Saharan Africa. If such gender bias in mortality turns out to be a predictor of sex-selection bias, this global problem may get considerably worse before it gets better.

### Considerations for the Future

There is, however, one country thus far that has managed to return from grotesquely imbalanced SRBs to normal human ratios: South Korea. As explained by Woojin Chung and Monica Das Gupta in 2007 in *Population and Development Review*, there is still considerable dispute about the factors involved in this turnaround, with many institutions and actors ready to take credit (as the old saying goes: success has many fathers). Available evidence, however, seems to suggest that South Korea’s SRB reversal was influenced less by government policy than by civil society: more specifically, by the spontaneous and largely uncoordinated congealing of a mass movement for honoring, protecting, and prizing daughters. In effect,

this movement—drawing largely but by no means exclusively on the faith-based community—sparked a national conversation of conscience about the practice of female feticide. This conversation was instrumental in stigmatizing the practice, not altogether unlike the way in which nationwide conversations of conscience helped to stigmatize international slave-trading in other countries in earlier times. The best hope today in the global war against baby girls may be to carry this conversation of conscience to other lands. Medical and health care professionals—without whose assistance mass female feticide could not occur—have a special obligation to be front and center in this dialogue.