# Mapping the Adverse Consequences of Sex Selection and Gender Imbalance in India and China

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Rapid fertility declines in China and India and the advent of technologies for sex determination have contributed to the birth of fewer girls. As a result, both countries today have an excess of males and a shortage of females. Much of the work on adverse sex ratios until now has largely dealt with the identification, patterns, and causes of skewed sex ratios, and not their consequences. This review examines the emerging literature on the social consequences of the gender imbalance, and the five papers that follow explore the relationship of sex ratios with other social dimensions.

tion have contributed to the birth of fewer girls. As a result of these key factors, both countries have an excess of males and a shortage of females. A national survey carried out in China in 2005 showed that there were 33 million excess males under the age of 20 in the country as a whole (Zhu et al 2009). In India, according to the 2011 Census, there are nearly 37.3 million more men than women (Census of India 2011). Such a demographic profile will necessarily have far-reaching social consequences with widespread concern already being voiced over the likely adverse consequences of highly masculine populations. Much of the work on adverse sex ratios until now has largely dealt with the identification, patterns and causes of skewed sex ratios, and not their consequences. This review, therefore, examines the emerging literature on the social consequences of the gender imbalance, key to which are concerns over the effect of too many men in society. In addition, five papers that explore the relationship of sex ratios with other social

wo of the most populous countries of the world, India and China, significantly shape the gender balance in

Asia through their skewed sex ratios, which are tilted in

favour of males. In China, the sex ratio at birth (SRB) for 2008

was reported to be 119 boys for every 100 girls and India is now

estimated to have an SRB of about 110 (Das Gupta et al 2009; ORG 2010). However, both countries have shown some im-

provement in recent years – China's SRB is down from a peak

of 121, and 14 of its provinces with high sex ratios are begin-

ning to show a downward trend; India's is down from a peak of

about 113. Despite these mild improvements, the SRBs still remain adverse and there is continuing daughter discrimination

and son preference. The rapid fertility declines in the two

countries – through China's one-child policy and India's twochild norm – and the advent of technologies for sex determina-

The existing literature can be roughly classified under six distinct, though interconnected, themes – (1) Marriage squeeze; (2) Surplus males, crime and violence against women; (3) Effect of the marriage squeeze on marriage patterns and practices; (4) Effect on marriage payments (dowry, bride price) and on economic behaviour; (5) Effects on men's sexual behaviour and health; and (6) Effect on women's status and gender equity prospects. Much of the academic exploration in these areas until now has come from China, which has a much larger male surplus; the literature on India is comparatively sparse with many of the consequences still to be explored.

dimensions are presented.

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#### The Marriage Squeeze

An effect of the imbalance in sex ratios is the mismatch in the marriage market, which is referred to as the "marriage squeeze". According to demographers, the chances of marriage depend on the supply of potential mates, which is influenced by the srb, marriage patterns and population age structure. In societies that have a normative age gap between married spouses, with males being a few years older than females, rapid fertility decline can also contribute to the marriage squeeze. As smaller cohorts are born, the number of unmarried men begins to accumulate. If, further, women are being selected out at birth (or post-birth through higher mortality), there will be still fewer women in the marriage market. China has gone through a drastic fertility reduction and India is undergoing rapid fertility decline, and both countries have been sex selecting. Thus, a marriage squeeze against males is inevitable. It is important to note that the effects of the marriage squeeze are felt more than 20 years after the appearance of skewed sex ratios, as marriageable cohorts come of age. Both India and China are now experiencing a marriage squeeze, which will possibly become worse as the forecasts discussed later in this section reveal.

It is important, however, to remember that the marriage squeeze, as Eklund writes in her paper, is not merely a numeric imbalance – it is affected by how marriage is socially, economically and politically constructed. Countries without a sex ratio imbalance can also suffer from a marriage squeeze as seen in the case of Japan (Knight 1995). In South Korea, the marriage squeeze became exaggerated in rural areas not only due to the demographic imbalance, but also with the flight of large numbers of young women to cities (Kim 2010).

As marriage is a socially shaped and dynamic institution, different factors can combine to generate a marriage squeeze (against males or females) and affect different segments of the population. Equally important is the influence of factors such as higher educational levels, greater participation of women in the workforce, and changing marital and sexual preferences, which are likely to affect and are already affecting the marriage market (*The Economist* 2011). Eklund also points out that the marriage squeeze is not new in China, although the demographic imbalance is a key reason for it in its present stage; India too shares a similar history.

That marriage remains nearly universal and socially compulsory in India and China creates anxieties over the inability of large numbers of men to marry. Policymakers in China have expressed open concern about the effects of a shortage of brides. Li Weixiong, adviser to the country's political consultative conference on population issues, has said, "Such serious gender disproportion poses a major threat to the healthy, harmonious and sustainable growth of the nation's population and would trigger such crimes and social problems as abduction of women and prostitution" (*The Guardian* 2004).

Many scholars have presented estimates of the current and future marriage squeeze that will leave large numbers of males in India and China without marriage partners. Ebenstein and Sharygin (2009: 402-03) state, "China is on the cusp of a

dramatic deterioration in men's marital prospects" and "the sex imbalance between potential spouses of the same age group is forecast to be at its worst by 2020". Jiang et al (2013) claim that the marriage squeeze in China is even worse if only the never-married population is considered, instead of including all people without distinguishing their marital status. Guilmoto (2012) has simulated the future marriage squeeze in China and India, and predicts that with the current SRB in China an extra 8.1 million single men will reach the age of 50 during the 2050 decade. According to him, the cumulative number of these additional bachelors could exceed 32 million between 2020 and 2080.<sup>2</sup>

For India, Guilmoto (2012) predicts that the cumulative number of additional men remaining single during 2020-80 will be closer to 40 million, as Indian population cohorts will be comparatively larger. Hudson and den Boer (2004: 129) calculate that in 2001 there was a surplus of 35 million men in India, and that there were 16.5 million surplus males in the ages 15-35 by 2006, with the possibility that by 2020 the number will be between 28 and 32 million. According to them, "Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh together contribute to one-half of the missing females of India" (ibid: 125). Data from the 2001 Census shows that in Haryana, Punjab, Uttar Pradesh, and Rajasthan, states with historic sex ratio imbalances, 10% to 15% of the male population is not married in the peak marriageable age group of 25 to 49. A much smaller fraction of the female population, 3% to 4%, is not married. There are thus three to four times as many unmarried males relative to unmarried females (Census of India 2001). The marriage squeeze is thus likely to be far worse in the populous states in the future and in those with long-standing skewed sex ratios. Examining 1991 and 2001 Indian census data, Samayiar and Joe (2010) maintain that there are more unmarried males than females in the marriage market, and that the smaller cohorts of girls being born will add to the future marriage squeeze, forcing men to marry later or look elsewhere for brides. As discussed later, such processes are already in evidence.

Ethnographic evidence on the shortage of brides is provided by many scholars for India (Kaur 2004, 2012; Ahlawat 2009; Chaudhry and Mohan 2011; Kukreja and Kumar 2013) and for China (Davin 2005; Lu 2008; Gates 1996; Zhang 2006). Besides these selected writings, numerous reports on bride shortage and the means adopted to address it have been appearing in the Chinese, Indian, and foreign media since at least 2000.

The bride shortages forecasted imply that men in both China and India will face a severe marriage crisis. In a more recent paper, Kochin and Knox (2012), however, argue that all predictions about the marriage squeeze are based on a static model of the marriage market, which does not take into account adaptive processes that may set in, such as an increase in the age gap between spouses, increased remarriage rates for divorced and widowed women, and possible immigration of males, which may mitigate the extreme effects predicted by demographers. But marriage change is slow to happen and the number of males who would choose alternative lifestyles – choosing not to marry, choosing same-sex partners, and marrying widows

and divorced women – may not be sufficient to influence the problem drastically. Women choosing similar behaviour would reduce their availability even further. Yet, as Eklund points out, terms like "leftover women" and "bare branches" have pejorative connotations and intensify the notion that remaining unmarried is deviant. According to her, such language strengthens the expectation that everyone should marry, and thereby contributes to the marriage squeeze.

The literature on surplus unmarried males points out that men who are left out of the marriage market are likely to be poor, uneducated, unemployed, of a low status, or disadvantaged in other ways (such as being physically or mentally challenged). The majority of women in such societies get married, and may even have better prospects and "marry up", leaving behind males who have few resources to leverage on the marriage market. While marriage markets tend to be very complex with various rules of caste and class endogamy, clan and village exogamy, widow remarriage (or its prohibition) and age gaps shaping them, there is sufficient evidence that within closed or semi-closed groups and even within families, it is the more disadvantaged men who get left out (Hudson and den Boer 2002, 2004; Kaur 2004, 2012; Min and Eades 1995). Rural men tend to suffer more as the bride shortage is often exacerbated by women moving to urban or more prosperous areas. Sharygin et al (2013) show that the proportion of never-married men in China will be especially high among the poor in low-income provinces that are least able to provide social protection programmes. Thus the marriage squeeze against males will throw up different problems dissected along regional, caste, class, and age hierarchies.

## **Predicted Consequences: Crime and Violence**

In addition to the fact that a large number of men may not be able to marry, scholars and the media have been raising concerns about the possible alarming consequences of too many unattached males – a phenomenon now popularly denoted by the phrase "bare branches" used in China for men who will not marry and have their own families.

The discussion on the "dangers" of surplus men was set off by two political scientists, Valerie Hudson and Andrea M den Boer, in their alarmist paper "A Surplus of Men, A Deficit of Peace: Security and Sex Ratios in Asia's Largest States" published in 2002 in the journal International Security. They later expanded the article into a book Bare Branches: Security Implications of Asia's Surplus Male Population (2004). The book and paper raise the question of the effects of extreme gender inequality on national and international security, arguing that "High sex ratio societies simply have a different security calculus" (2002: 37). They ask, "What are the likely domestic, regional, and perhaps even international repercussions if their growth (of young unattached men) is left unchecked?" (2004: 229). Devoting considerable space to documenting links across history between surplus males and rebellions, rise in crime and general social disorder, they make two specific predictions about China and India. They predict that China is likely to use its surplus males to "suppress violence at home and export it abroad through colonisation and war", while India, as an ethnically heterogeneous society may find itself engaged in higher levels of intercommunity strife and conflict (2004: 202). Emphasising that their predictions cannot be precise, they maintain that significant numbers of unmarried men could have an "unmistakable aggravating and amplifying effect" on general law and order (2002: 37). They urge the Indian and Chinese governments to pursue policies that take note of such possible consequences and also alert other governments to include this new factor in their security thinking.

While such predictions may be termed far-fetched, with little evidence on the ground, the authors' main propositions that an excess of males is in general disruptive of society and may put women at greater danger has found some support in various studies. Thus Edlund et al (2007) hypothesise that increasingly male sex ratios have contributed to the rise in criminality in China, doubling crime over two decades. Based on annual province-level data for the period 1988-2004, they find that a 1% increase in the sex ratio raised violent and property crime rates by 3.8%, and suggest that "the sex imbalance may account for up to one-sixth of the overall rise in crime". Based on data from China's Law Yearbook for 2001, they state that "90% of all arrestees in 2000 were men; and the overwhelming majority (70%) of perpetrators of violent and property crimes in China were between 16 and 25 years old" (2007: 1-2). Zhang (2010) links the rising incidence of rape and sexual harassment in China to the scarcity of women. Hesketh et al (2011), however, argue that, as yet, there is little evidence for the hypothesis that low-status, unmarried males will band together to become a threat to the social order on a wide scale in China. Their research shows that while such men do indeed have low self-esteem and are inclined to depression, there is no evidence that they are prone to aggression or violence.

Yet, many scholars, both in India and China assert that there is a likely link between the increasingly masculine sex ratio and the growing incidence of violence of all sorts, especially against women. Zhang states that in China there is a rising incidence of rape and sexual harassment, and that the scarcity of women is unlikely to enhance their position in society (2010: 38). She argues that women will be at greater risk due to the increased risk of gender-based violence against them, the rising demand for sex work, and the development of trafficking networks. Discussing the shortage of brides, she says, "Bare branches (unmarried men) in rich provinces can buy brides or sexual services from women from poorer provinces such as Yunnan and Guangxi" (2010: 19-20).

In their paper, in this collection, Bose et al examine whether domestic violence and control over women is worse in areas with a gender imbalance. They argue that although the "dyadic power" of women is supposed to be higher when they are in scarce supply, Indian women in districts with high sex ratios experience more physical abuse and a higher degree of control than those in areas with better sex ratios. Their research could be further extended to explore something that comes up repeatedly in ethnographic research – men in such areas exercise

greater surveillance over their wives and display a higher degree of suspicion if wives venture out to work. In some high sex ratio Indian states like Uttar Pradesh, subjecting the woman to constant childbearing is another mode of exercising control over her.

In India, there has been early discussion of the possible links between violence and adverse sex ratios. In a much noted paper, Oldenburg (1992) argues that sex ratios tend to be more masculine in areas that are more violence-prone and where muscle power is needed to protect and acquire property, i e, more sons are needed in such places. Murder rates are high in high sex ratio districts of Uttar Pradesh. Taking up his argument and further examining the relationship between crime, gender and society, Dreze and Khera (2002) find that murder rates are indeed higher in districts with low female-male ratios, and conclude that patriarchal, male-dominated societies are likely to be more violent.

It is pertinent to state that it is difficult to establish direct causality between sex ratios and their effects on other social dimensions. Yet, ignoring the available statistical and anecdotal evidence that points in the direction of a relationship between sex ratios and the marriage squeeze, and sex ratios and social order would be tantamount to not seeing the forest for the trees. Sexual crimes against women seem to be on the rise in the north and north-western areas of India that have high sex ratios. Evidence related to surplus bachelors is provided by many respondents from the high sex ratio states of Haryana and Punjab, who report that many young unmarried men roam around in groups with little to do. Two telling stories are reported from the field. In one case, women in Haryana asked a politician campaigning for votes for a jail near their village. When asked why, they said that since all their sons were in jail, it would make it easier to visit them. A local woman field worker from Jind district recounted how young, unemployed, unmarried men from villages boarded trains early in the morning to go to universities in the larger towns. They did not go to study, but simply to get away from the taunts of family members. Once in the colleges, they made a nuisance of themselves, bullying male students and harassing females. In the evening, they would again head back to their villages. In Haryana, such men are called malang, or chronic bachelors (see Ahlawat, forthcoming) and in Punjab they are called chharas. Journalist Namita Kohli quotes a schoolteacher from a village in Haryana, "Earlier, we could send our women to the fields alone, but now men around cannot be trusted. Rapes and violence are rising due to their desperation. It will take a lot of time for the situation to change" (Hindustan Times 2007).

Kaur (2008) points out a connection between skewed sex ratios and another kind of violence that has been on the rise – the so-called "honour killings" in Haryana and western Uttar Pradesh. Many of these honour killings are of young people who have rejected prescribed community norms of marriage and eloped. Such marriages may be inter-caste, with the men being from lower castes. Other honour killings involve marriages that violate norms of clan or village exogamy. She argues that the recent activism and policing of marriages by community bodies such as khap panchayats is due to the crisis

engendered by the shortage of local women and heightened competition over them.

## **Effect on Marriage Patterns and Practices**

The status of the bachelor has always been low in agrarian societies where family labour has been important to farming. As a respondent from a Haryana village said to this author, "With age, single men become a subject of ridicule among friends who have 'settled down'". Similarly, Li et al state, "In the cultural context of China, singlehood is a state of frustration, and even of deprivation, for which it is difficult to find socially acceptable compensations: having children, living with a partner, having sexual relations, are aspects of life from which single men may be excluded" (2010: 679). Additionally, being married creates the crucial space for displaying male honour through breadwinning and raising and protecting a family, especially in deeply patriarchal societies. The importance of marriage to the vast numbers in the populous, socially traditional societies of China and India cannot be overemphasised despite the fact that there are progressive movements trying to loosen the hold of marriage and allow freedom of sexual preference.

As a result, the marriage squeeze has prompted various coping responses in the affected societies. Families with sons are faced with two questions - What to do with surplus sons and how to find them brides when there are few available and there is stiff competition for the available ones. The notion of "surplus sons" is understood in relation to familial economic resources; when resources are low or perceived as such, families ensure that one son gets married, but they may lose interest in marrying the others (Kaur 2008). Hudson and den Boer (2004) talk about countries sending surplus young men with no prospect of marriage into armies or allowing them to migrate - these two key strategies have historically been in operation in the Punjab region of India to deal with surplus sons. If no brides were available for those who remained at home, the solution was to buy brides from poorer areas or from poorer or low-caste families. Although such marriages violated customary caste and community norms, they were accepted "out of necessity" and by convenient fictions such as "a woman has no caste" (Darling 1928; Kaur 2004, 2008, 2012). Strategies in China to ensure brides have been to engage infants to each other, or adopt and raise a little girl as a future bride for one's son (Wang 2003).

## **Bride Import through Long-distance Marriage**

The recent phase of gender imbalance in the marriage market has seen a rising popularity of long-distance marriage or bride import as a means to address the bride shortage. In both India and China, the common response of people when the connection between sex selection and bride shortage is pointed out is that rather than allow daughters to be born, they would resort to importing brides. Thus Zhang (2010: 38) writes, "Besides, the villagers did not realise the significance of a deficit of girls; when Wu asked him how to deal with deficit of brides in the future, a cadre in the village said, "Under the open and reform policy, if men cannot get brides in China, they can find them in other countries'".

Eklund's paper points out that bride shortage in China is being addressed by cross-region marriage, "kidnap marriage", and kidnapping, which includes deception and enticement. Bride trafficking often involves abduction and luring women for marriage into high sex ratio areas, in both India and China. Yet, a large proportion of the shortage is being filled by the voluntary chain marriage migration of women to these areas. The shortages in prosperous areas are redressed by women from poorer or rural provinces moving to better-off regions to marry men with more resources (Davin 2005). In China, a consequence of such migration is that men in rural, poor areas are left without brides. These men, in turn, may acquire brides from poorer countries such as Vietnam (Belanger 2010). In India, similarly, brides have been moving from the poorer eastern or southern parts of the country to the high sex ratio, prosperous areas in the north (Ahlawat 2009; Chaudhry and Mohan 2011; Kaur 2004, 2012; Kukreja and Kumar 2013).3 Women from across national borders - from Nepal and Bangladesh are also "sold into marriage" (Blanchet 2005; Kaur 2012).4

In some high sex ratio countries such as South Korea, Taiwan, and Hong Kong, long-distance marriage takes the form of commercially arranged/brokered international marriage (Wang and Chang 2002; Yang and Lu 2010; Lu 2008; Belanger 2010). Agencies and brokers connect prospective grooms to brides from countries such as the Philippines, Cambodia, North Vietnam and China. South Korea now has a very high percentage of foreign female spouses, and many South Koreans have preferred to marry ethnic Koreans residing in China (Kim 2010; Freeman 2005).

Whether long-distance marriage is international (also referred to as cross-border) or cross-region, there is a large gap between the culture of the spouses, and the burden of adjustment falls on the women who, as strangers to the local culture, may face various kinds of discrimination and be subjected to more domestic violence (Ahlawat forthcoming; Yang and Lu 2010; CWCC 2007). Long-distance brides have less power in the marriage and lack support structures that they can resort to in times of difficulty. However, many of them learn to negotiate better marital bargains. Mishra's paper in this review discusses how long-distance bride import is becoming the norm in Haryana. She dwells on the challenge such marriages could pose to the norm of caste endogamy as men who are unable to marry locally bring wives belonging to other castes from distant regions. She interrogates the perception that all such brides are victims and suffer from lack of agency by providing ethnographic data on how the brides negotiate the differences between their own caste practices and those of the marital families. She also reveals that contrary to expectations, not all long-distance marriages are hypergamous for the women as some of them belong to higher castes than their husbands. The difficulties that women belonging to lower or untouchable castes face in inter-caste marriages are, however, far greater as the stigma of untouchability still persists.

In India, practices such as fraternal polyandry (wife sharing by brothers) and leviratic marriage (marriage of widow to her husband's brother) are seen to be re-emerging in response to bride shortages (Ahlawat forthcoming; Dube 1983; Kaur 2004). The marriage squeeze is made worse by the fact that the traditional acceptance of bachelorhood or celibacy is diminishing as the joint family declines, and nuclear families are less welcoming of accommodating unmarried relatives. In rural areas, single living is rare, and made difficult by the cultural disapproval of men undertaking "feminine" tasks.

Exploring the effect of bride shortages on social institutions and practices, Larsen and Kaur in their paper document the directions in which local marriage systems are evolving in the three states of Punjab, Haryana and Himachal Pradesh. They find that earlier rigid norms of caste endogamy, clan exogamy, and marriage distance are being relaxed in the face of bride shortages, and less dowry is being demanded in such areas. A question they ask is whether the changes happening are mere coping mechanisms of a temporary nature or resilient enough to eventually weaken patriarchal institutions such as endogamous marriage, patrivirilocal residence and dowry.

They find that property is being bequeathed to daughters in "girls only" families and there is greater acceptance of uxorilocal marriage (couple residing with woman's family) (also see Chowdhry 2012). In a paper on uxorilocal marriage in China, the authors (Jin et al 2007: 530) show that the SRB is near normal in some areas with a greater prevalence of uxorilocal marriage and predict that son preference is likely to weaken with its greater acceptance. Eklund points out that with an increase in the number of only daughter households, the demand for uxorilocal sons-in-law will increase (2011). In China, there is realisation that to change gender preferences, various institutional structures that support son preference need to be restructured. To make families with a daughter acceptable, the Chinese government is promoting uxorilocal marriage and residence, and has recently introduced retirement benefits for parents of only daughters. In India, too, the government has been promulgating various progressive legislations vis-à-vis women's rights to property, incentives for registering property in the name of women, and easier divorce and maintenance.

### Effect on Dowry, Bride Price, and Economic Behaviour

It is commonly expected that with the scarcity of women, the direction of marriage payments will be reversed, that is, in India, dowry will decline and some form of bride price will take its place. In China, the effect is seen in the increase in bride price as men compete for scarce women. Previous literature on India (Bhat and Halli 1999; Rao 1993) has proposed that dowry arose as there were fewer men and more marriageable women in the marriage market. However, this situation was set to reverse around the 1980s with more men than women in the marriage market (Das Gupta et al 2009). A recent paper on India by Chiu et al (2010) finds that the gender imbalance reduces net dowry payments and that its effect strengthens as marriage market competition deepens. Larsen and Kaur also find that there is a lower demand for dowry in areas that report bride shortages. In addition, the work on cross-region marriage in India has shown that such marriages do not involve dowry, with men taking care of all marriage expenses

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(Kaur 2004; Chaudhry and Mohan 2011). Although the latter cannot be called reverse dowry or bride price, a main attraction for poor parents to give away their daughters in long-distance marriages is the absence of dowry. However, most sociologists with field experience point out that the shifts in dowry are not uniform. Although the lowering of dowry appears to be a positive unintended outcome of sex ratio imbalance, dowries continue to be high in hypergamous marriages that seek "suitable boys", declining only for men with fewer material or social resources at their command. More research is needed to explore the effect on dowry values in high sex ratio areas of India.

China, on the other hand, has a greater prevalence of bride price than dowry, and some scholars have posited a rise in bride price with the rise in competition for brides.<sup>5</sup> Wei and Zhang (2009, 2011) argue that to compete in the marriage market, parents of Chinese males need to save more to be able to provide a bride price as well as build a house, the latter also being necessary to attract a bride.6 Using data at the household, county, and provincial level, they find that local sex imbalances are strongly associated with higher savings and entrepreneurial activity in households with sons. In a similarly interesting article on India, Stopnitzky (2011), through an empirical study of a sanitation programme in Haryana colloquially known as "No Toilet, No Bride", shows that in this bridescarce state men who build toilets in their homes improve their chances of getting a bride. He shows that male investment in toilets increased by 15% due to the programme, and that the programme's effect was four times larger in marriage markets where women were scarce (26%) compared to those where women were abundant (6%).

## **Effects on Sexual Behaviour and Health**

An increasing concern, especially in China, is that the phenomenon of surplus males may lead to increasingly risky sexual behaviour, thereby resulting in a higher incidence of ніv. Tucker et al (2005) argue that China's surplus men could become a significant new ніv risk group with the demand for commercial sex going up, while Ebenstein et al (2010) and Poston et al (2011) predict a rise in sexually transmitted infections (STIS). Similarly, South et al (2012) suggest that an increasing deficit of potential female partners is likely to accelerate the trend towards later age at marriage in India and raise young men's risk of engaging in commercial sex. However, these authors also claim that their research on India and China shows that an increase in HIV is not a necessary outcome of the excess supply of males (South et al 2012; South and Trent 2010). Zhou et al (2011) focus more on the psychological health problems that bachelors and ageing bachelors could face, and Sharygin et al (2013) draw attention to the crisis for elderly Chinese bachelors, who will be concentrated in poor provinces with little state social protection. This is of special concern in China where the one-child family leaves no caregivers for single elderly males. Li et al in this review, point out that the Chinese government needs to formulate a holistic framework for the social management of the causes and consequences of skewed sex ratios. The "Care for Girls" programme, earlier designed to

address the problem of reversing the gender imbalance by promoting the equal value of the girl child, should also focus on mitigating the marriage crisis and devising strategies to take care of vulnerable groups such as ageing bachelors and sexual minorities.

As of now, explorations on such aspects are missing in the Indian literature on the impact of sex ratio imbalances. The problem of ageing bachelors has not been acute in India as they have been accommodated and cared for in the joint family. However, as this institution declines, similar problems could arise in India as well.

#### **Are Scarce Women Valued More?**

A significant debate in the sex ratio literature has been over whether women gain from being fewer in number. As an example, we consider the Indian debate on the issue. Dharma Kumar, an Indian economist, has argued that the sex determination-propelled shortage of women will raise their value, eventually reversing female adverse sex ratios (1983). Discussing the spread of sex-determination technologies and Bardhan's (1982) analysis that work determines women's worth, she says,

But why not see this economic logic through? Sex selection at conception will reduce the supply of women, they will become more valuable, and female children will be better cared for and will live longer. We have here a good instrument for balancing the supply of and demand for women, and for equating their price all over India (since caste, regional, religions and other barriers prevent the movement of women) (1983: 68).

Several scholars have rebutted her arguments, saying that the negative consequences of sex selection for women may far outweigh possible positive consequences (Dube 1983; Vishwanath 1983). Yet, writing decades later, Therese Hesketh and her co-authors, most of them medical practitioners, argue in a similar vein.

There may also be positive aspects of this easy access to sex selection. First, access to prenatal sex determination probably results in an increase in the proportion of wanted births, leading to less discrimination against girls and lower female mortality. India, South Korea and China have all reported reductions in differential mortality in the last decade. Second, it has been argued that an imbalance in the sex ratio could be a means to help to reduce growth in the population. Third, as numbers of women in society fall, they become more highly valued and their social status increases. Not only will this benefit the women's self-esteem, mental health and well-being, but the improved status of women should result in reduced son preference, with fewer sex-selective abortions and an ultimate rebalancing of the sex ratio (2011: 1376).

However, most investigations into the social consequences of skewed sex ratios and the shortage of women provide evidence that the common assumption of economists that women's value will go up if they are in scarce supply does not work uniformly, neatly, or as expected. Some women do benefit from this scarcity, for instance, their value in the marriage market may go up or the demand for dowry may go down, or bride price may go up as in China (from which not the women but their parents benefit).

An early study by Guttentag and Secord (1983) explored the consequences of varying sex compositions of the population on the status and roles of women. According to them, the sex

in shorter supply will have greater "dyadic power" as its members will have the option to leave a current companion and choose another. However, they point out that dyadic power may be constrained by "structural power" (deriving from economic, political, and legal structures of a society), and admit that while women in female-scarce societies are likely to gain in dyadic power, they may have little structural power, which males are more likely to possess and to a greater extent. Even with greater dyadic power, women are likely to be valued more for their feminine roles, which will restrict their participation in the wider world. They will tend to marry early, have higher fertility (although population growth would decline with fewer childbearing women), be homemakers, and be less likely to pursue educational and career goals. A 117-country study by South and Trent, which empirically tested Guttentag and Secord's propositions, found that if one controls for the level of socio-economic development, the key propositions mentioned above are vindicated. They conclude, "It is somewhat paradoxical that the increased 'valuation' of women that accompanies high sex ratios severely limits their life options" (1988: 1112).

The shortage of women may reinforce gendered female roles such as reproduction, domestic work, and care work. Women would have little agency of their own and could indeed suffer a deterioration in their equity prospects. It is equally possible that as female security gets compromised with an excess of men vying for them, parents may withdraw unmarried girls from school or higher education, or restrict them from taking up employment before marriage. As safeguarding the virginity of a woman before marriage remains important in India, early marriage may be seen as the solution. Thus many of the gains made by women in recent decades may be in danger of being reversed. Several scholars argue that scarce women may indeed be at greater risk (Dube 1983).

Contrary to some of these expectations, Larsen and Kaur's paper finds that women in bride-shortage areas face fewer restrictions on their physical mobility, and are more likely to support their parents. The reason for the latter could be that with fewer or no daughters-in-law in bride-shortage areas, parents are forced to rely on unmarried and married daughters for various types of support. It is probable that some of these unintended effects will dent practices related to control over women and the providing of old-age support by sons, which are key to the reproduction of patriarchy. Recognising that society is always a dynamic process in the making, it is likely that many of the ill effects of unbalanced sex ratios may be countered by other important socio-economic developments such as women's greater participation in education and the workforce, both of which enhance their contributions to natal and conjugal families and allow them greater agency in decision-making.

Yet, the general view among scholars is that "self-correction" of skewed sex ratios cannot be left to happen by itself over a long duration. Rather, communities and governments need to take proactive steps to engender an equal value of the girl child. At the same time, the social consequences of the skewed sex ratios in India and China will be far reaching and will continue to unfold in the future. It is imperative that more research be carried out on the various dimensions of the effects of skewed sex ratios to help address negative consequences, strengthen unintended positive consequences and shape policy. Miller has argued that a balanced sex ratio should be considered a "public good" as an imbalance poses several threats to social well-being (2001: 1091). The argument for balanced sex ratios is important from many perspectives, not least of which is that girls have an equal right to be allowed to be born and grow to their full potential.

## NOTES

- 1 The international convention of measuring sex ratios is the number of males per 100 females. Therefore, high or rising sex ratios indicate a worsening of the sex ratio. India uses the opposite convention where the sex ratio is measured as the number of females to 1,000 males. In this usage, a decline in the sex ratio indicates worsening of the sex ratio and low sex ratio means a more masculine sex ratio.
- 2 Sharygin et al (2013) predict that by 2030 more than 20% of men in China aged 30-39 will never have married. Zhang (2010) provides similar figures of a 30-million surplus in the age group 20-45 by 2020, indicating the serious nature of the marriage crisis that China would be facing.
- 3 Dharma Kumar was prescient about crossregion marriage. She said, even if flippantly,
  "Moreover, amniocentesis tests at present can
  only be afforded by the well-off. They will then
  reduce the number of daughters they have
  drastically. So the sons of rich Punjabis will
  have to go to south India or to poor Punjabis for
  their wives and will not be able to extract high
  dowries in either case. And that will improve
  either income distribution or national integration, so perhaps amniocentesis clinics should
  be taxed heavily to restrict their use to the
  well-off" (1983: 63).
- 4 There is considerable debate on how to interpret cross-border and cross-region marriage.

- For a discussion of the Indian literature, see Kaur (2012); for China and other Asian countries, see Lu (2008), Yang and Lu (2010) and Wang and Chang (2002).
- 5 High-status marriages in China also involve dowry (Min and Eades 1995).
- 6 Min and Eades (1995) argue that under the household responsibility system, women's labour has become more valuable and this too has contributed to the rise in bride price.

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