SEX RATIOS AND GENDER BIASED SEX SELECTION

HISTORY, DEBATES AND FUTURE DIRECTIONS

UNFPA

UN WOMEN
United Nations Entity for Gender Equality and the Empowerment of Women

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FOREWORD

India's declining child sex ratio speaks of a culture in which gender inequality is deeply ingrained. Gender biased sex selection is a manifestation of the subordinate status of women in society, with far reaching socio-demographic consequences. Gender equality and gender justice is a direct casualty of this practice.

The discourse on gender biased sex selection in India has evolved over time from the realm of private spaces to that of public policy. India's experience in dealing with the issue offers many valuable lessons for the global community. This assumes special significance given the increasing imbalance in sex ratios in the early age groups observed in countries in South, East and Central Asia, and Eastern Europe.

The United Nations believes that the practice of gender biased sex selection is essentially about gender discrimination. The issue therefore finds deep resonance for UN Women in its core objective of promoting gender equality and the empowerment of women. The United Nations Population Fund (UNFPA) has been at the forefront in bringing attention to the reality of gender biased sex selection and is mandated to lead and coordinate the overall efforts of the UN system to address it. The legacy and mandate entrusted by the Beijing Declaration and the International Conference on Population and Development (ICPD) Programme of Action give the two organizations added impetus and responsibility to work on this issue. It is therefore fitting that this publication is the result of joint efforts by UN Women and UNFPA. It effectively showcases the convergence of resources and mandates for greater impact on a subject that merits cross-sectoral action.

This publication maps existing evidence on gender biased sex selection in the Indian context, weaving in significant social debates and policy developments that have influenced perceptions, and pathways to action. It offers practical suggestions to advance the path of critical inquiry by focusing on different domains such as family and household, education, labour and employment, and on institutions that directly or indirectly aid or combat the practice of sex selection.

UN Women and UNFPA would like to acknowledge and appreciate Dr. Mary E. John for providing a lucid and insightful overview of the debates and research on declining child sex ratio in India. Dr. John has synthesized the multiple dimensions of the problem in a straightforward way. The report provides a frame through which past perceptions and actions, current efforts, and future research can be connected for evolving a more definitive response to gender biased sex selection. This publication will add momentum to the ongoing efforts to address skewed sex ratios in the country. It is hoped that it will serve as a useful resource and guide for informed policy discourse on the issue.

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ABBREVIATIONS

AIIMS	All India Institute of Medical Sciences
ANMs	Auxiliary Nurse Midwives
ARTs	Assisted Reproductive Technologies
BPL	Below Poverty Line
BRAC	Bangladesh Rural Advancement Committee
CEHAT	Centre for Enquiry into Health and Allied Themes
CSR	Child Sex Ratio
CSRs	Child Sex Ratios
CWDS	Centre for Women's Development Studies
FASDSP	Forum against Sex Determination and Sex Pre-selection
FASS	Forum against Sex Selection
ICSSR	Indian Council of Social Science Research
ICMR	Indian Council of Medical Research
ICPD	International Conference on Population and Development
ICT	Information and Communication Technologies
IPC	Indian Penal Code
IVF	*In Vitro* Fertilization
MASUM	Mahila Sarvangeen Utkarsh Mandal
MTP	Medical Termination of Pregnancy Act
NHRC	National Human Rights Commission
NGO	Non-Governmental Organization
OSR	Overall Sex Ratios
PC-PNDT	Pre-Conception and Pre-Natal Diagnostic Techniques Act
PNDT	Pre-Natal Diagnostic Techniques Act
SRB	Sex Ratio at Birth
SSA	Sex Selective Abortions
UN	United Nations
UNFPA	United Nations Population Fund

CONTENTS

EXECUTIVE SUMMARY

This report consists of an overview of the secondary literature on the subject of gender biased sex selection in the Indian context. Its aim is to provide a road map for what has become an extremely wide ranging field of research, and in doing so, to indicate future directions for fruitful inquiry. The report begins by adopting a historical perspective, given that the problem of 'missing women', a phrase coined by Amartya Sen in 1990, is by no means new.

The opening sub-section briefly discusses the period from about the mid nineteenth century under British colonial rule, when reports about female infanticide first emerged in the colonial archive. The significance of this period lies in the range of explanations offered both during this very time itself and by later historians, as well as the passing of the Female Infanticide Act of 1871.

The report then moves forward to the 1960s and 70s, when demographers discovered a long term declining trend in overall sex ratios, using Census data from the late nineteenth century into the post independence decades. This shocking and 'inexplicable' decline took centre stage in the *Towards Equality* Report of the Committee on the Status of Women in India for the UN year of Women in 1975. It was simply hard to fathom how, in the course of efforts at modernization and development, the condition of women could somehow worsen. Social scientists and especially economists became concerned with parallel evidence of gender discrimination in households during this period. The overall focus during this stage was on socio economic change in rural India and its possible effects on women's deteriorating life chances and mortality.

The women's movement and women's studies were also born during the 1970s. A major focus of campaigning from the late 1970s was on violence – cases of rape and sexual harassment against women, and the shocking discovery of the hitherto unknown phenomenon of dowry deaths in urban middle class homes. This is the backdrop for the subsequent discovery of the use of amniocentesis testing in certain cities in the early 1980s for determining the sex of a foetus before birth, which was followed by carrying out an abortion should the foetus be female. The Forum against Sex Determination and Sex Preselection was created as a coalition of organizations whose activism resulted in making the practice a criminal offence in the State of Maharashtra in 1986 followed by the PNDT Act at the national level in 1994, and its revision as the PC-PNDT Act in 2003. The shift from earlier concerns with infant mortality and instances of female infanticide to the increasingly easy access to sex determination testing via the ubiquity of the ante-natal use of ultrasound for all pregnancies is highlighted. This has posed the gravest challenge to combating the practice of sex selection via medical intervention.

Given the significance of the law in combating sex determination, the report focuses on how the PNDT Act came to be passed, its basic provisions as well as limitations. Critiques of the law are also discussed in this context, as well as different explanations as to why the law has found seemingly little traction. Apart

from the sphere of the law which makes sex determination testing a crime, the state has also sought to develop policies in the form of special schemes for the girl child. The report therefore looks at some of the state level schemes that provide conditional cash transfers in the name of a daughter in below poverty line families, their problematic entanglement in population control policies and other aspects that make these schemes dubious both in principle and practice.

The issue of abortion in India is also briefly highlighted, considering the paradox that abortion in India did not receive much attention until after the widespread abuse of sex selective abortions came to light. It is argued that abortion itself remains an extremely poorly researched issue and must receive greater attention in its own right.

The report then provides summaries and commentaries on prominent research related to sex selection and adverse sex ratios. First and foremost there is the expanding discipline of demography that has become quite sophisticated in terms of analyses of macro level trends for different population groups. There has been an obsession with numbers, but also with estimating to what extent the changing patterns can be put down to differential mortality rates, female infanticide and sex selection before birth. Different estimates are discussed, including how demographers themselves have offered varying interpretations, theories of causation and possible consequences – whether from the side of medical technology or that of gender discrimination. The role that improvements in survival for boys can also play in making sex ratios look worse is also noted.

Often complementing the focus on large numbers and changing trends are more sociological and ethnographically structured studies that operate at the local micro level. The report provides brief pictures of more recent studies that go beyond standard accounts, including the role of civil society and the state, changing familial patterns and so on. This section also includes brief mention of an ethnographically oriented multi-sited study in several districts of north west India. This study probed the local contexts and multiple reasons (including counter intuitive factors of increased education, rise in marriage, and anxieties over sexuality) which are heightened during fertility decline. This has resulted in members of families justifying the kind of daughter aversion that is now accompanying son preference as families seek to match their resources with the sex composition of their children.

Dowry is discussed in a separate section given the extent to which this practice and its huge expansion in modern times has been seen to be the single biggest cause for the practice of sex selection. The burden of dowry has become emblematic of the cost of bringing up a daughter in contemporary India. Theories and debates around dowry are discussed in order to indicate how dowry has become a linchpin by connecting the value of a daughter with broader economic structures.

As would be obvious there is no shortage of differences among both activists and scholars on the question of sex ratios, their explanation and consequences. Indeed, over the years such disagreements have, if anything, been deepening. Has there been too great or too little a focus on the PC-PNDT Act? Many advocates believe that the main effort must continue to be the criminalization of venal medical practitioners, while others warn of how the very advocacy against sex selection has often turned into a problematic campaign

against abortions per se. Disputes abound when it comes to interpretation. Could there be reduced son preference even though the numbers are more skewed today than ever before in India's history? Is the problem one of "mindsets", which are out of synch with modern values of equality, or, does modernity itself, have a lot to do with what is going on? Some read the latest figures as proof of heightened practices of "female genocide", while others see signs of a turn-around.

Though this report is largely focused on existing secondary level research, it includes a brief picture of overall trends with the help of a number of Tables in the Appendix. Trends over time, at the level of different states, both urban and rural, are provided. The latest child sex ratios according to the final population figures released by Census 2011 are discussed region wise with the help of a graph to show 'high' and 'low' trends in the north, west, south, east and north-east of India. The shifts in 2011 from a peaking of the practice in north west India where it continues to be very severe, to its thinner spread to large parts of the rest of the country are brought out. It is this shifting trend that should be followed up in new research.

The report shows how important it is to go beyond looking at India alone in order to gain a better grasp of adverse child sex ratios and the reasons for the phenomenon at this point in historical time. Comparative studies are discussed, such as more frequent comparisons with China and South Korea, with early Europe, but also with the unprecedented discovery of adverse child sex ratios in post-socialist countries such as Vietnam and in the Caucasus region.

The rubric of violence is also given special consideration in this report given that the practice of eliminating the female foetus before birth has been understood to be part of a broader structure of violence against women – here meted out before birth, if of a pre-emptive nature. The question whether violence offers the most useful frame for understanding is probed in this section.

The final section of the report looks broadly at the different perspectives that are palpable in much of the research, in terms of their explanatory frameworks. Three broad frames are identified and discussed – 'culture', 'violence', and 'political economy'. The usefulness of each of these is explored. The section then looks at different domains that could benefit from further research – from family and household; the world of clinics and the medical profession; education and higher education; labour and employment; and, finally, institutions engaged in combating sex selection from the state and NGOs, to women's organisations. By way of conclusion, the report highlights the need for regional analyses – whether of those historically 'bad' locations now showing minor improvements, or the spread to areas with no prior histories of female adverse sex ratios.

While a long history of engagement has laid the ground work and provided considerable insights, there is still much that is unclear, and therefore considerable need persists at this time to develop focused and specific researches to accompany the ongoing struggle for a less gender discriminatory society.

CHAPTER ONE

1.1. Introductory Remarks

It is surely not accidental that when Indian film actor Aamir Khan launched his prime time television Sunday morning show Satyamev Jayate on 13th May 2012, to sensitize the public on social issues, the opening episode was on female foeticide and 'missing girls'. This tells us something about how gender figures in the popular imagination as a social problem (compared to, say, poverty or untouchability). Furthermore, in contrast to the marginal location of female infanticide in the heated debates over the 'women's question' during colonialism and social reform, or even the discovery of a declining sex ratio after Indian independence, adverse child sex ratios today have become practically synonymous with gender discrimination. There appears to be no more poignant image of what is wrong with Indian society than the millions of little girls that are not being allowed to be born. And yet, as we shall come to see, this by no means implies a commitment to a gender just order. More to the point, it is conundrums and impasses, rather than breakthroughs and advances, that have been encountered repeatedly since skewed sex ratios came to light.

Let us begin, then, with what the sex ratio story is about and where we are at this stage in comparison to the past. The sex ratio is a measure that compares the number of women and men in a particular population group. In India, it has historically taken the form of the number of women/girls per 1000 men/boys, whereas everywhere else (including our neighbours in South Asia), the measure works the other way around, with sex ratios counting the number of men/boys per 100 women/girls. Interestingly, populations do not come evenly balanced into male and female. 'Nature' appears to have evolved complex and differential evolutionary life chances for the male and female of the human species – on average, slightly more boys than girls are born; but since the baby girl has that slight biological edge over the male, more female babies survive, at least in most parts of the world. Furthermore, women tend to outlive men at the other end of the life cycle, leading to sex ratios that increasingly favour women with age. While the sex ratio at birth (SRB) is around 950 girls per 1000 boys, (or 105 boys per 100 girls) (UNFPA 2012), this therefore changes into a sex ratio favouring girls due to their relatively lower mortality rates in 'normal' populations. India has been amongst the very few countries in the world, along with neighbouring Nepal (though to a lesser degree) and China, where the infant mortality rate for girls is worse than for boys. India is therefore not alone in having a history of skewed sex ratios. Interestingly, though, this is a dubious distinction that brings it closer to the Asian nations of China and South Korea, and, over the last decade, to countries such as Vietnam and Georgia, Armenia and Azerbaijan from the Caucasus region, rather than to its South Asian neighbours, in spite of the more shared history of the sub-continent. Thus, where India has a male-female mortality rate in the 0-4 age group of 88, the equivalent figure for Bangladesh is 103 for 2011. On the other hand, sex ratios at birth are 110 boys per 100 girls for India (Sample Registration System 2009-11) compared to 121.2 for China in 2010.

1.2 The Colonial Context

What is new about the situation today might become clearer if we briefly explore what is known about its history, one that has been somewhat fitfully explored, fuelled in turn by contemporary concerns. Beginning with the colonial period, it might surprise readers to hear about the ways in which British officials first claimed to have

discovered that there was something amiss in the course of their travels among the people in colonial north India. What had been put down to seclusion and women's invisibility to the public world, is rendered in several accounts as something else altogether: The British were shocked by open admissions of practices that allowed a daughter to die, with descriptions in the colonial archive of several villages without even a single female child. The first recorded instances of female infanticide are to be found as far back as 1789 among the Rajkumar Rajputs of Jaunpur. According to L.S. Viswanath, the British records initially displayed a mix of Orientalism (ascribing the practice to ancient sacred texts), while providing anecdotal accounts of the practice among particular landed castes, sometimes with numerical evidence of highly disparate numbers of boys and girls (Viswanath 1998; see also Panigrahi 1972). Vishwanath discusses the mixed history of the scattered colonial accounts of female infanticide and their claims about the number of baby girls done away with. The most frequently cited reasons have been pithily summarized by Barbara Miller as "pride and purse" (Miller 1981: 56), namely the practice of hypergamy and the necessity of giving large dowries. Everyone seemed to agree that among such castes, nothing was worse than the shame and danger of an unmarried daughter, hence the need to do away with them at birth if need be. Commentators have noted the ambiguous and long drawn out British response to female infanticide, from overt fears of interfering in the domestic matters of a 'martial race' like the Rajputs to the passing of the Female Infanticide Act in 1870, and the subsequent tracking of sex ratios in the Census. According to Miller, the very first Census Report of 1872 left female infanticide and neglect out of their purview altogether, and explained the discrepant numbers with alternatives such as 'hot climate', and inaccuracies in enumeration due to undercounting and age misreporting. According to others, however, the very creation of the Census for the counting of the Indian population by the colonial state was fuelled not just by Malthusian discourses of population or the need to fix caste and community boundaries, but by the wish to demonstrate its civilizing mission to combat 'violence against women' through addressing female infanticide via the counting of men and women, boys and girls (See Bhatnagar et al 2005 cited in Purewal 2010: 12). Certainly we see that, in 1911 and 1921, the Census divided north Indian castes into two groups based on the numbers of males and females – according to the figures put out, overall sex ratio figures were below 800 girls/women for 1000 men/boys among several Rajput castes, Jats, Ahirs and Gujjars in the north and north-west. Castes could thus be categorized according to how they treated their women, and marked as deviant accordingly (See Sen 2002; Malhotra 2002). Here is a quotation from the Census Commissioner in 1911, decades after the passing of the Female Infanticide Act:

"Hypergamy, or the rule that a girl must be given in marriage to a man of higher rank, makes it very difficult and very expensive to obtain a suitable husband, while the admission of inferiority which is implied in giving a girl in marriage is a blow to a man's pride. Apart from this, a Rajput husband often tyrannizes his father-in-law. Female infanticide was resorted to in order to avoid these troubles which the marriage of a daughter involved" (cited in Raju and Premi 1998:3).

Veena Talwar Oldenburg's book length study (Talwar Oldenburg 2002) called for 'a new historical understanding' into the selective 'discovery' of practices such

as female infanticide by the British in the course of their conquest of India. She contrasted the British treatment towards two communities, the Sikh Bedis and the Jats, both of whom came to practice female infanticide. While the former were indicted and blame squarely laid on their custom of dowry, the latter were not, with the false claim that, given their practice of bride price and women's participation in agricultural labour, they did not indulge in infanticide. But according to Monica Das Gupta, British administrators gave different reasons for female infanticide among different castes, such as the Jats and the Rajputs – the Jats were thereby keeping down the population and preventing the sub-division of property (in other words, practicing a form of family planning), while the Rajputs were constrained by hypergamy and dowry (Das Gupta 1995: 490). Talwar-Oldenburg's larger argument is that it was the consequences of British rule (rather than an improvident traditional practice) that fundamentally changed rural economies among peasant castes, driving up the price of land, creating new levels of indebtedness under increased tax burdens, which in turn transformed prior, more favourable practices relating to women's wealth, property rights and dowry, thus spurring female infanticide. Her analysis is undoubtedly extremely important for questioning the 'civilising mission' of British rule, and ahistorical cultural explanations of 'tradition and custom' as the cause of women's low status (and can be fruitfully compared to Lata Mani's much cited pioneering investigation into the colonial discourse surrounding the abolition of sati, Mani 1998). However, as Ravinder Kaur has pointed out, Talwar Oldenburg misses out on the actively pursued status seeking marriage strategies of peasant castes that led to the relative neglect of daughters, if not outright infanticide, which cannot only be laid at the door of the British (Kaur 2007:110). In any event, whatever the Orientalism involved in interpretation, or indeed the impact of subsequent developments, practices discovered in 1789 cannot be the consequence of revenue policies that had yet to be brought into existence.

Commentators have noted the ambiguous and long drawn out British response to female infanticide, from overt fears of interfering in the domestic matters of a 'martial race' like the Rajputs to the passing of the Female Infanticide Act in 1870, and the subsequent tracking of sex ratios in the Census.

This brief exploration of the colonial context and the welter of accounts and explanations should give us pause, since we will have occasion later on in this review, to examine what indeed has changed all these centuries later. How have the disciplines of anthropology, sociology, demography, the actions of the state, and, indeed, the resources of feminism taken us forward, compared to the agendas, prevarications and rationalizations in evidence during colonial rule?

1.3 After Independence: Declining Sex Ratios and *Towards Equality*

After its discontinuation in 1941, the counting of the population by the newly born Indian state was reinstated through a decennial Census from 1951, but with an important difference – individual castes were no longer enumerated, with the exception of the Scheduled Castes and

Scheduled Tribes. In the late 1960s and 70s, a new generation of demographers, led by Pravin Visaria and Asok Mitra, discovered the long term trend of a declining sex ratio (Visaria 1969, Mitra 2000 [1978]; see also Dandekar 1975). By comparing the overall numbers of women and men across the decades, starting from 1871 into the first decades following independence, the shock was that this simple comparative measure of the life chances of women and men was worsening over time. There were definite regional variations, with the north-west displaying the lowest trends. All India census statistics in 1901 put the figure at 961 women for every 1000 men, which fell to 946 in 1951, 941 in 1961 and 930 in 1971. Here then was independent India's first major 'conundrum': How can a century striving for modernity reduce women's life chances compared to men, especially after the break with colonialism and the onset of state led development? This data therefore occupied a pivotal place in the *Towards Equality* Report prepared by the Committee on the Status of Women in India in 1975, which had been designated by the UN as the International Women's Year, as central evidence of women's declining status, and one that demanded both explanation and redressal by the nation state (Sharma and Sujaya ed. 2012 [GoI 1974]). When the fledgling research field of women's studies was established within the Indian Council of Social Science Research (ICSSR) in the mid 70s, the existing data on the declining sex ratio acted as a springboard for the new research they hoped to undertake, ranging from migration to women's labour.

Asok Mitra's monograph in 1978 is particularly noteworthy for the scope of the questions he posed to the "inexplicable" data. While it was relatively easy to put down the very early Census figures to undercounting and, as we have seen, the regions of colonial Punjab and parts of Rajputana had already been noted for their practices of female infanticide, it was the twentieth century trends that were so difficult to comprehend. Mitra called upon the social science community to probe everything, from the effects of recurrent famines and epidemics, migration patterns, food availability and consumption trends, mortality differentials across the entire life cycle, from infancy to maternal deaths and aging, disparities in medical treatment, and, finally, to the effects of labour and employment among women both rural and urban.

"The conclusion seems inescapable that certain protective mechanisms of a complex social, cultural and economic nature, which had operated however tenuously in the past to maintain a favourable female-male ratio, may have given way in recent decades" (Mitra 2000 [1978]).

Along with the insights of demography, anthropology was also contributing at this stage. Barbara Miller's work has already been referred to in this context. Her 1981 classic *The Endangered Sex* drew from a range of sources — the colonial historical record on female infanticide, micro level ethnographic monographs from across the country, studies of medical records and Census statistics — to postulate a north-south divide: Women from upper caste and propertied households in north India are at a disadvantage compared to the south. These differences derived from the preferences in food, health care and love given to sons compared to daughters in the north, with direct consequences for their survival. Such preferences were largely based on the relatively low rates of women's work participation in agriculture in the north — "work is worth" in her famous phrase. Her account also included

considerations of marriage costs and dowry, (such as her discussion of the "pride and purse" arguments provided by the British) and posited that where such costs were high daughters posed a serious threat. She did note, however, that the north-south distinction did not always hold – after all, propertied groups in the south also had high dowries, while northern unpropertied groups had bride wealth and higher levels of female labour. Ultimately, Miller believed that there were broadly two "cultures" at work – the northern, more "masculinist" and the other – the southern – more "feminist" or at least more egalitarian. In their study just a couple of years later, Tim Dyson and Mick Moore also posited a north-south divide, based on kinship systems, and contrasted the patrilocal village exogamy in the north, with strong status differentials between wife-givers and wife-takers, compared to the south with its more 'female-friendly' patterns of village endogamy, including cross-cousin marriages (Dyson and Moore 1983).

"Childrearing at home principally as a housewife and as family worker was possibly less strenuous than that process continuing under the strain of wages earned under severely competitive and insecure conditions outside the home".

Till the 1980s, much of the focus on disparate sex ratios, whether in the historical, anthropological or demographic literature, looked for their explanations within kinship patterns and in rural contexts. After independence, female infanticide was largely thought of as a colonial vestige or at least a dying practice. Forms of neglect and discrimination towards girls and women, especially within poor rural households leading to higher mortality rates and premature aging found many adherents, especially among economists.

Therefore, while it is important to note that Asok Mitra did wish to include in his long list of research the role of urban employment such as blue and white collar jobs, the effective focus coming out of the social sciences during the 1970s and 80s was on sex ratio disparities in rural, and more specifically, agricultural households. Barbara Miller's analysis rested on finding cultural correlates within rural societies. Moreover, the kind of focus on women's work brought out contradictory assumptions. On the one hand, Mitra for instance, delved into women's long working hours at home or in family agriculture to speculate whether "childrearing at home principally as a housewife and as family worker was possibly less strenuous than that process continuing under the strain of wages earned under severely competitive and insecure conditions outside the home" (2001: 168). But shortly thereafter, he wonders whether the problem is that "in recent decades the socially and economically productive role of women has been yielding place more and more to their biological reproductive role which in turn is reducing their social and economic value" (ibid: 169).

Miller's analysis and attempt to correlate women's work with sex ratios also ran into difficulties, as we have seen. Clearly, women's work in the home, her unpaid 'productive' labour and her potential to work for wages were deeply significant yet contradictory issues. (See the essays in the volume *Tyranny of the Household,* Jain and Banerjee 1985; Bina Agarwal 1986; Kundu and Premi 1992; and John 2005).

CHAPTER TWO

2.1 The Women's Movement's Engagements with Sex Selection

In the late 1970s and 80s, women's organizations shocked the public with evidence of violence against women among the urban middle classes, of which the most horrendous involved unmasking the 'accidental' death of young brides in the homes of their in-laws. Never investigated before, these murders, or in some cases suicides, were understood to be the culmination of harassment over dowry, leading to fundamental changes in medico-criminal procedures and the law. It is in the wake of these campaigns against violence that an outcry ensued over the first reports of amniocentesis testing for sex determination in cities like Delhi, Bombay and Amritsar. Later investigations revealed that a department of Human Cytogenetics had been set up at the All India Institute of Medical Sciences (AIIMS), New Delhi's premier state financed research hospital, during the 1970s. This hospital undertook a sample survey in 1974 with the aid of amniocentesis to detect foetal abnormalities among women in the city. Within a year it was apparent to the medical establishment that the pregnant women being tested wanted to know the sex of the foetus and opted in "7 out 8 cases" for abortion when the sex was female (cited in Mazumdar 1994: 2). Though the Indian Council of Medical Research (ICMR) stopped the AIIMS tests by 1979, private practitioners promoting such tests emerged in Punjab, Maharashtra and Delhi soon after.

The creation of the FASDSP in 1985 turned the issue into a national campaign, which used all the skills of organizing – from street theatre and demonstrations to public interest litigation.

With the first protest meeting in 1982 in Delhi, called by a coalition of national women's organizations demanding a complete ban (CWDS 1982), and the establishment of the Forum against Sex Determination and Sex Pre-selection (FASDSP) in Bombay in 1985, a new level of political intervention was necessitated, focusing on a modern technology that made sex selection before birth a possibility. Given the nature of amniocentesis testing, the location of these practices was urban, and ranged from major cities in the north-west and west to smaller towns. According to some reports, testing centres cropped up in states like West Bengal, Bihar, and Goa, places with no prior histories of female infanticide (Mazumdar 1994). Vibhuti Patel has vividly described how popular amniocentesis became in cities like Bombay in the early 80s, with women having to book themselves for a test in major hospitals a month in advance; surveys by voluntary groups such as the Women's Centre revealed 10 tests per day across 6 hospitals and clinics (Patel 1988). An investigative study by Dr. Sanjeev Kulkarni of the Foundation for Research in Community Health in Bombay found that 42 out of 50 gynaecologists contacted, acknowledged performing sex determination tests for patients, most of whom came from middle and upper class backgrounds (Kulkarni 1986). Robin Jeffrey and Patricia Jeffrey similarly observed the entry of amniocentesis testing at some distance from metropolitan India, in Bijnor town in Uttar Pradesh (Jeffrey and Jeffrey 1983).

The creation of the FASDSP in 1985 turned the issue into a national campaign, which used all the skills of organizing – from

street theatre and demonstrations to public interest litigation. Initially there was little public support. Indeed, it was not even clear to most people what the problem was. Just as the campaign against sex selection began to gain ground, came startling reports of female infanticide in Tamil Nadu, considered to be a 'good' state in terms of sex ratios and women's overall status. In specific rural districts, especially Madurai, Salem and Dharmapuri, the numbers were high enough to show up in taluk (block) level sex ratios. Poor families among the Kallar community in particular, were resorting to the killing of new born baby girls in response to processes of agrarian change that were destroying a more gender egalitarian peasant economy. Though the change was bringing canal irrigation, new communication networks and family planning, it was also turning daughters into a liability. In the course of undertaking a UNICEF sponsored study on infant and child growth in specific villages, in the district of North Arcot, Sabu George discovered the practice of female infanticide quite accidentally. Covering 13,000 women and 759 live births, out of 23 male and 33 female child deaths recorded during the study period, as many as 19 turned out to be cases of infanticide, all girls. A clear pattern emerged with cases coming from the landed Gounder caste families in the more hilly and isolated villages, while others were free of the practice. "That the Gounders are, relatively speaking, well-off does not mean that they do not feel economic pressures when it comes to raising daughters. It is precisely the cost of raising daughters according to upper caste rules that creates severe constraints..." (George et al 1992: 1155). In an essay reflecting on female infanticide in Tamil Nadu written a decade later, Rajeswari Sunder Rajan sensitively probes the different frameworks that have been deployed for approaching this practice – as a crime, the product of a backward region, a manifestation of gender discrimination and through the lens of demographically oriented sex ratio imbalances (Sunder Rajan 2003). Even though such acts are treated as murder within the Indian Penal Code (IPC), Sunder Rajan dwells on the futility of treating it as crime and, indeed, the questionable justice of doing so. In a much publicized case at the time, the father was let off and the mother sentenced to 14 years of rigorous imprisonment (Sunder Rajan 2003: 182).

Such specific cases of female infanticide apart, it was sex selection via medical technologies (namely the detection of foetal sex followed by an abortion) that came to be perceived as the main danger. As a consequence of campaign pressure, the first central legislation took the form of the Pre-Natal Diagnostic Techniques (Prohibition of Sex Selection) (PNDT) Act of 1994, subsequently revised as the PC (Pre-Conception) - PNDT (Regulation and Prevention of Misuse) Act of 2003. However, legislation by no means had the result that was anticipated – the practice continued and has been spreading even though it is a crime (carrying a punishment of imprisonment of up to three years and a fine).

More commonly, people believed that if fewer girls were born, their value would go up in a supply-demand manner. Feminists on their part sought to provide counter-advertisements against such tests, or painted futuristic dystopias of a world with too few women.

For many activists the campaign against sex selection was a formative experience. Prior to 1994, the tests were openly undertaken and widely advertised, and most people saw little harm in the practice. If such a technology enabled families to have fewer children did it not help the cause of population control? More commonly, people believed that if fewer girls were born, their value would go up in a supply-demand manner. Feminists on their part sought to provide counter-advertisements against such tests, or painted futuristic dystopias of a world with too few women, what it would be like to be a "miserable minority", living in "terror, tension and constant fear" (Ravindra 1993: 70). The early period of optimism – after all, many feminists believed that one was up against a new technology, not age old customs – gave way after the initial years and began to wear thin for some. When the central legislation took shape in 1994, a major drawback from the perspective of the movement is that it left no room for intervention by voluntary groups in matters of vigilance or access to the judiciary.

2.2 Sex Selection and the Law

Precisely because of the pivotal place that the law has occupied in the opposition to sex selection, it is particularly important to emphasize that the legal focus has been on the technologies involved in sex determination testing, not on the subsequent act of having an abortion (which in any event would not obtain in the rare cases of pre-selection). This point is often missed, given the language of the campaigns against female foeticide or sex selective abortions (SSA), including all the media focus on sensational cases involving the discovery of aborted fetuses. Obviously, it is processes whereby the female foetus is eliminated or is not selected that results in 'missing girls' and a skewed sex ratio; but the law as it stands is designed to stem this tide at the initial stage of sex determination or pre-selection.

Nivedita Menon has challenged the campaign against sex selection, by arguing that the very effort to obtain justice from the law is doomed to failure. It is simply philosophically incoherent to argue in favour of abortion "in terms of the right of women to control their bodies and at the same time, demanding that women be restricted by law from choosing specifically to abort female fetuses" (Menon 2004: 72). Abortion in other parts of the world had already encountered problems when deploying the language of rights because of the ways in which foetal rights were then placed, in opposition to those of the mother. In our context Menon asks how the law can be "selective", that is to say, distinguish between a general right to abortion, on the one hand, and the specific abrogation of that right in the case of sex selection.

Menon's critique points to very real problems in the language and focus of the campaigns. To date, 'female foeticide' is a popular slogan, in spite of or perhaps because of its connotations of murder, even genocide; others prefer the more politically correct terminology of sex selective abortions. However, whatever the name, abortions and the Medical Termination of Pregnancy Act (MTP), 1971 are not the most significant sites where the law encountered its limitations. The problem was not of how to narrow down the meaning of abortion to sex selective abortions, but rather of getting the law to work at the prior stage of sex determination, especially when the terrain of its applicability became technologically more widespread and advanced. The PNDT Act focused on regulating sex determination testing — naming the

techniques, determining where pre-natal diagnostics can be conducted, who can conduct them, procedural aspects of registration, record maintenance and, finally, provisions for inspection by state appointed bodies. In their subsequent examination of the legislative history and context of the PC-PNDT Act, Indira Jaising, C. Sathyamala and Asmita Basu begin by pointing out the first problem with the 1994 legislation – next to nothing was done in terms of its implementation (Jaising et al 2007).

A Public Interest Litigation led by Sabu George, Centre for Enquiry into Health and Allied Themes (CEHAT) and Mahila Sarvangeen Utkarsh Mandal (MASUM) seeking directions was therefore filed in the Supreme Court in 1998. At this point in time, technological innovations available in India included highly expensive and complex possibilities of pre-selection through certain sperm sorting techniques in combination with Assisted Reproductive Technologies (ARTs) to "choose" the sex of a child at the time of conception through *in vitro* fertilization (IVF) (See SAMA 2010). In flagrant violation of the PNDT Act even "home kits" for knowing the sex of a baby have frequently been advertised over the internet from countries like the US and Canada.

But as Jaising, Sathyamala and Basu state with great emphasis, it is with the ubiquity of ultrasound (including portable versions), prescribed for all pregnancies, that the limits of the law have become most obvious. The law had to be "prohibitive" in the case of specialized pre-selection practices, but could only be "regulatory" against the "misuse" of something like ultrasound, now an integral part of the burgeoning medical business involved in all pregnancy monitoring. Somehow, this regulation had to prevent the communication of the sex of the foetus "behind closed doors", which, as they point out, could really only be ensured if a legal authority were physically present. Thus the law has encountered its biggest stumbling block in the fact that what had started out as a particular medical technique to detect foetal abnormalities via specialized genetic centres was now part of the generalized "normal" practice of ante-natal medical care.

Unlike other forms of neglect or female infanticide, what makes sex selection unique is that it requires the active intervention by medical personnel and their misuse of medical technology. Medical practitioners, moreover, occupy a position of social power and influence. Hence one of the biggest failures of the PNDT Act has been their overall immunity, which may be why it took so many years to even put monitoring bodies in place. It should come as no surprise, then, that extreme measures such as sting operations by news channels with decoy patients have been resorted to in efforts to catch erring doctors. According to Brinda Karat and Sabu George, the strong nexus connecting medical personnel, politicians

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and bureaucrats has made a mockery of the law. As they point out, "since 1994 when the PC-PNDT law was enacted there have been only 93 convictions. Of the 1,036 ongoing cases, only a small per cent, possibly 10 per cent, relate to charges of communication of the sex of the foetus" (*The Hindu*, Feb 4th 2012).

Therefore, something of an impasse has been encountered in the legal campaign, which groups are trying to break. It is not enough to say, as Karat and George among other leading activists do, that there is nothing wrong with the law (which must certainly be included in any comprehensive policy now under consideration), when its implementation has either been non-existent or so flawed. More than the incoherence of a selective approach to abortion, it is a situation of all round collusion backed by power without a complainant that robs the law of meaning. Moreover, as the disability movement has pointed out, the law has selectiveness built into it. Recall the context in which the PNDT Act was first enacted – namely the introduction of amniocentesis techniques for the detection of foetal abnormalities. Even though there was some initial discussion among women's organizations about the advisability of demanding an overall ban on any amniocentesis testing, the basic form taken by the law was to make a distinction between 'legitimate' grounds and their 'misuse'. In other words, while checking for certain genetic abnormalities in a foetus are medically and socially acceptable grounds for aborting such a foetus, should there be a positive diagnosis, sex determination testing is a crime. Feminists like Anita Ghai have asked why there should be such an automatic assumption against bringing a potentially disabled child into the world, and what this tells us about the absence of any effective rights for the disabled, and of society's responsibilities towards children with disabilities. It is thanks to these efforts that there is at least some awareness of the complexity that surrounds assumptions about 'abnormality'. Politicizing the 'social' bias against girls cannot be advanced without also politicizing the 'naturalized' bias against disability. Hence more discussion and advocacy are needed at the interface of both the disability and women's movements (Ghai and Johri 2008; Rapp 2000; see also John 2011).

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Having focused on the major impasses that have been encountered in both creating and implementing the law against sex selection, this does not mean that nothing can be achieved through this law. One study has even attempted to account for the relative success of the law by comparing the state of Maharashtra where the law was first implemented in 1986 with child sex ratios (CSRs) in other states, in order to track changes from the pre-ban to the post-ban periods (Nandi and Deolalikar 2012). Arindam Nandi and Anil B. Deolalikar believe that the presence of the ban may have prevented the worsening of the CSRs by as much as 13-20 points.

On the ground, the efforts of Arvind

Kumar, as Collector, Hyderabad, in ensuring regular and effective monitoring have been frequently cited as an example of what his committed implementation achieved to curb the practice of sex determination testing. (The city of Hyderabad showed a vastly improved CSR in comparison to neighbouring districts). But the question then becomes, who exactly is being curbed by creating a fear of the law? While it may well be that there is some change among radiologists (especially those who have been more aggressively pushing sex determination in areas poorly serviced medically), bureaucrats and politicians have frequently turned to the idea and practice of pregnancy tracking and monitoring as a way forward. What this does is to shift the focus, not only from the doctor to the pregnant woman, but also to any decision to undergo an abortion, thus bringing within its ambit abortions that were not preceded by sex determination. Punjab has been using this method of tracking pregnancies by Auxiliary Nurse Midwives (ANMs), especially among women who have had one or two daughters, according to Bijoyalaxmi Nanda (unpublished report). The 'Nawanshahr campaign' as it has often been called, would be another example where a zealous Deputy Commissioner, Krishna Kumar, organized several NGOs under a Suwidha Centre, which involved collecting data on the registration of births via medical records and subsequent follow up. Information technologies were drawn upon to enable the tracking of pregnancies over the course of the first trimester, thus bringing to bear invasive modes of monitoring and control of a sort, not witnessed hitherto.

Nanda goes on to report that the improved CSR in Punjab, according to Census 2011, has both made the government complacent about any further implementation of the Act and resulted in the withdrawal of donor support to local campaigns, which were quite vibrant a decade ago. The new effort in the state of Maharashtra was to introduce a tracking device within ultrasound machines called the 'silent observer', whose purpose is to maintain a record of ultrasound images and thereby aid the state in the monitoring of sex determination. The state commissioned a study to evaluate various aspects of this Information and Communication Technologies (ICT) led initiative in Kolhapur district with financial and technical support from UNFPA. The study reveals no significant change in SRBs a year after the initiative. At best its introduction may have instilled fear in the minds of sonologists that they are being watched, but it is neither tamper proof nor has the district administration taken any action based on the evidence generated by the device (State Health Systems Resource Centre 2012).

2.3 Population Policies, Government Schemes, and the Girl Child

Apart from the law, how else has the state machinery responded to the 'missing girl child'? Schemes are the other means that have been adopted so far. However, these very schemes that have been promoted recently reveal the ongoing centrality of population control in the compulsions towards combating the adverse CSR. A particularly clear example would be the conditional cash transfer schemes for the girl child being variously promoted by a number of state governments.

Behind most of these schemes is an aspect of population policy that enjoys widespread consent, namely the two-child norm. Though the National Population Policy (2000) contains no such provisions

and though India has been a signatory to the International Conference on Population and Development (ICPD), which entails a commitment to reproductive rights, recent Supreme Court rulings as well as population policies promulgated by several states, including Haryana, Rajasthan, Madhya Pradesh, Chhattisgarh, Odisha, and Andhra Pradesh, seek to penalize and disbar those who have more than two children from accessing various government programmes. First and foremost, such a policy constitutes a violation of human rights, especially, as the National Human Rights Commission (NHRC) noted in 2003, those of "the marginalized and vulnerable sections of society, including women" (NHRC 2003:1). As Mohan Rao has argued, the "imposition of the two-child norm, and the disincentives proposed (including disbarment to stand for elections right from the level of local government), would mean that the majority of the deprived populations would bear the brunt of the state's withdrawal of ameliorative measures, pitiably inadequate as they are" (Rao 2008: 301). But, what is less well recognized, in the context of the present focus on adverse CSRs, is that a "vigorous pursuit of the two-child norm is an invitation to female sex selective abortion" (ibid: 303). Indeed, among the more common rationalizations offered by doctors who agree to perform sex determination and sex selective abortions is precisely their belief that they are helping to bring down population growth. This means that if the State is indeed serious about questioning its policies in the wake of the ongoing decline in the CSR, widespread support for population policies such as the two-child norm, including the introduction of coercive disincentives, must be reviewed if not discontinued.

If the State is indeed serious about questioning its policies in the wake of the ongoing decline in the CSR, widespread support for population policies such as the two-child norm, including the introduction of coercive disincentives, must be reviewed if not discontinued.

A recent desk study by T.V. Sekher provides a detailed overview of many of the current schemes being promoted in several states (UNFPA 2011). These schemes are all variations of the Girl Child Protection Scheme, first launched by the Tamil Nadu government in 1992 as a response to the incidence of female infanticide discussed above. In Tamil Nadu at that time, a sum of Rs 100 was put into a state fund for each baby girl enrolled in the scheme, followed by further amounts in step with completing various stages of schooling, until finally, at the age of 21, if still unmarried, she would receive a lump sum of Rs 20,000. However, as Rajeswari Sunder Rajan and others have been quick to point out, this scheme was further saddled with various eligibility criteria—no sons, indeed, subsequent sterilization of the mother to ensure no further births and below poverty line (BPL) income levels for a family that wished to enroll (Sunder Rajan 2003). The amounts of money have certainly increased in the interim. In 2008, the Delhi government under Sheila Dikshit inaugurated the 'Ladli Scheme' with an initial payment of Rs. 10,000, followed by payments in lump sums of Rs. 5000 at various stages to reach a total of one lakh for the girl child at the age of 18, if she were still unmarried. But the rules and requirements

laid down, the conditionalities and eligibility criteria for the various schemes on offer today, as discussed by Sekher, have now multiplied. Moreover, as many have noted, the scrambling of population control with protecting the girl child can have particularly adverse outcomes. Poverty has also been turned into an eligibility criterion when it is well known that planning the gender of one's children is at its most acute among the non-poor, that is, among those striving for upward mobility with limited resources. Many have critiqued such schemes for effectively providing a lump sum as dowry to a family—indeed, in north-west India, these schemes are locally called 'dahej' (dowry) schemes. It is to be hoped therefore that these schemes will be subjected to a much needed review.

2.4 The Problem of Abortion

As is well-known, the MTP was quietly passed in India in the context of a widespread push for population control policies, which permits abortion under certain conditions, including failure of contraception. Abortion does not exist as a right nor has it been the focus of women's struggles in our context. It is somewhat ironic, therefore, that it is in the wake of the campaign over sex selection and opposition to sex selective abortions, that the twilight zone occupied by abortion practices in India has received more attention. But even now, despite campaigns on safe motherhood, discussions on abortion rights are few and far between and research on abortion sparse (See Visaria et al 2007).

Given the frequent comparisons made between abortion and sex selective abortion, it must be pointed out how different the two are at the level of a pregnant women's 'choice' (whether coerced or consensual). Whereas in the first case a woman does not want to have a child at all (regardless of its sex or normality), in the second instance, there is desire or pressure for a son. We have already discussed how easily mobilization against sex selection slides into focusing on cases of sex selective abortions, including tracking pregnancies among certain state officials eager to prove their credentials.

Critical attention has been given to often well intentioned campaigns against sex selection, invariably couched in the terminology of female foeticide or *brun hatya* in Hindi (which is a neologism literally meaning foetus killing). Not just the language but especially the visual imagery deployed, invariably shows a foetus (whether within a woman's womb or suspended in space), in a state of distress, suffering violent attacks, and so on), which end up being uncannily similar to anti-abortion campaigns in other parts of the world.

Even now, despite campaigns on safe motherhood, discussions on abortion rights are few and far between and research on abortion sparse.

In April 2011, in the wake of the Census findings that showed a major drop of 30 points in the CSR of the state of Maharashtra (recall that this was the very state that had pioneered the regulation of sex selection with the first state law in 1986), several organizations and individuals came together under the coalition, Forum against Sex Selection (FASS). An informal network of over 50 organizations and individuals, it was formed to renew the

campaign by addressing all key issues related to sex selection and gender discrimination. What distinguishes this group is their awareness of the impasses that have beset mobilization in recent years, the problems with the state apparatus meant to implement the PC-PNDT Act and the need to address the problem of declining sex ratios in ways that do not impinge on women's right to abortion. In August 2011, they initiated a protest letter with over 250 signatories to the Health Minister of the Maharashtra government for having suggested to the state legislature that 'female foeticide' be treated under Section 302 of the IPC. This would make the woman, her husband and any doctors found to be involved in such a case to be guilty of murder. The letter made it clear why this was wrong and that any act of sex selection must be taken up under the law already in place, namely the PC-PNDT Act.

This is not to say that campaigns, old and new, were solely focused on the law. The beginnings of the campaign coincided with the onset of the women's movement, as we have seen, which led to the formation of the first post-independence women's organizations (some autonomous and others linked to political parties on the left) as well as centres for women's studies, concerned with ever expanding problems of violence, economic rights, population and health, state power, and much more.

Let us now look at parallel efforts to take on the challenges of the declining sex ratios and problems of sex selection in the multifaceted world of research.

CHAPTER THREE

3.I Where are the Feminist Demographers?

There is a rather curious prophetic section in Barbara Miller's 1981 discussion on the endangered sex, addressed to 'development planners'. She believed that those concerned with India's population policies needed to pay more attention to the ironic ways in which daughter neglect and infanticide accomplished some of their goals. Miller then went on to speculate on the likely wide acceptance of 'modern methods' of regulating the sex of one's offspring (available in the US but relatively unknown in India at the time), which "would solve many problems" however "unpleasant and problematic" (Miller: 35-36). As we know, these newer methods did indeed find their way into India, and have transformed our debates and struggles.

The first discovery of new and disturbing trends among CSRs was an accidental product of the state's desire to measure literacy rates and schooling, which led to separate Census statistics for the pre-school 0-6 age group population. Even though Census 1991 recorded an all time low sex ratio of 927 overall, its most worrying statistic turned out to be declining CSRs in several states, even below 900 in Punjab and Haryana. A decade later Census 2001 riveted the country and the world beyond with news that India's overall CSR had dropped below that of the general population: While the CSRs fell from 943 in 1991 to 927 in 2001, that of the overall sex ratio rose from 927 to 933 in the same period (a clear sign that life expectancy among surviving women was increasing significantly). Several states in north-west, west and central India witnessed further plunges in their CSRs – Punjab led the way with a startling CSR of 798, while others such as Himachal Pradesh experienced declines for the first time. Census 2001 also made history (especially at the district level) because CSRs fell below acceptable levels in very different parts of the country, such as Goa, urban Odisha, and even pockets in the North-East.

What had remained the province of a limited number of activists, scholars and doctors, has since turned into a field with growing local, national and international stakes. Research in particular has grown by leaps and bounds, from a range of perspectives, institutional locations and disciplinary orientations. There has been a particular obsession with numbers, spurred by Amartya Sen's famous essay "More than 100 million women are missing", which highlighted China and India's prominence in the problem (Sen 1990). Satish Agnihotri sounded a note of caution in his study of differential mortality rates among children, by region and social group in India, with sex selection as yet only of marginal concern (Agnihotri 2000). He is responsible for coining the notion of a "prosperity effect", defined in terms of the relative effects of increases in income on the survival of boys and girls, with startling evidence that such prosperity worsened the gender gap of survival. His study was based on 1961 and 1981 district level Census data, initial results of Census 1991, and 1988 and 1995 data on infant and under-five child mortality estimates. In his analysis, high levels of infant and child mortality in the past (when male mortality outweighed or equalled that of females) are set off against more recent trends, when these rates declined differentially leading to a situation where the effects of excess female mortality became more pronounced. He also contrasted the district level figures for the 'general' population, for Scheduled Castes and Scheduled Tribes. While it is the case that the north-western region has the lowest rates overall, confirming prior studies and historical analysis about

this region, other districts in western India especially also display similar trends. Of particular importance is his analysis of the sharp decline in CSRs among the Scheduled Castes in north India, where the rate of decline even exceeds that of the general population. While the equivalent CSRs among Scheduled Tribes is high on average, this is often a consequence of high rates of child mortality for both sexes, with the exception of the state of Rajasthan whose tribal populations also showed excess female mortality.

Monica Das Gupta and P.N. Mari Bhat computed that between 1981 and 1991, approximately 4.2 million girls in the age group 0-4 had died, in excess of official death rates, and also arrived at an estimate of 1.2 million girls missing due to sex selective abortions, just under 1% of all female live births (Das Gupta and Bhat 1998). Missing women - among different age groups, social locations and across time periods – turned into a major and contentious subject of analysis, with considerable dispute over trends and their causes.

A particularly noteworthy exploration was undertaken by Mari Bhat who argued against what he deemed to be excessively 'feminist' assumptions of gender bias (Mari Bhat 2002). Revisiting the data from 1911 onwards, he highlighted problems with age reporting among children in particular (which would render CSR comparisons across time less reliable); he also pointed to ways in which relative improvements in the life expectancy of boys and adult men from very low prior levels over the course of the twentieth century could misleadingly "worsen" the sex ratio. Re-estimating Asok Mitra's 'conundrum' over India's declining sex ratio, Mari Bhat postulated that while in the first half of the twentieth century about 5 million adult women were 'missing', by 1991 the figure was 21 million (of which only 14% were below 15 years). Between 1951 and 1981 the sex ratio among children became marginally masculine and then worsened post 1981, for the first time in urban India. The latter could be put down largely to sex selection, but the former might be as much due to a rise in male births with better maternal nutrition and deliveries, as a consequence of a greater bias against girls.

After the results of Census 2001, various scholars have been attempting to determine just how much sex selection is going on, drawing from various data sources, not all of which corroborate each other. While Prabhat Jha came up with a figure of 10 million for two decades (1981-2001) based on a single source, the special fertility and mortality survey (Jha et al 2006), P.M. Kulkarni's more extensive analysis estimated 10 million for the longer period 1981-2005 (Kulkarni 2007), with 5.4% SSAs out of all female live births during 2001-2005. In an effort to connect sex ratios at birth with the use and misuse of pre-natal diagnostic techniques Mari Bhat and Francis Zavier examined the National Family Health Survey data. Challenging activists who focused on the

Missing women - among different age groups, social locations and across time periods – turned into a major and contentious subject of analysis, with considerable dispute over trends and their causes.

principal role of medical technologies, they questioned any simple or direct line of causality between the mere availability of PNDT or general ante-natal care and increasing sex selection (Bhat and Zavier 2007). The most obvious example would be southern India where use is the highest and misuse is rare. In rural India, 9 % may have availed of pre-natal testing, out of which 24% are cases of misuse; compare this with 32% of urban use out of which 9% constitute misuse.

The provisional results of Census 2011 have added new twists to the saga. India's overall CSR has dropped further to 914. While north-west India and the rest of the country continue to stand apart, the reasons have changed. It would appear that there has been a peaking (or plateauing) of the practice of sex selection in states like Gujarat, Haryana, Delhi and Himachal Pradesh, with actual small improvements from very low levels in Punjab and Chandigarh. Whatever the extent and nature of positive change in north-west India, CSRs are falling in large parts of western, central and eastern India – Maharashtra, Goa, Rajasthan, Madhya Pradesh, Uttar Pradesh, and even Andhra Pradesh has joined the ranks from among the southern states. In other words, the state wise figures demonstrate a widening of the circle, well beyond the so-called prosperity belt of north-west India, to the poorer states.

3.2 Micro-studies and Ethnographies

As we have seen, micro level studies, that is to say, studies that were engaged in researching problems relating to the adverse sex ratio at specific sites in rural or urban India, rather than via macro level secondary data, go back to the colonial period itself. Colonial officials engaged in what today might well pass for village level anthropologies, deploying the terminology of kinship and marriage practices to explain the incidence of female infanticide in parts of north India. The work of Barbara Miller, Tim Dyson and Monica Das Gupta's early work in rural Punjab have also been noted, along with the first reports of female infanticide in select districts of rural Tamil Nadu in the 1980s. When amniocentesis testing for sex determination first hit the headlines in the same decade, we have also seen how activists and scholars undertook local surveys and studies in order to highlight a very new phenomenon.

With the passing of the first laws against sex selection, the practice became a crime, which in turn had an effect on how activists and scholars went about investigating its prevalence. Some organizations took it upon themselves to provide compendia on the literature available, often at the behest of international agencies (e.g. See the commissioned studies by UNFPA [Joseph and CYDA 2007], and another compendium sponsored by USAID [Ekatra and IFES, n.d.]). The CYDA study was focused on advocacy efforts and the challenges encountered, based on several regional consultations with multiple interest groups. This review cannot cover the plethora of studies available, which naturally vary hugely in terms of their scope and quality. The vast majority appear to have been galvanized by the Census 2001 findings, thus concentrating mainly on north-west India. Unfortunately many of them, even those undertaken by academics, do not provide clear criteria for their methodologies, sampling procedures, and the number of actual cases, and instead give generic and repetitive explanations for the prevalence of son preference and daughter dis-preference. There is a tendency to simply repeat the usual list for son preference

in patrilineal and patrilocal societies – as security in old age, for carrying on the family name, for lighting the funeral pyre and so on, compared to an equally generic view of daughters as a burden. Since such ideas and attitudes have more or less been true across time and space in vast swathes of northern India, they do little to illuminate those specific contexts where the declining CSR has become acute in recent decades in particular. This review therefore will restrict itself to some of the more interesting case studies.

A notable study by Saraswati Raju and M.K. Premi undertaken in the 1990s offers a useful transition point, since it focuses on the prevalence of female infanticide many decades after independence (Raju and Premi 1996). The horizon for their study of several villages in the districts of Bhind and Morena in the central state of Madhya Pradesh was provided by long term sex ratio trends for this region, where the relatively low presence of women and girls emerges as a 'traditional' fact. Thus the Gwalior Census Report of 1931 showed that certain castes such as the Brahman, Rajput, Bania, Gujjar and Maratha (clearly upper and middle castes) had a 'startling excess of males', while others – the Sondhia, Balai, Sahrariya, Bhil and Bhilala - were more even. In their local level study conducted in 1995, Raju and Premi found several multi caste villages, which depicted extremely low sex ratios overall and in the age group 0-7 years, in particular (not unlike the castes enumerated in Census 1931 but also extending to Yadavs and Ahirs). Low sex ratio villages could be mapped along a contiguous tract extending from the Jaisalmer-Barmer border in Rajasthan to the Etawah and Mainpuri districts of Uttar Pradesh. Interviews made it clear that female infanticide was being practiced among specific castes, and the reason given was 'large dowries'. The researchers saw the problem as structural, epitomized by the women's status as victims, who were illiterate with no choices to speak of, living in a world ridden with severe gender and status hierarchies circumscribed by caste. Interestingly, the possibility that new technologies may be playing a role here does not crop up at all.

Other studies, especially those conducted after 2001, focused more on sex selection via medical intervention. To take an example from the southern State of Tamil Nadu, Sharada Srinivasen investigated 'daughter elimination' in all its forms – female infanticide, neglect and sex selection – as this has manifested itself in recent decades in specific districts of Tamil Nadu (Srinivasen 2012). According to her, forms of neglect leading to child mortality rates skewed against girls after the age of one year were more prevalent prior to the 1980s, then took the form of practices of female infanticide (already discussed earlier in this review) among specific castes, and, from the end of the 1990s, has been shifting to the pre-birth elimination of female fetuses via medical interventions, of which she finds evidence across half the state. She sees the causes for this as lying squarely in the

There is a tendency to simply repeat the usual list for son preference in patrilineal and patrilocal societies – as security in old age, for carrying on the family name, for lighting the funeral pyre and so on, compared to an equally generic view of daughters as a burden.

deteriorating status of women in recent decades, spurred by modes of economic development and parallel transformations in Tamil kinship systems – 'the shift from isogamous kin endogamy to hypergamous, virilocal marriages, a decline in cross-kin marriages, the rise and spread of the practice of dowry, and the weakening of women's natal ties' (Srinivasen: 244). Srinivasen perceived women to be victims at two levels, in terms of their actual lack of choices and also because of their beliefs that they had no choices – 'women's acts [to eliminate a daughter before or after birth] can be outcomes of false consciousness, as much as shaped by constraints and internalization through socialization' (ibid: 250). The question therefore becomes one of seeing, how an increasingly women unfriendly climate can be changed and through what policies, programmes, laws and spaces.

In her analysis of sex selection in urban locations in Delhi and Punjab (which is noteworthy because urban based studies are less common), Tulsi Patel used focus group discussions to arrive at what she calls the 'mindset' of 'young parents in modernizing India'. According to Patel such parents are not simply opposed to daughters as such (Patel 2007: 143). Rather, they wish to have two children of which at least one should be a son. She goes on at some length to discuss the particular case of a woman who already had two daughters and who used the help of a friend, and money supplied by the husband to get the sex determination test done, which was then followed by an abortion when the test revealed a female foetus. Patel uses such individual cases to emphasize the burden on women after they have given birth to a daughter, leading to their own vested interest to go in for sex selective abortions repeatedly until a son is announced.

An important but not sufficiently studied aspect of the changing situation is the role that non-state organizations have been playing in attempts to curb sex selection. Sharada Srinivasen had looked at some of the efforts of the Tamil Nadu state in this regard, and found that it had been more successful in curbing female infanticide than in reducing sex selection. Rainuka Dagar has discussed how "members of the Sikh clergy in the Punjab proclaimed a social boycott on those Sikhs who practised female foeticide" (Dagar 2007: 116). But as she goes on to say, while the misuse of technology may thus be denounced on the one hand, the same religion and religious institutions bless families and are willing to receive offerings to aid the birth of a male child.

In a very carefully designed recent study focusing on rural Himachal Pradesh, (where the CSR plummeted for the first time between 1991 and 2001), Mattias Larsen has used complex quantitative techniques in line with qualitative interviews, (from primary data gathered from eight villages in the districts of Kangra and Kullu) to look more closely at what might have changed to better account for the low CSRs. He highlights divergent intergenerational differences between fathers and sons, and between daughters and their mothers-in-law in terms of their life choices and decision making in a context shaped by agriculture as the traditional source of livelihood. Thanks to education, Larsen avers, daughters-in-law are now more empowered, with much more joint decision making among the women in the household. However, with increased 'disembedding' caused by the growth of non-farm sources of income, there is, on the other hand, what he calls 'a decline in trust in sons' (Larsen 2012: 180). What is particularly noteworthy in his analysis is that it is precisely in a changing context

defined by greater uncertainty, that parents are experiencing a heightened dependency on sons, a willingness to invest more in them, none of which pertain to daughters, who may well be 'very trustworthy, hard-working and dependable, but nonetheless [are] net liabilities' (Larsen 2012: 196).

Yet another study by Navtej K. Purewal addresses what she calls 'foeticide fatigue' in contemporary Punjab (Purewal 2010). She contextualizes her interest in the subject in typical 'postcolonial' mode, by revisiting anti-infanticide campaigns of the colonial period. In her reading, these managed on the one hand, to produce records of 'objective' reporting and categorizations in order to appear as promoters of social justice, yet all the while taming 'masculinity' through the furtherance of the male-headed household, resolutely keeping women 'out of sight' (Purewal: 35). Fast forwarding to twenty-first century Punjab, Purewal therefore wants to know what has changed today, whether in the prevalence of son preference or in the campaigns to combat female foeticide. She feels that the government's legal campaign shares much with its colonial predecessor, 'naming and shaming' via threats of punishment, the only difference being that today, women are visible as victims, and that more invasive technologies of surveillance are resorted to, such as the pregnancy monitoring aggressively resorted to in the Nawanshahr Campaign discussed earlier in this review. While possibly productive in the short run, such interventions are counter-productive in the long run. Other forms of activism find greater favour – those broadly within the realm of 'culture' – such as the medium of poetry, using the spring festival of Lohri as enabling for women, even 'ladli' as an image of a loved child. She especially highlights feminist interventions via the medium of the internet, including among diasporic communities now resorting to sex selection in the West. Much can be achieved by building women's agency, according to Purewal, whether in combating the reach of sex determination clinics or in furthering the aspirations of the present generation of young women.

As we can see from these few examples, current studies are as concerned with understanding the problem on the ground as with modes of combating existing practices. Before discussing the potential of such studies any further, let us bring into the picture what has undoubtedly been seen as being the main source of the problem.

3.3 Dowry

When it comes to providing causal explanations for the practice of sex selection today, two broad claims emerge. On the supply side, as we have repeatedly seen, we have medical technologies, granted fullest agency in the hands of the aggressive radiologist who takes his mobile machine into the hinterland of rural India to vend his wares, unmindful of the criminality of such actions. Such unscrupulous practitioners in turn are being ably supported by multinational capital, and several activists have pointed to the role that companies like General Electric are playing in pushing the market for ultrasound machines, further and further, into India's rural heartland. On the demand side, what appears with equal frequency is, quite simply, 'dowry'. "Like a black shadow in the wake of dowry demands, is the spread of sex selection" (Karat and George, ibid). Much has been written on the modern institution of dowry (Srinivas 1984; Basu 2005; Jain and Banerjee 2000; Oldenburg 2002; Sunder Rajan 2003; AIDWA 2003; Palriwala 2009) and this would be a good place to review how prior

opposition to dowry as a practice came to be extended to explaining the practice of sex selection.

In her very useful summary of the debates that beset the intertwined subjects of dowry and inheritance, within and beyond the women's movement in India in the 1980s and 1990s, Srimati Basu has pointed out how even those who vociferously disagreed with each other, nonetheless, often shared similar concerns (Basu 2005). It must be remembered here that opposition to dowry as a quintessential 'social evil' harks back to the pre-independence women's movement, and had certainly found its place in colonial explanations for the practice of female infanticide among the hypergamous Rajputs. It is not as well known that the Dowry Prohibition Act was passed in 1961, a few years after the Hindu Code Bill, and that the initial campaign of the Progressive Organization of Women in the city of Hyderabad in 1975 (among the very first such organizations to emerge during that decade) was against the practice of dowry. When the women's movement emerged more fully after the lifting of the Emergency, in cities like Bombay and Delhi, it was the discovery of 'dowry deaths' that hit the headlines and announced to the world that a new politics to combat violence in the family was in the streets and the courtrooms. The journal *Manushi* carried the first articles of the campaigns against the non-accidental death of young brides in the homes of their in-laws, and demanded a wholesale dowry boycott. In the years that followed, Madhu Kishwar, for one, publicly changed her position on the evils of dowry, arguing subsequently that such opposition was not in fact in the women's own interest, calling it a 'phony symbol' when the real culprit was power relations within the family (Kishwar [1988] 2005: 271). In a direct response Rajni Palriwala, however argued that the practice of dowry was no empty symbol but needed to be placed in its changing context - its spread throughout the country, across region, religion and caste, its non-voluntary character, its increase both monetarily and in kind, such that a dowry might well be worth more than a daughter's equal share in the family property, the extended and ongoing quality of the demands, and the absence of any significant control over this process by the wives themselves (Palriwala [1989] 2005: 281-82). In her commentary on this angry exchange, Basu notes what both positions effectively agreed on, namely a focus on patriarchal ideologies regarding women's alienation from their natal families and the devaluation of women's labour, and the need for genuine inheritance rights and less dependence on marriage for survival (2005: xxxiii).

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It is the idea that dowry is a modern phenomenon linked with capitalist modes of development and the devaluation of women and their labour, that then makes it possible to see dowry as a primary 'cause' for the practice of sex selection as well. After all, in the initial years in the 1980s, when sex determination testing was

openly being advertised in several cities, doctors put out the slogan "Rs. 500 now or Rs. 50,000 later" (cited in Gandhi and Shah 1992).

The role that dowry might be playing in a changed modern context has been the subject of various analyses, of which that offered by the sociologist M.N. Srinivas is the most well known (Srinivas 1984). Nirmala Banerjee and Devaki Jain (Banerjee and Jain 2000) have offered some speculative analyses of their own to account for the curious and complex patterns in overall and CSRs in different regions of the country over time, and the link with changing dowry practices. In the first part of their essay, they questioned the heavy emphasis placed on women's work participation rates by economists like Pranab Bardhan (1974, 1982) and Barbara Miller (1981), which correlated women's labour outside the household with sex ratios in different regions. Why, they asked, does this correlation only hold in some regions and not in others? Moreover, there are well known problems with the estimates provided by the Census, which leave out much of women's subsistence labour outside the household or even market oriented economic activities within it. Banerjee and Jain therefore argued for a reversal in the relation of causality: "Women are held in low regard [in regions like the Punjab] and because of this, both the survival chances of the girl child as well as the work done by women throughout their lives are considered relatively unimportant" (2000: 90). This led them to shift the focus of analysis to questions of 'culture' and kinship, and the role of women in certain castes as status agents, especially via marriage practices like hypergamy. Within this they hypothesized further that Brahmins were key mediators in such processes, especially where they constituted a dominant proportion of the population, as was the case in large parts of north India.

However, there appears to be a disjuncture in their own analysis when looking at trends from the 1981 Census onwards, especially the widespread fall in CSRs thereafter. Questioning their own hypothesis of status seeking behaviour among specific north Indian castes and the 'Sanskritization' thesis put forward by Jean Dreze and Amartya Sen (1995), they believe that new explanations are now required in the light of economic development and its negative effects on daughters. This part of their analysis begins with theories of the 'marriage squeeze' in growing populations (i.e., the fact that the cohort of women of marriageable age is always larger than that of grooms in a given endogamous group), which has led to shifts from bride price to dowry with a growing scarcity of grooms in the course of the twentieth century. They then posit what they call a new 'widespread and growing male resistance to marriage' (ibid: 106) due to a shrinking of traditional occupations and the rise of uncertain access to regular incomes with modern development. Basically, dowry payments from the bride's family now become an economic requirement, which would be the case for poorer and Scheduled Caste families as well as those who aspire to higher standards of living at the other end of the class-caste hierarchy. Women are at a severe disadvantage in terms of their own limited earning power, and hence become even more dependent on 'good marriages' achieved with correspondingly heavy dowries, which in turn make them a burden. By way of conclusion they reiterate that there can be no one explanation, of course; both 'economic' and 'cultural' factors will be variously at play at different junctures.

Dowry has thus been something of a linchpin in many arguments, offered up in

numerous ways in order to find connections between women's status in Indian society and economic developments over time. The increased, indeed 'monstrous' practice of dowry, translates quite simply into growing daughter aversion and therefore to fewer girls being born. In a recent discussion, Patricia Jeffrey has warned against any 'complacency' on the part of demographers who, in the light of a changing marriage squeeze now operating against men (given fertility declines and too few girls being born) predict that dowry will now come down and daughters increase in value (Jeffery 2012). The study will return to some of these arguments and their relevance for thinking about future directions for research in the concluding section of this review.

CHAPTER FOUR

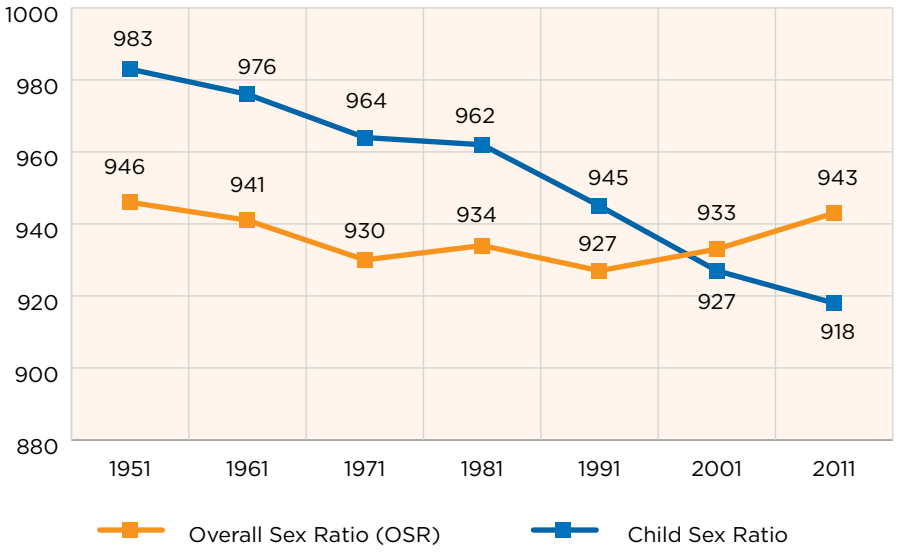
4.1 Debates and Disagreements

As would be obvious by now there is no shortage of differences among both activists and scholars on the question of sex ratios, their explanation and consequences. Indeed, over the years such disagreements have, if anything, been deepening. Has there been too great or too little a focus on the PC-PNDT Act? Many advocates believe that the main effort must continue to be the criminalization of venal medical practitioners, while others warn of how the very advocacy against sex selection has often turned into a problematic campaign against abortions per se. Disputes are abound when it comes to interpretation. Could there be reduced son preference even though the numbers are more skewed today than ever before in India's history? Is the problem one of "mindsets", which are out of synch with modern values of equality, or, does modernity itself, have a lot to do with what is going on? Some read the latest figures as proof of heightened practices of "female genocide", while others see signs of a turn-around.

4.2 What can the numbers tell us today?

In the Appendix to this review, a series of Tables provide quick numerical pictures of trends in overall and CSRs. The first graph below gives us the all India statistical picture from 1951 to 2011. The sex ratios in the country, taken as a whole in the last half century, declined slightly from 946 in 1951 to 927 in 1991 and have been slowly rising since then. These are the figures that occupied the attention of demographers, such as Asok Mitra and subsequently Mari Bhat, as already discussed. Of course, Mitra did not live to witness the most recent improvements and was therefore preoccupied with the 'inexplicable' decline. Mari Bhat, on the other hand, as we have seen, disaggregated this picture by region and age, arguing that relative improvements in the life chances of men and boys needed to be factored in to help explain the earlier declining trends. Most demographers are in agreement that the more recent improvements in overall sex ratios point to the increasing life expectancy among the women who are

GRAPH 1: COMPARATIVE TRENDS IN OVERALL AND CHILD SEX RATIOS



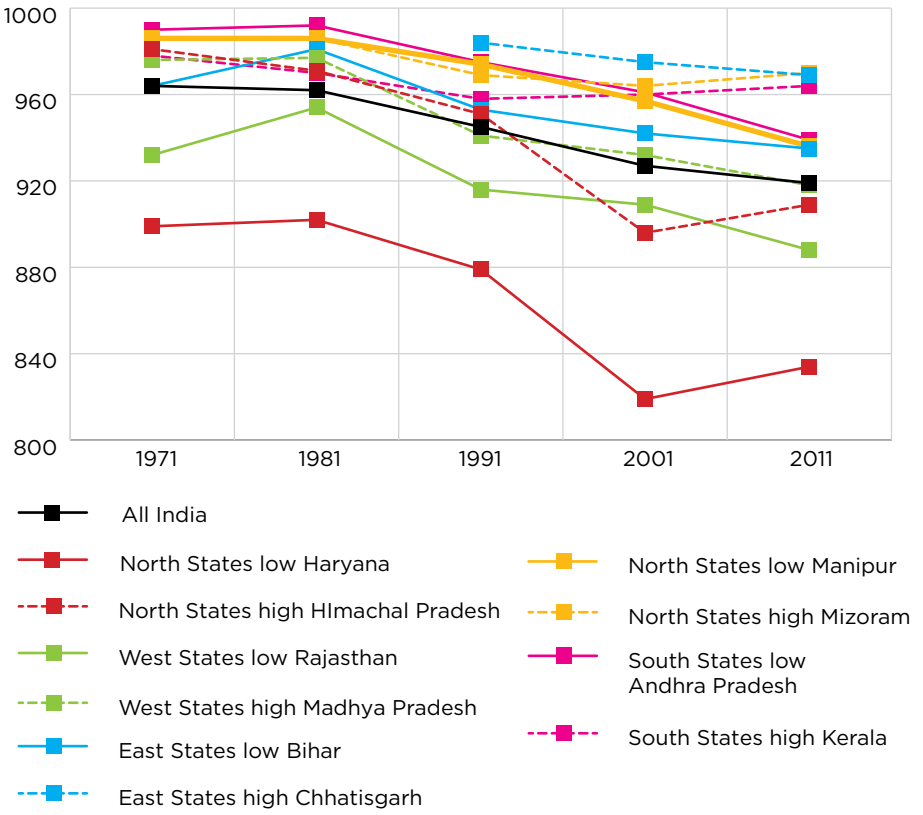
born, which, in the past and contrary to all other parts of the world, were lower than that of men due to processes of premature aging. Women in India now outlive men, as improvements in male life expectancy appear to have been slowed down by factors such as life styles and diseases that take a greater toll on them.

The pattern of CSRs are in marked contrast to overall sex ratios as Graph 1 above clearly shows. They have been declining and the rate of decline has in fact worsened in the very years when overall sex ratios began to improve. This corresponds to the decades following 1981 and offers incontrovertible evidence of the effects of resorting to sex determination testing and the selective elimination of female fetuses prior to birth, along with possible female infanticide, and skewed infant and child mortality. The estimates of the number of missing girls due to sex selection have also been discussed in this review. When the provisional results of Census 2011 were initially released, the all India CSR publicized was 914. However, the final population figures since put out by the Registrar General's office have been significantly upwardly revised to 918, making for a nine point decline from 2001 compared to that of 18 points in the previous decade. This would indicate a slowing down in the rate of decline in the practice of sex selection, and clearly calls for further investigation. These figures also need to be interpreted in conjunction with changing patterns of SRBs which have also shown small improvements since 2005 in several states (See UNFPA 2012).

When the provisional results of Census 2011 were initially released, the all India CSR publicized was 914. However, the final population figures since put out by the Registrar General's office have been significantly upwardly revised to 918, making for a 9 point decline from 2001 compared to that of 18 points in the previous decade.

The second graph provides a disaggregated snapshot of trends among the CSRs of select states in the period associated with the practice of sex determination testing and consequent sex selection. Table 3 in the Appendix provides a picture of CSRs in all the states and union territories of the country from 1981 to 2011, by region – north, west, east, south and north-east. These regions have been so chosen because they do show distinctive patterns where CSRs are concerned. As of 2001 the worst sex ratios were to be found in the north and west (Punjab, Haryana, Himachal Pradesh, Delhi, Chandigarh (UT) Uttar Pradesh; and Gujarat, Rajasthan, Maharashtra, Madhya Pradesh). Jammu and Kashmir has been anomalous and the figures need further probing, especially for 2011. Comparatively, the east, south and north-east displayed better averages. In 2011, this picture has changed to reveal a new kind of difference between the worst states and the rest of India. Several states, such as Punjab, Haryana, Himachal Pradesh, Chandigarh now show small improvements from their prior low levels – but declines are now visible in large parts of India in 2011, of which states like Rajasthan and Maharashtra in the west, certain eastern states along with Andhra Pradesh in the south have significant declines. Therefore it has been speculated that while the severity of the practice of sex selection may have peaked in those

GRAPH 2: CSRs OF SELECT STATES 1971-2011



regions where it was at its worst, it has now spread much more widely, if more thinly, across the country.

The graph above has chosen the 'best' and 'worst' states based on their 2011 CSRs from each region for easy comparison. The trends of 10 states compared to the all India average from 1981 to 2011 are visible – these are Haryana and Himachal Pradesh in the north, Rajasthan and Madhya Pradesh in the west, Bihar and Chhattisgarh in the east, Andhra Pradesh and Kerala in the south, and Manipur and Mizoram in the north-east. It must be reemphasized here that we are always discussing ratios, that is to say, the relative birth and survival of girls and boys in the 0-6 age group. With 950 girls to 1000 boys as a global norm, notice therefore that ratios that are higher than this also reveal a problem, namely higher mortality rates for boys than should be the case. As discussed in particular by Satish Agnihotri (2000), regions with very high CSRs can well be regions of high poverty with proportionately more of the biologically weaker male sex either miscarrying or dying. Notice also that states with very high CSRs in 1981 (980 and above as per Table 3) are states with significant proportions of Scheduled Tribes. In the graph above, Andhra Pradesh (CSR 992), Manipur and Mizoram (CSR (986) in 1981, and Chhattisgarh in 1991 (CSR 984) have unusually high CSRs.

However, in this review we are more concerned with changes following this period. Notice that only two states, Haryana

and Rajasthan of the northern and western regions are clearly below the national average in 1981 while all the remaining eight lie above it. By 1991, one more state (Madhya Pradesh), has dipped below the national average, and Himachal Pradesh joins this group in 2001. Notice also the changing trends between 2001 and 2011 as the two states of the northern region (Haryana and Himachal Pradesh) improve, along with a small increase in Mizoram, while all the others register declines.

District level data would reveal more variation and show where the changes have been most pronounced.

Explaining such changes requires bringing together various significant variables along with contextual analyses, which we shall discuss at the conclusion of this review.

4.3 The International Scenario

So far the discussion has focused exclusively on India including some discussion of its internal regional differences. But equally significant are countries and regions beyond the nation. Given the insularity of much of the discussion on adverse sex ratios and problems of sex selection in our context, a comparative frame might well yield new and significant insights. It might be worth spending a moment on thinking about the South Asian region and patterns of skewed sex ratios. As already pointed out in the introduction to this report, India stands apart from its more immediate neighbours, and the north-west regions more especially, in terms of the degree of the skew. In a recent essay, Naila Kabeer and her colleagues at BRAC (formerly Bangladesh Rural Advancement Committee) explicitly probed the absence of the problem in the case of Bangladesh (Kabeer et al 2013). There are no obvious answers, given that Bangladesh certainly shares much with its larger neighbour in terms of socio-economic conditions, son preference and recent patterns of fertility decline. They point to the possibility that less harsh community level norms of marriage (including Muslim notions of marriage as contract), apart from the greater job opportunities for women, might be the most important reason. The strength of NGO activism propagating ideas of gender equality, and the less vigorous spread of ultrasound technology are also considered.

Apart from the attention given to China especially by western observers, some of it undoubtedly motivated and sensationalist, the number of countries coming under the scanner of 'sex ratio imbalances' has been growing. Interestingly, almost all of them are in Asia.

Be that as it may, it is to other Asian nations that India has been more frequently compared when it comes to declining CSRs. It is well known that China has been in the lead where skewed CSRs are concerned. Major studies have been devoted to the decision to introduce a one-child policy by the Chinese government under Deng in the 1970s (Greenhalgh 2008) and on its disastrous consequences - 'bare branches', the name given to the hordes of Chinese men and the violence they would unleash given their unmarriageable fate (Hudson and de Boer 2005). But apart from the attention given to China especially by western observers, some of it undoubtedly motivated and sensationalist, the number

of countries coming under the scanner of 'sex ratio imbalances' has been growing. Interestingly, almost all of them are in Asia. In a series of articles, Monica Das Gupta is prominent among those who have looked at changing trends using a comparative frame. One of her essays compares twentieth century rural Punjab with Europe in the late nineteenth century, when fertility decline was first emerging in both contexts (Das Gupta 1995). Building on her early study of female mortality (Das Gupta 1987) and from other village studies along with Census data, she looked at developments in Punjab from the 1920s, which was when households first experienced declining child mortality rates and hence a growing population. Rural households adjusted 'to try and maintain a balance between population and resources' (1995: 486) in ways that invite comparison with Europe after the industrial revolution. Before 1920, in a Punjabi landowning household contending with large swings in mortality, marriage was regulated (with extra sons remaining unmarried, migrating, or cohabiting in forms of fraternal polyandry) to prevent rapid sub-division of property, and a corresponding surplus of unmarried women was avoided by female infanticide or female child neglect (In situations of decline, outsiders could be invited in to service the household, including wives from as far as Bengal). She contends that after 1920 when the population steadily increased, the strategies practiced were to keep correspondingly larger proportions of men unmarried, and curb women's fertility, including rising ages of marriage. Along with the economic development associated with the Green Revolution in the 60s came health facilities and contraception, so that new found security and rising expectations could now combine with a ready acceptance of 'modern' family planning methods (Landless labour families broadly 'followed the lead' of the families they worked for). Europe also experienced fertility decline well before the advent of contraception, in response to all the developments associated with capitalism, urbanization and public health in the late 19th century. Even though many such families in countries like England and France were illiterate and poor, not unlike their Punjabi counterparts, they also shared, according to Das Gupta, a sense of control over their life. What remains unclear in this essay, however, is the persistence of the adverse sex ratio in Punjab, quite unlike the European story. In another essay she notes in passing how different rural Europe was from South and East Asia in one definite aspect – daughters grew into adulthood, looked for work in other households or farms while staying with their parents, and married on their own. Any 'shortages' in husbands, was thus a 'personal problem', 'not an intolerable situation for parents to avoid by any means possible' (Das Gupta and Li 1999: 623).

This is probably why Das Gupta subsequently embarked on a series of joint papers on precisely those Asian countries like China, South Korea and northern India, which share similar kinship systems – patrilineal and patrilocal village exogamy, relatively 'resistant to change'. Das Gupta and Li Shuhzuo (ibid: 1999) compared demographic changes during the twentieth century in these countries, especially the interrelations between the marriage squeeze brought about by an expanding population and gender discrimination. North-west India, as it turns out, has had the 'quietest' century compared to the wars, famines and political revolutions of China, or the 1950s war and subsequent rapid economic development of South Korea. In China, the early decades of war as well as the famine of 1959-61 took its toll in the form of heightened abandonment and neglect of young girls,

leading to an adverse CSR, continuing in the 1970s, and accelerating after the mid 1980s. Curiously, while the reason given is the 'availability of sex selective abortion', the article never mentions the one-child policy that was enforced in the 80s, the 'draconian and disastrous' policy that has been minutely and extensively studied by Susan Greenhalgh (2009). South Korea displayed similar CSR patterns to those of China. Das Gupta and Li attempt to see how different phases in demographic transition (mortality declines and fertility declines) coupled with discrimination against daughters affected women and marriage. China has known the greatest extent of the effect of a surplus of men in the marriage market, one which is predicted to reach its maximum in the early decades of the twenty-first century, the 'bare branches' phenomenon that has been widely discussed in the literature. In Korea, the effect of a relative shortage of women is more recent, and is also predicted to continue into the present, as evidenced by the 'import' of brides from neighbouring countries. India, on the other hand, has, on the whole, had a surplus of marriageable women for most of the previous century as the population steadily increased. Indeed, the normative difference in the age at marriage for men and women being greater than in East Asia, the Indian marriage market has been tilting quite markedly against women, whose effects are visible in the spread of dowry and violence, as also discussed by others earlier in this chapter. When fertility declines and discrimination lead to a shortage of women, does this then improve women's status in supply and demand fashion as predicted decades ago by Dharma Kumar (1983) and vehemently countered by activists and others? Das Gupta and Li discuss reported cases of kidnapping or luring women in rural China; nor are women welcome back in their natal homes given the community based allocation of land. They are unsure about outcomes in South Korea. However, they hypothesize that 'a scarcity of women will raise their value [treatment] but not their status [autonomy] in societies characterized by strong gender inequality in power' (ibid: 641). In any event, the greatest squeeze is experienced by men who have the least power in the marriage market – younger sons, the poor and unemployed.

'A scarcity of women will raise their value [treatment] but not their status [autonomy] in societies characterized by strong gender inequality in power'.

In another co-authored article (Das Gupta et al 2003), once again the rigidities of the kinship systems of these countries is revisited, where only sons count, and where women's own value in the household depends on producing male heirs. In South Korea, only the eldest son could be the source of support for his parents, making for a particularly heightened form of preference. They thus perceive a sharp dichotomy between the value of a girl in her parent's home and in her in-law's. Yet, they also look for forces of change in urbanization patterns and globalization, which are reducing the centrality of sons in their parents' lives, especially where women are educated and employed. Thus the sex ratio in Shanghai is close to normal, and the sex ratio at birth has been improving in South Korea since the onset of the twenty-first century. They conclude that much can be done through social movements, legislation and the mass

media. Das Gupta and scholars in South Korea and China have been particularly keen to look for and explain signs of a turnaround in South Korea, and possibly China as well (Das Gupta 2009; Chung and Das Gupta 2007; Das Gupta, Chung and Li 2009; Li 2011). However, this analysis does not take enough note of CSR patterns in India with its greater urban bias, nor that market led reforms have not produced significant employment opportunities for Indian women. At the same time, there are a few analyses of sex ratios at birth in the Indian context that indicate some positive trends in very recent years (Kulkarni 2007; Kaur 2011).

In the meanwhile, there is now evidence that new regions and countries are joining the fray, as several Central Asian nations and Vietnam have been displaying tell-tale signs in the last few years. A recent conference volume brought out by Isabelle Attane and Christophe Z. Guilmoto (2007), provides evidence of disturbing trends from Azerbaijan, Georgia and Armenia from the Caucasus, Vietnam and possibly even Kerala (S. Sudha et al 2007; see also S. Irudayarajan et al 2000) where none existed before. Thus the study on the Caucasus points to a worsening of sex ratios at birth since the mid 1990s which are especially acute for the third birth, though this is not visible in either of their larger neighbours – Russia or Iran (Mesle et al 2007). Questions abound – why is this happening here now, and if son preference exists, how did 70 years of communist rule suppress it? Vietnam, too, is a nation that has lived through decades of socialism after the Vietnam war, and its demographic patterns are particularly complex. Huge losses among men during the protracted war and relative poverty led to patterns of female out migration to countries like Taiwan and mainland China, including for purposes of marriage and sex work, whether voluntary or as victims of trafficking (Hugo and Nguyen Thi 2007, Le Bach et al 2007). However, a new development, not perhaps known at the time of these essays, are sex ratio imbalances at birth that have emerged since 2005, especially in Vietnam's more developed regions, in sync with their demographic transition to below replacement levels. Once again, the worst imbalances are in the third birth (Dinh Huy 2011). In their introduction, Attane and Guilmoto ponder over the delayed response on the part of both demographers and feminists to the world wide imbalances visible at least since the 1970s, giving credit to Amartya Sen's 1990 article for bringing about much needed international attention. (They appear to be unaware therefore of the pioneering role played by activism in India since the 1980s). They also dwell at length on the many challenges in analyzing demographic data, and consequent difficulties in making accurate estimates. The problem, they believe, has also changed decisively from the era of excess female mortality characteristic of poor, subordinate and rural populations, to that of technology led sex selection practiced by urban middle and upper classes. In their own joint essay comparing the 'billionaires' China and India, they argue for the need for more localized and regional analyses within these two countries, since there is considerable variation across regions within both, apart from considerable differences between them. Generic structural explanations about economic development and fertility declines cannot suffice (Attane and Guilmoto 2007b).

Finally, we must not forget recent demographic evidence from the West, that provide numbers for what many groups had already been tackling on the ground, in the United States, Canada and the United Kingdom. Examining US

Census data for 2000, Douglas Almond and Lena Edlund found some evidence that sex selection is at work in the United States. According to them, biased sex ratios are confined to U.S. born children of Chinese, Korean and Asian Indian parents and are visible from the second child onwards, when there is no previous son. No significant patterns were found among whites. They noted that this was recent (not being visible in 1990 data) and irrespective of the mothers' citizenship status.

"Son biased sex ratios were found despite the absence of many of the factors advanced to rationalize son bias in India, China and Korea, such as China's one child policy, high dowry payments (India), patrilocal marriage patterns (all three countries) or reliance on children for old age support and physical security" (Almond and Edlund 2008: 3).

However, another report seeks to challenge these claims, since the Almond and Edlund study neglects to mention that there is no overall evidence of biased CSRs when all children of Asian American families are considered together, and, furthermore, that there is a corresponding bias towards a girl in the third birth when previous births have been sons (Citro et al 2014). This report goes on to argue that in those US states where bans on sex selective abortion have been introduced in recent years, nothing has changed in patterns of sex ratios at birth. It would appear that there is much greater opposition on the part of US law makers and administrators to the fact that sex selection may be happening via abortion rather than as a result of pre-selection methods available for ensuring the birth of a son, which (unlike in India) are legal in countries like the US. In the case of the UK there is also evidence of sex selection among families of Indian origin (Dubuc and Coleman 2007).

4.4 A Question of Violence?

This overview began by tracing the history of skewed sex ratios to its initial discovery during colonial rule, and the subsequent tracking of a decline in the 1970s and 80s. The previous sections indicate how best we might characterize the present conjunctural moment, within which practices of prenatal sex selection are spreading anew. In a recent essay Kumkum Sangari has claimed that even though the heightened prevalence of sex selection cannot be understood outside of a combination of many factors, it is the special role of domestic violence that needs to be foregrounded - as a 'continuum' of violence undergone by the pregnant woman, the discriminated daughter and the future daughter-in-law, which forms a 'connective tissue' between the familial and public domains (Sangari 2012). While the issue of violence must be examined with care, it is less convincing that violence is the major causative factor for the kinds of daughter aversion that families are displaying when, aided by medical practitioners, they 'choose' not to bring a detected female foetus to term. Moreover, there is little correlation between reportage on domestic violence and adverse CSRs – the state of Kerala leads the way according to the National Crime Records Bureau but still has the best CSRs.

Where Sangari offers the specific lens of violence to describe and explain what is happening, and others, as we have seen, have given 'dowry' a pre-eminent place, one also encounters the opposite problem in much of the literature, where terms are used generically and loosely, with little explanatory value. Thus, "tradition",

"culture", "mindsets", "son preference", and more generally "gender discrimination and bias", continue to be the most frequently cited. Interestingly, were we to compare the contemporary situation with the colonial period that was discussed at the beginning of this report, one may well get a feeling of déjà vu – what, apart from the new technologies, has really changed? The point that is being made is not that there has to be an entirely new way of understanding the present and its 'missing girls. One factor that has frequently figured in discussions of the family today concerns changes in fertility. The acutest form was China's one child policy, introduced into that country during the 1970s, which triggered a massive demographic revolution, including some of the worst sex ratios among children that the world has ever seen. The Indian state has been pushing a less draconian two child norm, one that has received its share of criticism, primarily because it is a violation of human rights, especially among the poor, but also because of its perceived effects on sex selection. Interestingly, even a scholar like Mari Bhat has changed his own position on the consequences of fertility decline. In a much cited essay co-authored with Monica Dasgupta, he posited a 'parity effect' and an 'intensification effect' in analyzing the consequences of fertility decline for gender bias (Dasgupta and Mari Bhat 1998). In the first case, reducing the number of children also reduces gender bias given that female mortality is most pronounced lower down the birth order. In the second case, the total number of children desired falls more rapidly than the total number of sons, thus leading to heightened discrimination against girls. The essay argued that in India, especially in the north, the intensification effect outweighed parity. Revising his opinion subsequently, however, he claimed a more complex relationship between fertility decline, son preference and sex selection. In the past, families wanted large families with plenty of sons, while today's family wants one son and a daughter, or perhaps two sons and a daughter. In other words, reduced son preference could go hand in hand with skewed child ratios (Bhat and Zavier 2001). And just to add further voices, Ravinder Kaur has cautioned against simple assumptions about past preferences where sons are concerned, arguing that in the case of peasant castes like the Jats, for instance, a matching of resources with family size included regulating both 'bachelor sons' and 'dispensable daughters', and it is this dynamic that is entering a new phase today (Kaur 2007).

Even the stated preference of one son and one daughter needs to be interpreted with care – in my view families are actually 'planning' to have *at least one son and at most one daughter.*

There is no doubt that contemporary India is witnessing a highly gendered version of fertility decline – in north-west India, according to the findings of a co-authored study (John, Kaur, Palriwala, Raju and Sagar 2008), this veers from one to three children. Note therefore an unprecedented shift in son preference as well – extra sons are no longer wanted either. This can not be mechanically read as reduced son preference. Rather, even the stated preference of one son and one daughter needs to be interpreted with care – it is the author's view that families are actually 'planning' to have *at least one son and at most one daughter*. It would surely be worth exploring whether this family building strategy has now moved beyond

north-west India into the swathe of the country that has seen a downward spiral over the last decade.

Notice further that CSRs have fallen most precipitously during a period of unprecedented economic growth. It has emanated from northern and northwestern India, regions which may be characterized as being in the wake of the Green Revolution and whose levels of prosperity therefore require more careful calibration. A huge disenchantment with agriculture has set in, supplemented by highly volatile forms of development, a parallel revolution in aspirational levels, especially among the non-poor classes, where CSRs are the most skewed. Families are planning to have or not have a daughter or a son who will have to be brought up into adulthood, 'settled', and whose future relationship will be shaped by the inter-generational transfer of resources under such conditions. Positive changes are also palpable – such as increases in educational attainments, often with proportionately more girls in higher education (see John 2012), and rises in the ages of marriage. And yet, as our study tried to show:

"...these unintended consequences of contemporary social processes, when combined with parental fears of the unattached sexuality of adult daughters in a context of a highly competitive and differentiated marriage market, are compounding the sense of burden represented by the birth of a daughter. She now requires many more years at home with higher investments in nutrition, health and education... Sons, on the other hand, embody a range of ritual and economic roles. If the current climate of economic volatility and masculine anomie makes them often fall short of expectations, nonetheless at least one is essential for the future of the family. It is this conjuncture that is producing the falling CSR" (John et al 2008: 86).

This also means that it is simply too vague to refer in general to gender discrimination or patriarchy as a catch all explanation, as some are prone to do. What we are seeing on the one hand is a new level of daughter aversion, most starkly visible in the negligible number of families who only have girls in low sex ratio regions, given the kind of cost that a daughter today represents. It is also necessary to probe further – after all, whatever the form that son preference is now taking, families need wives and daughters-in-law in order to reproduce themselves. It is this fear of men who will not find wives that is fuelling state-led as well as internationalist agendas seeking to ensure the 'gender balancing' of the population. But the individual families interviewed in our study did not share this fear, if anything, their primary worry focused on the employment chances of sons, their loss to alcoholism and drug abuse (especially in Punjab), and were in denial over the consequences of the low sex ratio in their midst. This seemingly curious situation becomes somewhat clearer in the context of growing evidence of strategies including cross regional marriages, whereby wives from culturally alien but relatively 'good' sex ratio states as far afield as Kerala, West Bengal, Assam and even Bangladesh are brought to regions like Haryana or Uttar Pradesh (Kaur 2004, 2012). India is therefore witnessing a multiplication of status disparities in the twenty-first century, both among women (such as between daughters and daughters-in-law) and men (caught in a marriage squeeze, especially those with too little to offer) whose logic has defied many efforts to combat gender discrimination and 'save the girl child'.

Before moving on to the question of new directions of research, let us provisionally conclude with the following considerations.

Firstly, with the backing of large data sets, local contexts are vital for understanding the changing dynamics in patterns of sex selection. Even in the region of the North West local contexts are significant and significantly different. For example, in the study referred to earlier (John et al 2008) which was undertaken during 2003-05 in five of the lowest CSR districts of the country, it became evident that within this broad belt where CSRs had dropped severely, any generalization had to proceed on the basis of quite distinct local specificities. Thus for instance, while the district of Fatehgar Sahib in Punjab demonstrated the presence of families with just one son (especially among rural Jat Sikhs and urban upper castes), and families in Kangra and Rohtak strived for two children (but very few with only girls), in the districts of Dholpur and Morena significant forms of child neglect leading to high rates of mortality among girls in larger families went hand in hand with the growing practice of sex selection.

India is therefore witnessing a multiplication of status disparities in the twenty-first century, both among women (such as between daughters and daughters-in-law) and men (caught in a marriage squeeze, especially those with too little to offer) whose logic has defied many efforts to combat gender discrimination and 'save the girl child'.

Secondly, it is necessary to bring together analyses that are usually kept apart. More than anything else it is the interlocking effects of two markets — the compulsory institution of marriage and the increasingly depressed labour market — that are critical for the present and future life chances of daughters and sons. What needs to be understood and contested are the contradictions of value and cost embodied by women – most visible in the difference (rather than the continuum) represented by daughters and prospective daughters-in-law in hypergamous marriage markets, where sons marry 'down' while girls marry 'up'. Expectations that marriage in India's contemporary globalizing economy might be loosening are not bright when the proportion of women with any kind of paid work are as low as 15% according to data trends for 2009-10 (Mazumdar and Neetha 2011; see also John 2013).

Thirdly, and more positively, the very processes that are making daughters appear to be an unbearable cost are also harbingers of change and resistance. It is not the 'girl child' that is the source of so much anxiety and rationalization among families but the adult woman, and the sooner that the ubiquitous girl child image receives a make-over, whether in the corridors of policy or the popular media, the better. Even the horrendous violence visible in recent years in states like Haryana against those who wish to marry against community and caste norms speak of reactions to new assertions for space on the part of young people, who are seeking and making changes that will ultimately be irreversible. This is also what, makes it only too clear that we are not endlessly reinventing versions of the past as they were analysed for us in the colonial archives, but are, however uneasily, inhabiting a new century, with all its challenges.

CHAPTER FIVE

5.1 Future Directions for Research

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It might be wondered, given this long and extraordinary history of a problem and all the thought and action that have gone into understanding and combating it, whether there is room for anything more. At the same time, we have seen how many quandaries, conundrums and impasses have characterized this very history. It is suggested that, even though there is doubtless fatigue at various levels, that further research in the name of positive change is both urgent and doable. Indeed, to turn the problem around, an appreciation of what has been attempted so far should make it possible to better identify the challenges before us, given the many insights that we can avail of at this time.

The three broad orientations that need to be probed might be called 'culture', 'violence' and 'political economy' for short.

Here are some suggestions, posed at different levels and in relation to various domains.

(a) Perspectives

Let us begin by characterizing the main perspectives animating most of the studies reviewed in order to tease out their strengths and weaknesses. All of them are more or less feminist in orientation. One should not, however, presume that those who wish to improve adverse sex ratios are necessarily feminist, which is defined here in its most minimal sense as implying an orientation where gender equality is a primary goal. Perspectives that see the solution of the skewed sex ratios as one of restoring a certain 'gender balance', necessary for social reproduction, may well not be particularly concerned about gender equality. Rather they may be responding to the disorder created by a significant 'shortage' of women in a region, where 'women' translates into women to be given in marriage to men in whatever appropriate fashion. Surplus men with few chances of finding brides are here the problem, for whom a supply of women needs to be ensured to maintain the basic harmony of the existing social order (familial, patrilineal, heteronormative, and gender unequal). Such men may either be a problem because they are prone to violence, or because the need for their care – normally undertaken by women in the family, a problem that increases with the vulnerability of such men, in terms of poverty, employment, physical/mental ability, age and so on – will now result in claims being made on the state for redressal. Interestingly, this is a problem in parts of the world where the cause is not sex selection, but the outmigration of women from regions which offer few prospects for realizing their aspirations for a better life. An example would be parts of rural Japan, a country which has never practiced sex selection. In the perspectives discussed below, however, the absence of a feminist lens is not at issue.

The three broad orientations that need to be probed might be called 'culture', 'violence' and 'political economy' for short. We have encountered the frame of 'culture' quite often in this review, where usually more anthropologically oriented modes of research identify kinship patterns and marriage practices (including changing practices of dowry) as the cultural horizon of explanation. Such accounts do not sufficiently bring into their frame the larger economic processes that are equally

crucial for understanding the nature of the problems that are shaping people's actions, here that of deciding on whether or not to have a daughter. However, they do have the advantage of opening up the spheres of family, marriage, socialization patterns and relationships across generations to further exploration, institutions which are sorely in need of denaturalization and historicization. One of the most complex of these, are the patterns of caste endogamy and village exogamy of northern India, now spreading elsewhere. Many studies concentrate on what they call 'culture' because they see culture as a kind of stopping point, an essential core that is unchanging. But the better ones reveal just how pliable the family can be, what kinds of pressures and social relations are at work, to what extent a new generation of young people can and are making positive change, as well as the resistance offered to transforming certain practices in the social reproduction of families, castes and communities.

The frame of violence too has its advantages. Violence is notoriously difficult to study, and one of the more glaring gaps in feminist literature is that between all the activism surrounding violence (which was so central to women's movements across the globe in the 1960s and 70s) and research on the subject. It is also curious to see how specific events of violence which gain visibility and shock the public have resulted in renewed interest and action. This has certainly been the case in the aftermath of the gang rape of the young woman on December 16th 2012 in the city of Delhi. It not only set in motion unprecedented protests across many cities and even globally, but also evoked numerous demands for more research on the subject, among other institutional responses from the state and various agencies.

The declining CSR and the practice of sex selection, too, have been approached under the rubric of violence. This has ranged from the very notion of 'female foeticide' as an act of direct violence if not murder, bringing the millions of estimated missing girls close to if not within notions of genocide (comparable therefore to the holocaust in terms of scale), to broader conceptualizations of the cycle of violence that women are prone to, within which the pre-birth elimination of the female foetus (to use more politically correct language) is but one link in a chain. Here the unborn foetus is causally connected to the violence inflicted on the pregnant woman who must give birth to a son or else face consequences as dire as being abandoned, the unwanted daughter who suffers neglect leading to ill health if not death, and the daughter-in-law harassed for more dowry and even killed for it. The problem with such an approach is that its very repetitiveness prevents one from uncovering the confluence of factors contributing to the unique dynamic driving sex selection at the present time, and on the differences and disjunctions in the status of 'women', as discussed earlier in this review.

Other approaches view 'violence against women' as an umbrella for addressing gender discrimination, which has been promoted by the UN and several human rights organizations. Indeed, during her recent visit to India in May 2013, Rashida Manjoo, the UN Special Rapporteur on Violence against Women made it a point to listen to the many manifestations of violence brought out by women's organizations - in public spaces, in the family and in the workplace. According to the statement circulated at the end of her visit, this is what she said on the subject of adverse sex ratios:

"I am also concerned about the declining female sex ratio in India. The deeply entrenched patriarchal social norms, prevailing views of daughter-aversion and

son-preference, the dowry-related link, and, the general sense of insecurity in light of high prevalence rates of gender-based violence, is fuelling a significant drop in female births throughout the country. The Indian Government's concern about this issue has resulted in the adoption of policies and schemes. The implementation of such interventions is resulting in the policing of pregnancies through tracking/ surveillance systems and is resulting in some cases in the denial of legal abortion rights, thereby violating the sexual and reproductive rights of women."

The work of historians, demographers and anthropologists considered in this review who have looked at trends both in India and in other Asian contexts attests to the extent to which property such as land, changing occupations and dependency on agriculture, the devaluation of women's labour, the growth of an increasingly monetized economy, the rise of an urbanizing middle class, and so on, have played a direct role in how families are 'planned', both before and after the availability of contraception and medical technologies of sex selection.

Within the ambit of a frame of violence, this is an important statement because it goes beyond the usual limits to include violations by the state in the very act of combating sex selection.

The third perspective to be considered is that of 'political economy'. This term has been used variably, sometimes as simply implying an emphasis on the economic as opposed to the cultural dimensions of understanding society, and sometimes as way of indicating a socialist if not Marxist approach. The sense in which it is being used here is that of trying to make enough room for structural factors including economic ones, in understanding the forces that are shaping family dynamics and sex ratio patterns. Reductive versions of this approach focus primarily on women's work as the only major factor to consider. We have already seen from studies beginning with Barbara Miller how this led to various contradictions. However, this does not mean that the hugely significant terrain of relationships between status and labour in the context of India should therefore not be taken into account. A weakness in several studies has been to jump from the realm of 'work' as the determinant of women's lack of value to focusing on women's status in the family, taken as the domain of 'culture'. Equally necessary, and missing in a whole range of analyses, are considerations of the economic growth trajectory that has characterized patterns of development, both urban and rural, in countries like India and elsewhere. In particular we lack any real sense of changing class formations and class fractions, and have been operating with rather loose notions of poverty and prosperity, rural backwardness and urban advancement. One of the complex aspects of the declining sex ratio involve its disaggregation into changing trends in infant and child mortality, female infanticide and sex selection, including relating these to different groups and classes. It would be overly simplistic to align high levels of mortality with poverty and growing sex selection via medical technologies with prosperity. What such dichotomies fail to grasp is precisely the dynamic and conflicted nature of the process across generations as they strive to 'match'

resources with family size and gender in their struggle to survive or aspire for a better life, and their determinants. This is a quintessentially economic issue buffeted no doubt by social practices and norms. The work of historians, demographers and anthropologists considered in this review who have looked at trends both in India and in other Asian contexts attests to the extent to which property such as land, changing occupations and dependency on agriculture, the devaluation of women's labour, the growth of an increasingly monetized economy, the rise of an urbanizing middle class, and so on, have played a direct role in how families are 'planned', both before and after the availability of contraception and medical technologies of sex selection. This kind of effort needs to be strengthened, especially to explain more recent trends. In the last two decades when CSRs began to seriously plummet in India, the relationship with current patterns of 'neo-liberal' economic growth remain poorly understood and require careful mediation. We therefore urgently need accounts that connect state policies with regional and local patterns of development (both urban and rural) and, further, to how they impact on differentially situated families and the 'decisions' they make about children. Vice versa, we know too little about how family members 'cost' their children in relation to their understanding of the economic and social prospects of a son or daughter, beyond standard talk of son preference.

(b) Domains of Research

In the context of the above discussion, further research needs to fruitfully take on the different domains and institutions that are caught up one way or another in aiding sex selection or possibly in combating the practice. We must begin with the families themselves, their members across age, generation and gender, especially the relationships between younger and older members. It is worth mentioning here that the study of children remains a marginal one, whether in the social sciences more generally or in women's/gender studies. Both sons and daughters in present day India, rural and urban, are the focus of intense 'planning' by elders, and, of course, the state, and are growing up into adulthood within a confluence of enormous pressures. Never before has the family form and its members been so individualized, never before have the youth of the nation been promised so much economic, cultural and sexual agency, while simultaneously being at the centre of the widest possible range of constraints. One of the revealed effects of the combination of son preference and daughter aversion under conditions of fertility decline is the small proportion of daughter only families. This was starkly revealed in the study cited earlier (John et al 2008) where the proportion of families with only girls ranged from 2% to 6%. Could, perhaps the shifting trends in CSRs as evinced in 2011 Census figures be tracked in relation to corresponding changes in the presence of girl only families, which are, for whatever reason, not engaging in sex selection?

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Families and more particularly marriage are also at the heart of concern over the consequences of skewed sex ratios as this becomes perceptible in adult populations. Much of this literature dwells on the problems of 'gender imbalance' already discussed earlier on. One cannot help but remark on the 'imbalance' in this very focus on gender imbalance – that is to say, one hears very little about populations with excess women, and much more about those with surplus men (See also Dyson 2012). Be that as it may, while the presence of surplus men has been on the agenda of nations such as China for some time since the problem there is now at its height, this issue has come to the attention of activists and researchers in India more recently, but is likely to take up more space in the years to come. For a discussion of different approaches to the consequences of adverse sex ratios in comparative perspective see Kaur (2013).

The next domain for consideration is education – both schooling and higher education. This might seem an odd choice and hardly one that should occupy a prominent place in thinking about sex ratios. One of the most counter-intuitive aspects in thinking about gender discrimination is the link with education (John 2012). The sphere of education has suffered deeply from a lack of attention, whether from scholars or activists, which is coming home to roost today. It is probably the only indicator of steady progress in a country characterized by some of the lowest literacy rates in the world, a country which only in 2010 was able to make elementary schooling a fundamental right for all. It is not sufficiently well known that those regions that have led the way as far as declining CSRs are concerned have witnessed some of the greatest increases in access to education for girls and women. Indeed, most counter-intuitive of all, those very regions that underwent huge plunges in their CSRs and sex ratios at birth in the 1990s as per 2001 Census data (Punjab, Haryana, Chandigarh, Delhi, Himachal Pradesh) had not only very high rates of literacy and schooling, but even reported proportionately greater gross enrolment ratios in higher education among girls than boys. This clearly goes against the usual picture of lower levels of education and higher dropout rates among girls. In other words, even as fewer girls are being born in these regions, a greater proportion of these have been finding their way into colleges and institutes beyond high school, at times beyond those of boys in their age cohorts. At the very least this should make us pause before ascribing unilateral explanations in terms of 'violence against women'. It is suggested that we need to foreground a third 'market', namely that of education. It cannot be viewed in isolation, but needs to be brought into play along with the markets of work and marriage, intersected by the structures of class, caste and community, in order to explore the different life chances and futures of young people today.

The institutions and personnel directly mediating sex ratios at birth via sex selection are the clinics and medical practitioners, which brings us to the next domain for consideration. According to some activists, the role of these clinics backed by multinational capital pushing the new technologies must be given full priority. Others have warned that a focus on doctors and the criminalization of sex selection will ultimately only have negative consequences on women's access to abortions as such. This is an area sorely lacking in research over all, and one that poses many challenges, including ethical ones. 'Studying up', namely attempting to study domains that enjoy relative power in relation to the researcher are by their

very nature few and far between, and this is the case here as well. The medical world has in any case been notoriously averse to claiming any real accountability on the whole question of sex selection, with the important exception of individual doctors and progressive associations such as Medico-Friends Circle. Some of the sharpest differences are to be found here. On the one hand, some advocate the wholesale ban of medical technologies such as ultrasound for ante-natal and pre-natal care in order to halt the practice of sex selection, believing that gender discrimination is as old as history and here to stay. Others believe on the contrary that sex selection is not the site where change can be effected (fight gender discrimination in society instead they say), and who see the greatest danger in the abrogation of women's right to abortion, which should be respected whatever the nature or sex of the foetus. In the midst of all these claims and counter claims, it is worth noting therefore how little is known about abortion practices in India. As mentioned earlier in this review they have only attained some visibility in the wake of the concern over 'missing girls'. It is a fact that the medical establishment is deeply mired within social norms and practices – indeed there are studies on the sex ratios of children of medical doctors and gynaecologists, whose skew makes it undeniable that they are guilty of practicing sex selection for themselves. More attention at the levels of research, advocacy and medical education are sorely needed. This would include the burgeoning field of assisted reproduction in all its forms, from pre-selection via IVF to surrogacy.

The next domain for consideration is that of women's labour and employment. In the wake of the globalization of the Indian economy in recent years, there has been renewed interest in women's work. This is an area that had suffered relative neglect after the considerable range of development studies in the 1970s and 80s especially by economists. During what might be called the developmental era, scholars placed various emphases on the poor performance of the Indian state, the low rates of economic growth, the 'semi-feudal semi-colonial' modes of production, and so on, all of which only exacerbated the widespread failure to give women's labour its due, whether at the national level or in the household. One of the unanticipated characteristics of the new labour regimes under conditions of flexible accumulation during the 1980s and

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90s that supplanted state led and welfarist efforts of employment generation, was the phenomenon of 'feminization' of work forces, as older jobs shrunk and women were even the new preferred worker. In India (and here the picture is in marked contrast to other Asian nations such as China and South Korea) the gendered nature and form of the employment scenario has been hotly debated. Till 2005 the only signs of feminization were in agriculture, as rural men sought out other avenues of employment. In urban India the major growth areas for women workers have been in school teaching and in domestic work, and in the manufacturing sectors there have even been actual

declines of a significant magnitude. This is the context within which questions of women's relationship to the labour market and potential for autonomy in relation to the familial domain have to be located. Moreover, it has been argued elsewhere, that India not only has to contend with the high degree of unpaid labour that women perform but also with the caste-based stigmatization of public labour that has fundamental social, sexual, and economic consequences for thinking about the value of women's work (John 2013).

It is believed that this complex scenario is not getting the attention it deserves and that discussions focusing overwhelmingly on violence must factor this in. The point is not simply that we have one of the lowest work participation rates for women in the world but that this continues to be the case in the twenty first century when certain norms about the 'new woman' ostensibly equipped with social, sexual and financial agency are being produced and circulated widely. We require more micro level understandings of the relationship between different employment enclaves, and the conflicting norms with and against which different women are seeking some freedom and security for themselves. Whether in the stagnating worlds of agriculture or animal husbandry, the ever shrinking manufacturing sector, the much sought after though vanishing government job, or the volatile service sector, what avenues are open to families who do imagine a future for their daughter beyond marriage? And if this does not seem to be on the horizon, how far do they go to ensure her 'happiness' as this is being currently defined?

If on the one side these are the domains that are shaping practices of sex selection directly or more often than not indirectly, there are, on the other side, all those who are engaged in combating this practice. First are the institutions of the state, its laws and policies which have been extensively discussed in this review. What is the picture at this time with regard to these? What of campaigns that have been conducted – whether by organizations, locally or internationally funded NGOs? What agendas fuel them? And last but not the least, what of religious leaders and organizations that have spoken out against this practice? In all of these, research remains sparse and considerable reliance so far has been placed on anecdotal evidence and occasional media coverage.

(c) Regions and Sites in Space and Time

Finally, research must contend with the high degree of regional variation in CSR patterns and in the prevalence of sex selection. These differences have been mapped across the country and have been brought out in the Tables in the Appendix and in the brief discussion above on the statistical picture with the help of Graphs. In the course of the review, we have discussed the 'leadership' of the north-west and the more anomalous situation in a few districts of Tamil Nadu, anomalous because they do not affect the average figures of this state. These have been the most studied regions so far both at the macro and micro levels.

We have also discussed some of the new developments indicated by the 2011 Census data. As the very worst states appear to be peaking, the rest are declining as the practice of sex selection spreads. International comparisons were also brought into the frame to suggest that here too insights have been gained by going beyond the problem within India. Thus new directions of research could focus, on the one hand, on regions that have not been at the centre of attention

so far – including regions in the south. Indeed 'new' areas within the country, such as districts where the CSRs dropped significantly according to Census 2011 data, would be particularly productive for understanding what is happening to make families go in for sex selection at this point in time. New regions in Asia too – Central and South East Asia – would also be extremely interesting, especially those that moved out of socialist societies.

But regions where some improvements have happened in the last decade also need careful follow up. How might such change be evaluated and what significance attached to it? Just as we have postulated the reasons and justifications that propel families into sex selection under social and economic constraints while pressing for upward mobility, it is necessary to ask ourselves whether change in the opposite direction, namely families who no longer worry about the sex composition of their children or are even happy to have daughters are more than just exceptions. As we move closer and closer to the small family norm, whether due to the actions of the state or due to the 'choices' that people now are making in favour of having just one or two children, this brings up once again the possible insights to be gained from daughter only families, in contrast to others, for instance. At the level of consequences of prior histories of sex selection, in regions already adapting to low sex ratios among adults such as Haryana, Punjab and Uttar Pradesh, there are a few accounts, mostly with very small numbers, of changing practices among men who cannot find brides according to conventional norms of community and caste. Some paint scenarios of coercive trafficking, of women being brought against their will while others see a more ambivalent process at work as women who share next to nothing by way of culture or language enter these households as wives and daughters-in-law.

One definite bias in most studies so far is the paucity of research on urban locations and their dynamics, whether of smaller towns, larger cities and metros. In India, in interesting contrast to countries like South Korea or China, the practice of sex selection began in urban cities. To date, (see Table 4 in the Appendix) though there is a clear spread of the practice into rural India, urban India continues to display some of the worst CSRs. And yet there has been much more work on rural India, whether this be the Gounder or Kallar communities of Tamil Nadu, the Jat Sikh farmers of the Punjab, the violence in Khap panchayat ridden Haryana, or more recent demographic changes among rural families in Himachal Pradesh. With a few exceptions (John et al 2008; Patel 2007) there has not been much focus on urban sites. This bias is compounded by the lack of studies on the non-poor, especially the so-called middle and upper classes. An obvious reason is that it is much harder to access information about the better off sections of our society – indeed, even our data sets are geared to studying poverty (see John 2005). Moreover, the state has only compounded the problem by scrambling the adverse CSR with its anti-poverty schemes and population control agendas. As we have seen, one of the biggest conundrums of all has been the close correlation between 'positive' indicators of development such as education, age at marriage and adverse CSRs. Therefore, studying the non-poor would be a definite area for further research.

Thus, to conclude, while there is much that we still do not know, there are many fruitful directions to take our thought and practice forward.

APPENDIX

TABLE 1: CHILD SEX RATIOS (CSRs) AND OVERALL SEX RATIOS (OSR)

	CSR and OSR						
	1951	1961	1971	1981	1991	2001	2011
Overall Sex Ratio (OSR)	**946**	**941**	**930**	**934**	**927**	**933**	**943**
Child Sex Ratio (CSR)	983	976	964	962	945	927	918

Source: Census of India, 1961, 1981, 2001 & 2011.

	Decline in CSR and OSR						
	1951	1961	1971	1981	1991	2001	2011
Overall Sex Ratio (OSR)		-5	-11	4	-7	6	10
Child Sex Ratio (CSR)		-7	-12	-2	-17	-18	-9

Source: Census of India, 1961, 1981, 2001 & 2011.

TABLE 2: STATE WISE OVERALL SEX RATIOS, 1951-2011

	State-wise Sex Ratio (Female per 1000 Males) in India {As per 1951 to 2011 Census}											
	Census year											
	1901	1911	1921	1931	1941	1951	1961	1971	1981	1991	2001	2011
India	972	964	955	950	945	946	941	930	934	927	933	943
North States												
Uttar Pradesh	938	916	908	903	907	908	907	876	882	876	898	912
Uttarakhand	NA	NA	NA	NA	NA	NA	NA	NA	NA	936	964	963
Himachal Pradesh	884	889	890	897	890	912	938	958	973	976	970	972
Jammu & Kashmir	882	876	870	865	869	873	878	878	892	896	900	889
Punjab	832	780	799	815	836	844	854	865	879	882	874	895
Haryana	867	835	844	844	869	871	868	867	870	865	861	879
Delhi	862	793	733	722	715	768	785	801	808	827	821	868
West States												
Rajasthan	905	908	896	907	906	921	908	911	919	910	922	928
Gujarat	954	946	944	945	941	952	940	934	942	934	921	919
Maharashtra	978	966	950	947	949	941	936	930	937	934	922	929
Madhya Pradesh	972	967	949	947	946	945	932	920	921	912	920	931
East States												
Bihar	1061	1051	1020	995	1002	1000	1005	957	948	907	921	918
Jharkhand	NA	NA	NA	NA	NA	NA	NA	NA	NA	922	941	948
Chhatisgarh	NA	NA	NA	NA	NA	NA	NA	NA	NA	985	990	991

	State-wise Sex Ratio (Female per 1000 Males) in India {As per 1951 to 2011 Census}											
	Census year											
	1901	1911	1921	1931	1941	1951	1961	1971	1981	1991	2001	2011
Odisha	1037	1056	1086	1067	1053	1022	1001	988	981	971	972	979
West Bengal	945	925	905	890	852	865	878	891	911	917	934	950
North East States												
Assam	919	915	896	874	875	868	869	896	910	923	932	958
Arunachal Pradesh	NA	NA	NA	NA	NA	NA	894	861	862	859	901	938
Meghalaya	1036	1013	1000	971	966	949	937	942	954	955	975	989
Manipur	1037	1029	1041	1065	1055	1036	1015	980	971	958	978	992
Nagaland	973	993	992	997	1021	999	933	871	863	886	909	931
Sikkim	916	951	970	967	920	907	904	863	835	878	875	890
Tripura	874	885	885	885	886	904	932	943	946	945	950	960
Mizoram	1113	1120	1109	1102	1069	1041	1009	946	919	921	938	976
South States												
Kerala	1004	1008	1011	1022	1027	1028	1022	1016	1032	1036	1058	1084
Tamil Nadu	1044	1042	1029	1027	1012	1007	992	978	977	974	986	996
Karnataka	983	981	969	965	960	966	959	957	963	960	964	973
Andhra Pradesh	985	992	993	987	980	986	981	977	975	972	978	993
Union Territories Excluding Delhi												
A & N Island	318	352	303	495	574	625	617	644	760	818	846	876
Dadra Nagar Haveli	960	967	940	911	925	946	963	1007	974	952	811	774
Daman Diu	995	1040	1143	1088	1080	1125	1169	1099	1062	969	709	618
Lakshadweep	1063	987	1027	994	1018	1043	1020	978	975	943	947	946
Pondicherry	NA	1058	1053	NA	NA	1030	1013	989	985	979	1001	1037
Goa	1091	1108	1120	1088	1084	1128	1066	981	975	967	960	973
Chandigarh	771	720	743	751	763	781	652	749	769	790	773	818

TABLE 3: SEX RATIO OF CHILD POPULATION IN AGE GROUP (0-6 YEARS): (1981-2011)

	1971	1981	1991	2001	2011	Decline in 2011 over 2001	Decline in 2001 over 1991	Decline in 1991 over 1981	Decline in 1981-1971
All India	**964**	**962**	**945**	**927**	**918**	**-9**	**-18**	**-17**	-2
North States									
Uttar Pradesh	923	935	927	916	902	**-14**	**-11**	**-8**	12
Uttarakhand	-	-	949	908	890	**-18**	**-41**		
Himachal Pradesh	981	971	951	896	909	**13**	**-55**	**-20**	-10
Jammu & Kashmir	959	964	N.A	941	862	**-79**			5
Punjab	899	908	875	798	846	**48**	**-77**	**-33**	9
Haryana	899	902	879	819	834	**15**	**-60**	**-23**	3

	1971	1981	1991	2001	2011	Decline in 2011 over 2001	Decline in 2001 over 1991	Decline in 1991 over 1981	Decline in 1981-1971
Delhi	909	926	915	868	871	**3**	**-47**	**-11**	17
Chandigarh	892	907	899	845	880	**35**	**-54**	**-8**	15
West States									
Rajasthan	932	954	916	909	888	**-21**	**-7**	**-38**	22
Gujarat	946	947	928	883	890	**7**	**-45**	**-19**	1
Maharashtra	972	956	946	913	894	**-19**	**-33**	**-10**	-16
Madhya Pradesh	976	977	941	932	918	**-14**	**-9**	**-36**	1
Goa	964	965	964	938	942	**4**	**-26**	**-1**	1
East States									
Bihar	964	981	953	942	935	**-7**	**-11**	**-28**	17
Jharkhand	NA	-	979	965	948	**-17**	**-14**		
Chhatisgarh	NA	-	984	975	969	**-6**	**-9**		
Odisha	1020	995	967	953	941	**-12**	**-14**	**-28**	-25
West Bengal	1010	981	967	960	956	**-4**	**-7**	**-14**	-29
North East States									
Assam	1002	*	975	965	962	**-3**	**-10**		
Arunachal Pradesh	968	997	982	964	972	**8**	**-18**	**-15**	29
Meghalaya	992	991	986	973	970	**-3**	**-13**	**-5**	-1
Manipur	986	986	974	957	936	**-21**	**-17**	**-12**	0
Nagaland	991	988	993	964	943	**-21**	**-29**	**5**	-3
Sikkim	1087	978	965	963	957	**-6**	**-2**	**-13**	-109
Tripura	977	972	967	966	957	**-9**	**-1**	**-5**	-5
Mizoram	NA	986	969	964	970	**6**	**-5**	**-17**	
South States									
Kerala	978	970	958	960	964	**4**	**2**	**-12**	-8
Tamil Nadu	974	967	948	942	943	**1**	**-6**	**-19**	-7
Karnataka	976	975	960	946	948	**2**	**-14**	**-15**	-1
Andhra Pradesh	990	992	975	961	939	**-22**	**-14**	**-17**	2

*Census was not conducted, ** In 1981, Daman & Diu figures have been included in Goa.

Sources: Census of India, 2011: Total Population; Provisional Figures.

Census of India, 2001, series-I, India: Primary Census Abstract, Total Population: Table A-5

Census of India, 1991; Series I-India, Part IV A-C Series; Socio-Cultural Tables, Vol-I and II

Census of India, 1981, Series-I-India, part IV A, Social and Cultural Tables, (Tables C - I to C - II)

Note:

For 1971, the figure of Goa includes Daman & Diu

The figures of Bihar, Madhya Pradesh and Uttar Pradesh for 1971 and 1981 include the figures of Jharkhand, Chhattisgarh and Uttaranchal, respectively.

For Jammu & Kashmir, 1991 Census data is not available

The 2001 figure for Manipur excludes figures of Paomata, Mao Maram and Purul Sub Divisions of Senapati district

TABLE 4: OVERALL SEX RATIO- STATE-WISE – 2001 & 2011

							Difference in 2001-11		
	Rural		Urban		Total		Rural	Urban	Total
	2001	2011	2001	2011	2001	2011	2001-11	2001-11	2001-11
All India	**946**	**949**	**900**	**929**	**933**	**943**	3	29	10
North States									
Uttar Pradesh	904	918	876	894	898	912	14	18	14
Uttarakhand	1007	1000	845	884	962	963	-7	39	1
Himachal Pradesh	989	986	795	853	968	972	-3	58	4
Jammu & Kashmir	917	908	819	840	892	889	-9	21	-3
Punjab	890	907	875	875	876	895	17	0	19
Haryana	866	882	847	873	861	879	16	26	18
Delhi	810	852	822	868	821	868	42	46	47
West States									
Rajasthan	930	933	890	914	923	928	3	24	5
Gujarat	945	949	880	880	920	919	4	0	-1
Maharashtra	960	952	873	903	922	929	-8	30	7
Madhya Pradesh	927	936	898	918	919	931	9	20	12
East States									
Bihar	926	921	868	895	919	918	-5	27	-1
Jharkhand	962	961	870	910	941	948	-1	40	7
Chhatisgarh	1004	1001	932	956	989	991	-3	24	2
Odisha	987	989	895	932	972	979	2	37	7
West Bengal	950	953	893	944	934	950	3	51	16
North East States									
Assam	944	960	872	946	935	958	16	74	23
Arunachal Pradesh	914	953	819	890	893	938	39	71	45
Meghalaya	969	986	982	1001	972	989	17	19	17
Manipur	963	976	1009	1026	974	992	13	17	18
Nagaland	916	940	829	908	900	931	24	79	31
Sikkim	880	882	830	913	875	890	2	83	15
Tripura	946	955	959	973	948	960	9	14	12
Mizoram	923	952	948	998	935	976	29	50	41
South States									
Kerala	1059	1078	1058	1091	1058	1084	19	33	26
Tamil Nadu	992	993	982	1000	987	996	1	18	9
Karnataka	977	979	942	963	965	973	2	21	8
Andhra Pradesh	983	996	965	987	978	993	13	22	15
Union Territories Excluding Delhi									
A & N Island	861	877	815	874	846	876	16	59	30
Dadra Nagar Haveli	852	863	691	682	812	774	11	-9	-38
Daman Diu	586	864	984	551	710	618	278	-433	-92
Lakshadweep	959	952	935	945	948	946	-7	10	-2
Pondicherry	990	1028	1007	1042	1001	1037	38	35	36
Goa	988	1003	934	956	961	973	15	22	12
Chandigarh	621	690	796	822	777	818	69	26	41

Sources: Census of India, 2011: Total Population; Provisional Figures.

Census of India, 2001, series-I, India: Primary Census Abstract, Total Population: Table A-5

TABLE 5: CHILD SEX RATIO 2001 AND 2011 RURAL URBAN

	CSR 1991			CSR 2001			CSR 2011			Difference in CSR 2011 & 2001			Difference in CSR 2001 & 1991		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
All India	**945**	**948**	**935**	**927**	**934**	**906**	**918**	**923**	**905**	**-9**	**-11**	**-1**	**-18**	**-14**	**-29**
North States															
Uttar Pradesh	927	926	928	916	921	890	902	906	885	-14	-15	-5	-11	-5	-38
Uttarakhand	949	952	936	908	918	872	890	899	868	-18	-19	-4	-41	-34	-64
Himachal Pradesh	951	955	904	896	900	844	909	912	881	13	12	37	-55	-55	-60
Jammu & Kashmir	Census not held			941	957	873	862	865	850	-79	-92	-23		957	873
Punjab	875	878	866	798	799	796	846	844	852	48	45	56	-77	-79	-70
Haryana	879	877	884	819	823	808	834	835	832	15	12	24	-60	-54	-76
Delhi	915	900	917	868	850	870	871	814	873	3	-36	3	-47	-50	-47
West States															
Rajasthan	916	919	909	909	914	887	888	892	874	-21	-22	-13	-7	-5	-22
Gujarat	928	936	909	883	906	837	890	914	852	7	8	15	-45	-30	-72
Maharashtra	946	953	934	913	916	908	894	890	899	-19	-26	-9	-33	-37	-26
Madhya Pradesh	941	944	931	932	939	907	918	923	901	-14	-16	-6	-9	-5	-24
East States															
Bihar	953	953	950	942	944	924	935	938	912	-7	-6	-12	-11	-9	-26
Jharkhand	979	985	950	965	973	930	948	957	908	-17	-16	-22	-14	-12	-20
Chhatisgarh	984	988	960	975	982	938	969	977	937	-6	-5	-1	-9	-6	-22
Odisha	967	969	949	953	955	933	941	946	913	-12	-9	-20	-14	-14	-16
West Bengal	967	969	955	960	963	948	956	959	947	-4	-4	-1	-7	-6	-7
North East States															
Assam	975	977	955	965	967	943	962	964	944	-3	-3	1	-10	-10	-12
Arunachal Pradesh	982	986	946	964	960	980	972	975	957	8	15	-23	-18	-26	34
Meghalaya	986	989	968	973	973	969	970	972	954	-3	-1	-15	-13	-16	1
Manipur	974	975	972	957	956	961	936	931	949	-21	-25	-12	-17	-19	-11
Nagaland	993	1001	959	964	969	939	943	933	973	-21	-36	34	-29	-32	-20
Sikkim	965	967	936	963	966	922	957	964	934	-6	-2	12	-2	-1	-14
Tripura	967	968	959	966	968	948	957	960	947	-9	-8	-1	-1	0	-11
Mizoram	969	973	965	964	965	963	970	966	974	6	1	11	-5	-8	-2
South States															
Kerala	958	958	958	960	961	958	964	965	963	4	4	5	2	3	0
Tamil Nadu	948	945	955	942	933	955	943	936	952	1	3	-3	-6	-12	0
Karnataka	960	963	951	946	949	940	948	950	946	2	1	6	-14	-14	-11
Andhra Pradesh	975	979	962	961	963	955	939	941	935	-22	-22	-20	-14	-16	-7
Union Territories Excluding Delhi															
A & N Island	973	973	970	957	966	936	968	976	954	11	10	18	-16	-7	-34
Dadra Nagar Haveli	1013	1015	977	979	1003	888	926	970	872	-53	-33	-16	-34	-12	-89
Daman Diu	958	933	996	926	916	943	904	932	894	-22	16	-49	-32	-17	-53
Lakshadweep	941	951	932	959	999	900	911	911	911	-48	-88	11	18	48	-32
Pondicherry	963	963	962	967	967	967	967	953	975	0	-14	8	4	4	5
Goa	964	972	953	938	952	924	942	945	940	4	-7	16	-26	-20	-29
Chandigarh	899	910	897	845	847	845	880	871	880	35	24	35	-54	-63	-52

Sources: Census of India, 2011: Total Population; Provisional Figures.

Census of India, 2001, series-I, India: Primary Census Abstract, Total Population: Table A-5

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