Missing Women and Bare Branches: Gender Balance and Conflict

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The emerging subfield of "security demographics" examines the linkages between population dynamics and the security trajectories of nation-states. For the last 5 to 10 years, researchers have examined the security aspects of such topics as the demographic transition, the sub-replacement birth rates of developed economies, the proportion of young men as compared to older men in the population, the effects of legal and illegal immigration, and the effects of pandemics such as AIDS and drug-resistant tuberculosis. We hope to add the variable of gender balance to the discussion: are societies with an abnormal ratio between men and women less secure?

Missing Women

In two areas of the world such imbalances have become fairly significant in the last half-century: 1) Russia and several former Warsaw Pact nations, where we find a deficit of adult males;[1] and 2) Asia—particularly India, China, and Pakistan—where we find a deficit of women, including female infants and children. We will let other scholars research the link between a deficit of males and national security. Our research, as explained in *Bare Branches: The Security Implications of Asia's Surplus Male Population* (MIT Press, 2004), focuses on the deficit of females in Asia. Standard demographic analysis readily confirms this abnormal deficit.[2] If we compare overall population sex ratios, the ratio for, say, Latin America is 98 males per 100 females (using 2000 U.S. Census Bureau figures), but the corresponding figure for Asia is 104.4 males per 100 females. But one must also keep in mind the sheer size of Asia's population: India and China alone comprise approximately 38 percent of the world's population. Thus, the overall sex ratio of the world is 101.3, despite the fact that the ratios for the rest of the world (excluding Oceania) range from 93.1 (Europe) to 98.9 (Africa).

Birth sex ratios in several Asian countries are outside of the established norm of 105-107 boy babies born for every 100 girl babies. The Indian government's estimate of its birth sex ratio is approximately 113 boy babies born for every 100 girl babies, with some locales recording ratios of 156 and higher (India Registrar General, 2001). The Chinese government states that its birth sex ratio is approximately 119, though some Chinese scholars have gone on record that the birth sex ratio is at least 121 (China State Statistical Bureau, 2001).[3] Again, in some locations, the ratio is higher; for example, the island of Hainan's birth sex ratio is 135. Other countries of concern include Pakistan, Bangladesh, Nepal, Bhutan, Taiwan, Afghanistan, and South Korea.[4]

Another indicator of gender imbalance is early childhood mortality. Boys typically have a higher early childhood mortality rate, which virtually cancels out their numerical advantage by age five. Boys' higher mortality is tied to sex-linked genetic mutations, such as hemophilia, as well as higher death rates from common childhood diseases, such as dysentery. However, in some of the Asian nations mentioned above,

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early childhood mortality rates for girls are actually higher than boys' (United Nations Population Division, 1998). Furthermore, orphanages house more girls than boys in these nations.[5]

What forces drive the deficit of females in Asian nations such as India and China? Why are their birth sex ratios so abnormal? Why are early childhood mortality rates for girls higher than those for boys? Why are most children in orphanages girls? How do we account for the disappearance of so many women—estimated conservatively at over 90 million missing women in seven Asian countries alone (see Table 1)?

Some scholars assert that there may be a physical cause at work preventing female births, such as the disease hepatitis B, antigens of which have been associated with higher birth sex ratios (Oster, 2005). While this may well be a contributing factor, it is worth considering the experience of the municipality of Shenzhen in southern China. Alarmed at the rising birth sex ratio, which reached 118 in 2002, local officials instituted a strict crackdown on black market ultrasound clinics. Offering up to 2,000 yuan for tips, officials then vigorously prosecuted and imprisoned the owners and technicians. By 2004, the birth sex ratio had dropped to 108 ("Shenzhen's newborn sex ratio more balanced," 2005).

Accounts such as this support the thesis that the modern gender imbalance in Asia, as with historical gender imbalances in Asia and elsewhere, is largely a man-made phenomenon.[6] Girls are being culled from the population, whether through prenatal sex identification and female sex-selective abortion, or through relative neglect compared to male offspring in early childhood (including abandonment), or through desperate life circumstances that might lead to suicide.

The gender imbalance in Asia is primarily the result of son preference and the profound devaluation of female life. This value ordering is not confined to Asia; why, then, is the deficit of women found there almost exclusively? Historically, of course, the culling of girls was not confined to Asia; evidence for this practice can be found on every continent. And practices are changing in some Asian nations: Japan normalized its sex ratios in the 20th century, and in South Korea, the deficit has been decreasing over time (Dickemann, 1975; South Korea National Statistics Office, 2001).

But this excellent question can only be answered through a multifactorial cultural analysis that examines variables such as religious prohibitions or sanctions; patrilocality (couples living with the husband's family); the duty of male offspring to support aged parents; dowry, hypergyny, and caste purity in India; the effect of interventions such as China's one-child policy; and the web of incentives and disincentives surrounding the issue of prenatal sex determination technology.[7]

Bare Branches

What effect will this deficit of females have on the security trajectory of nations? Anthropologist Barbara D. Miller (2001) has termed the preservation of a balanced sex ratio a "public good" that governments overlook at their peril. Will it matter to India and China that by the year 2020, 12-15 percent of their young adult males will not be able to "settle down" because the girls that would have grown up to be their wives were disposed of by their societies instead? With each passing year between now and 2020 (or even further), both the proportion and the number of young adult males that exceed the number of young adult females in China and India will increase (Hudson & den Boer, 2004). The Chinese have a special term for such young men: *guang gun-er*, or "bare branches"—branches of the family tree that will never bear fruit, but which may be useful as "bare sticks," or clubs.

The Chinese elision between bare branches and truncheons echoes our argument: men who are not provided the opportunity to develop a vested interest in a system of law and order will gravitate toward a system based on physical force, in which they hold an advantage over other members of society. Furthermore, in a

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Table 1: Number of Missing Women for Selected Asian Countries Using Census Data

Country	Year	Actual Number of Males	Actual Number of Females	Actual Sex Ratio	Expected Sex Ratio	Expected Number of Women	Missing Women
Afghanistan	2000	11,227,000	10,538,000	106.5	96.4	11,646,266	1,108,266
Bangladesh	2001	65,841,419	63,405,814	103.8	99.6	66,105,842	2,700,028
China	2000	653,550,000	612,280,000	106.7	100.1	652,897,103	40,617,103
India	2001	531,277,078	495,738,169	107.2	99.3	535,022,234	39,284,065
Pakistan	1998	68,873,686	63,445,593	108.6	99.2	69,429,119	5,983,526
South Korea	2000	23,068,181	22,917,108	100.7	100.0	23,068,181	151,073
Taiwan	2000	11,386,084	10,914,845	104.3	100.2	11,363,357	448,512
Total							**90,292,573**

Sources: Afghanistan—United Nations Population Division, *World Population Prospects: The 2002 Revision,* http://www.un.org/esa/population/publications/wpp2000/annex-tables.pdf; Bangladesh—Bangladesh Bureau of Statistics, *Population Census, 2001: Preliminary Report,* http://www.bbsgov.org; China—National Bureau of Statistics of the People's Republic of China, "Communiqué on Major Figures of the 2000 Population Census," No. 1, April 23, 2002, http://www.stats.gov.cn/english/newrelease/statistical reports/200204230084.htm; India—Office of the Registrar General, *Census of India, 2001, Series 1: India, Paper 1 of 2001: Provisional Population Totals* (New Delhi: India, 2001), http://www.censusindia.net/results; Pakistan—Population Census Organization, Statistics Division, Government of Pakistan, "1998 Census of Pakistan," http://www.pap.org.pk/population/sec2.htm; South Korea—National Statistical Office, *Republic of Korea Census Population, 2000,* http://www.nso.go.kr; and Taiwan—Statistical Bureau of Taiwan, *Historical Comparison of the Census Results, 2000,* http://www.stat.gov.tw

Note: From *Bare Branches: The Security Implications of Asia's Surplus Male Population* (page 62), by Valerie M. Hudson and Andrea M. den Boer, 2004, Cambridge, MA: MIT Press. Copyright 2004 by Belfer Center for Science and International Affairs. Reprinted with permission.

system with too few women, the men who marry are those with higher socio-economic status. The men unable to marry are poorer, less educated, less skilled, and less likely to be employed. These men are already at risk for establishing a system based on physical force in order to obtain by force what they cannot obtain legitimately. Without the opportunity to establish a household, they may not transition from potential threats to potential protectors of society. The rate of criminal behavior of unmarried men is many times higher than that of married men; marriage is a reliable predictor of a downturn in reckless, antisocial, illegal, and violent behavior by young adult males (Mazur & Michalek, 1998). If this transition cannot be effected for a sizeable proportion of a society's young men, the society is likely to become less stable.[8]

Statistical evidence for the linkage between gender imbalance and conflict includes several excellent studies that have demonstrated a strong correlation between state-level sex ratios and state-level rates of violent crime in India (Oldenburg, 1992; Dreze & Khera, 2000). States with high sex ratios, such as Uttar Pradesh, have much higher violent crime rates than states with more normal sex ratios, such as Kerala. Historical case studies abound, since abnormal sex ratios are not a new phenomena. The 19th century Nien rebels came from a very poor region in China with a sex ratio of at least 129 men per 100 women. At first, relatively smaller groups of men coalesced to form smuggling and extortion gangs. Eventually, these gangs banded together to form larger armies, wresting territory from imperial control. It took the emperor years to subdue this rebellion.

We must not overlook sociological theory and experimental evidence, as well. For example, scholars have studied the behavior of unattached young males, noting their propensity to congregate with others like them and to engage in dominance displays in such groups. Sociologists have found that the "risky shift" in group behavior, where a group is willing to take greater risks and engage in more reckless behavior than an individual member of the group, is much more pronounced in groups comprised solely of unattached young adult males (Johnson, Stemler, & Hunter, 1977).

After examining the evidence, some predictions can be made for societies with rising sex ratios: crime rates will increase; the proportion of violent crime will increase; rates of drug use, drug smuggling, weapons smuggling, trafficking, and prostitution will increase (see Hudson & den Boer, 2004). The society might develop domestic and international chattel markets that kidnap and traffic women within the country and across borders. For example, the shortage of marriage-age women in China is fueling a brisk

business in trafficked brides from North Korea (Demick, 2003).

We must also examine the reaction of the government. Historically, we have found that as governments become aware of the negative consequences of a growing number of bare branches, most governments are motivated to do something. In the past, "doing something" meant thinning the numbers of bare branches, whether through fighting, sponsoring the construction of large public works necessitating dangerous manual labor, exporting them to less populated areas, or co-opting them into the military or police. One 16th century Portuguese monarch sent his army, composed primarily of noble and non-noble bare branches, on one of the later crusades to avoid a crisis of governance; more than 25 percent of that army never returned, and many others were seriously wounded (Boone, 1983, 1986).

We find that the need to control the rising instability created by the increasing numbers of bare branches has led governments to favor more authoritarian approaches to internal governance and less benign international presences. In many ways, a society's prospects for democracy and peace are diminished in step with the devaluation of daughters.

How will this play out in 21st century Asia? Gender imbalance does not cause war or conflict per se, but it can aggravate it. Will the internal instability caused by substantial numbers of bare branches (by 2020, 28 million in India—the same or more in China) overshadow external security concerns for the governments of these nations? Some potentially unstable situations spring to mind: the feuding countries of Pakistan and India have gender imbalances, as do China and Taiwan; and the resource-rich Russian Far East faces an influx of Chinese workers while Russia continues to lose men (Radyuhin, 2003).

How will gender imbalances affect the potential for democracy in China and the evolution of democracy in India? The gender imbalances of these two countries will not remain solely their problem, as alone they comprise more than one-third of the world's population. The status of women in these nations could become an important factor in both domestic and international security in Asia, with possible implications for the entire international system.

The Chinese government is acting on this linkage. In July 2004, they announced their desire to normalize the birth sex ratio by the year 2010, and in January 2005, they announced programs to provide old-age pensions to parents of girls. Only time will tell if these and other interventions will achieve their desired ends. In the meantime, the horse has left the barn for at least the next 20 years, for there is no way to undo the birth sex ratios of previous years. Have these Asian nations discovered the value of female life too late? The whole world is waiting to see whether bare branches will be given the opportunity to grow again.

Notes

1. In Russia and its former satellites, drug and alcohol abuse, as well as tuberculosis and AIDS, have dramatically increased the mortality rate for adult males—recent U.S. Census Bureau (2005) figures estimate that there are 10 million fewer men than women in Russia alone. This, in turn, has fueled female emigration, supporting not only to a vigorous "mail-order bride" business, but also increasingly sophisticated and far-flung transnational prostitution and human trafficking networks.

2. There are established ranges of normal variation in overall population sex ratios, as well as early childhood and birth sex ratios. These ratios are adjusted for country-specific circumstances such as, for example, maternal mortality rates and infant mortality rates. Using official census data, we can determine if there are fewer women than could reasonably be expected. Of course, there are perturbing variables: for example, many of the Gulf states have very abnormal sex ratios favoring males due to the high number of guest workers, predominantly male, that labor in the oil economies of these states. Once we take these types of factors into account, we find that the deficit of females in Asia is a real phenomenon (Hudson & den Boer, 2004).

3. Additional information provided by the director of the Chinese Academy of Social Sciences via e-mail, concerning the *Nando Times* article, "China Reportedly Has 20 Percent More Males Than Females," dated January 7, 1999.

4. No data are available for North Korea.

5. Other statistics also factor into the observed gender imbalance. In the West, for example, male suicides

far outnumber female suicides. But in countries with deficits of women, female suicides outnumber male suicides. In fact, approximately 55 percent of all female suicides in the world are Chinese women of childbearing age (Murray & Lopez, 1996).

6. For more examples, please see Hudson and den Boer (2004).

7. For a more complete cultural analysis of these practices in Asia, please see Hudson and den Boer (2004), Bossen (2000), Miller (2001), and Sen (1990).

8. Note that this transition is also less likely in societies with a deficit of males; in such societies, men need not marry or form permanent attachments to obtain food, shelter, sexual services, domestic services, and so forth. In that respect, societies with too few men and societies with too many men share some characteristics. Furthermore, societies in which marriage age is generally delayed for men can also produce instability; for example, the average age at first marriage for men in Egypt is now 32 (Diane Singerman, personal communication, July 19, 2004).

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