Reference Materials - I

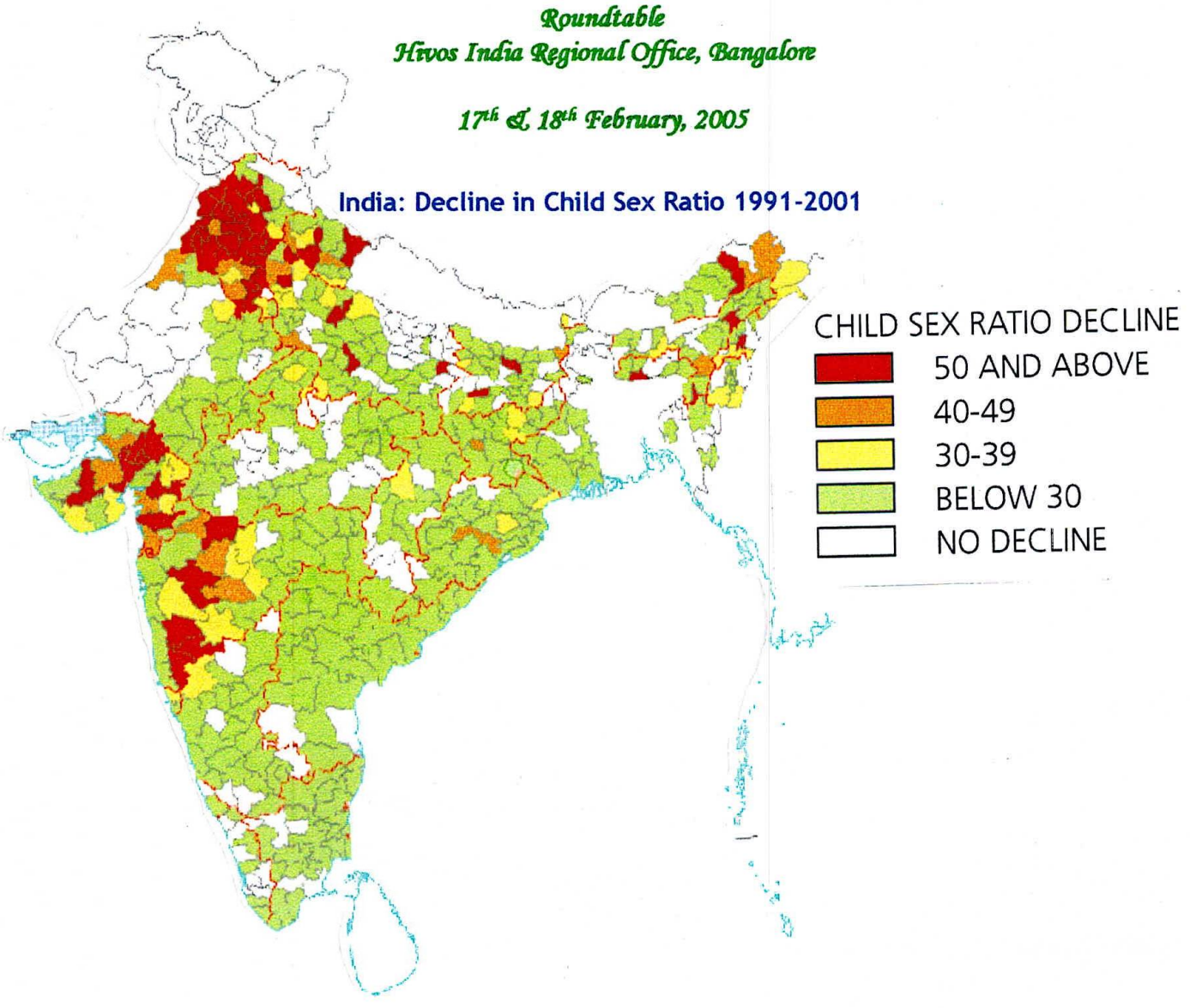
SEX SELECTION IN INDIA: ISSUES AND APPROACHES

SEX SELECTION IN INDIA: ISSUES AND APPROACHES

Roundtable
Hivos India Regional Office, Bangalore

17th & 18th February, 2005

India: Decline in Child Sex Ratio 1991-2001



Source: Missing: Mapping the Adverse Child Sex Ratio in India, compiled by the Office of India's Registrar - General and Census Commissioner, the Ministry of Health and Family Welfare, and UNFPA.

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Background Note for the Roundtable

Roundtable on Sex Selection in India: Issues and Approaches
Hivos India Regional Office
17th – 18th February, 2005
Bangalore

Introduction

Hivos (Humanist Institute for Cooperation with Developing Countries) supports many institutions in the voluntary sector in India which have been addressing issues of women's equality in their communities. Hivos' work in the country is determined by its partners' priorities and shared commitments. The Hivos India Regional Office in collaboration with its partners, its activist friends and fellow development specialists felt it would be useful to invite representatives of its partner and non-partner organizations, members of the medical and legal fraternities, media representatives, and members of the Government to deliberate on the deteriorating situation of women in the country with special focus on the cluster of issues centered around sex selection in India. Various factors that have a bearing on the issue have been discussed - patriarchy, son preference, attitudes and beliefs that discriminate against girl children, population policies, medical ethics, violence against women and legal reforms. The practice of elimination of girl children must be stopped and this is possible only through a convergence of social action and social commitment that brings together different actors and institutions with their own responsibilities and expertise. How can we carry forward in social and political practice a history of serious actions that will lead to fundamental changes in the present social systems of increasing gender inequality and the practice of sex selection?

In this meeting we hope to draw on the wisdom of earlier meetings to map the contours of the challenges as they stand now, to pinpoint the similarities and the differences in approaches and to sharpen the dialogue on future strategies which will put an end to this state of affairs.

The Process

In 1992 this office of Hivos held a national meeting on the position of women in India in association with the Centre for Women's Development Studies. That was the beginning of focused efforts to work with partner organisations that were committed to the establishment and realization of women's rights. We have learnt a great deal from CWDS and from our partners' stands on issues pertaining to women's equality and position in social life. This meeting is a result of the several dialogues we have held with different organizations and individuals. In many ways this meeting is being convened by all the members present! As a preparation for this meeting, Dr. Sabu George from CWDS was kind enough to agree to draft a report which can be widely disseminated to partner and other community organizations after this meeting.

Many participants have forwarded useful material; a selection of these documents will be put together in a reference materials folder for all participants. Key articles and press write-ups will be circulated to our partner organisations. Based on discussions at the roundtable, Hivos intends to bring out a final report.

Issues

It is clear from anecdotal evidence, testimonies of women and press reports that there is concern about the growing climate of discrimination against women in India and about the specific collusion between parties which culminates in the commission of atrocities against women and girl children. Both these aspects have to be addressed – the environment that condones collusion and the act of collusion itself. Regarding the first, one is compelled to question whether the women's movement has been proactive enough about safeguarding the interests of the girl child. The issue of the girl child came into prominence in the eighties, not before that. In the years since then, though there have been ongoing attempts to raise awareness in different spheres of society, the situation prevailing today demonstrates that the issue has not been internalized adequately by all concerned – perhaps even in the women's movement. Similarly, the child rights lobby has not seriously looked at gender in childhood. Women's organizations have expressed a need for stronger advocacy for the girl child by all actors.

The present sex ratio imbalance could not have happened without the highly unfortunate relationships of convenience and connivance that have developed between medical professionals and those seeking their services. Despite existing safeguards in the legislation against misuse of medical technology, the problem of sex selection persists in an environment of traditional-patriarchal values, just as do child marriage and dowry. This environment makes the issue of redressal and social change a highly complex and several leveled issue. The weakness in the implementation of social legislation is well known not only in the area of gender but also in areas such as child labor, untouchability and dalit rights. Again, in order to really make an impact, we must look at both levels – the environment that creates the strong demand for sex selection, and the inability of legal mechanisms to regulate the actors who cater to that demand with a ready supply of technology and services. Intervention strategies should address both demand and supply, but how to sequence or synchronize? Both are essential; perhaps different groups with different approaches are needed, but focusing on the basic fault line.

While attempting to analyze the efforts made during the past two decades to address the problem of sex selection, we realize that

- Single issue campaigns leading to highly critical changes in law and society need to be understood and replicated.
- Wider environments of neglect and derogatory attitudes towards women resulting in the lowering of full citizenship rights need to be explored and understood so that community-level activists can design campaigns to effect sweeping changes in health services, health care accessibility, availability of reproductive health rights information to women and men everywhere, and the premises on which inequality is built - prejudices that assume the stature of facts and norms in social life.

Poverty, structural processes that result in the disempowerment of people and loss of their access to and control of resources have been central to Hivos' financial support. However, it is clear that the issues being discussed at this roundtable concern communities who may or may not belong to immiserised populations. Indeed this calls for differing forms of interventions and efforts at the field level and different kinds of efforts by social development organizations. The problem is so deep-rooted, spanning the household and community levels, that it offers multiple long-term challenges to social development organisations. While the law under Section 23 (2) of the PNDT Act makes the offence of sex determination a non-cognizable, non-bailable offence, the lax enforcement machinery robs the law of effectiveness. Purveyors of ultrasound equipment contribute to the ultimate dispensability of women by making the machines very easily available. The 'portability' of equipment also implies the 'invisibilisation' of the problem itself as far as localities, public policy, and regulatory mechanisms stand. The problem does not lie with technologies but in the indiscriminate use of them. The culture of social acceptance of sex selection and the willful practice of eliminating girl children speak of the wider, growing climate that perpetuates gender inequality. This is of particular concern given the rapid changes in technology that make regulation and control difficult. Thousands of institutions and individuals across the country are complicit in a crime that is tantamount to human rights violations of a kind that is likely to result in genocide as pointed out by many activists and scholars.

With the view of building a commonality of purpose and a shared sense of reality, the roundtable will try to foster a dialogue across the diversity of approaches, situations and interpretation. It is our hope that the specialists gathered at the roundtable will underscore the immediate and long term consequences of sex selection, and highlight of the magnitude of the problem as reflected in the 1991 and 2001 censuses. Other sessions will touch upon the central role of population policies and a "target-driven population control" agenda particularly when implemented in a patriarchal society. The two-child norm, and the focus on controlling 'numbers' is a feature of all state policies, accelerating the decline in girl children. Decline in quality and accessibility of reproductive health care services have also contributed to the state of affairs and the roundtable will focus on these aspects of social reconstruction of a more equal society.

The responses that have emerged to this range of violatory practices- social mobilisation, appeals to the judiciary for clear regulatory mechanisms, media campaigns, debates on ethical choice and the culpability of the medical profession (including incorporation of ethics in the medical education curriculum) and public policy advocacy will be of special interest at the roundtable. We hope that this discussion on responses will yield new insights on a question that is crucial for Hivos as a development institution and for all civil society actors:

How can broad-based community organizations working on classical issues of class, caste and gender divides join with the large number of social organizations already active on several aspects of this growing crisis?

This question needs to be addressed in the context of communities that are in flux, as a consequence of pervasive social change at multiple levels flowing from the processes of modernisation, golobalisation and sanskritisation.

We hope that this dialogue between single-agenda campaign leaders and representatives of community development organisations that draw on wider social bases will strengthen future strategies for political and social action.

In Conclusion

With these objectives in mind, we have drawn up a schedule for the roundtable that will provide time and space for exchange and intervention by all the participants. Differences of opinions must be understood and overcome so that a few non-negotiables can be drawn up by everyone. When talking to many of the participants we sensed that everyone wishes to come to some convergence of perceptions and actions. *In this sense this meeting may be jointly owned, convened and carried forward by all present. We hope that based on the analysis developed at the roundtable, recommendations for social action will emerge for everyone to take home.*

We look forward to meeting with all of you and we hope that this roundtable will be useful for activists across the country who are trying to change the world of growing divides, with special reference to the practice of sex selection. Free market logic, the logic of technical totalitarianism which ruthlessly promotes the technical fix to deep social issues, the exploitation of women's bodies for social ends not necessarily theirs, the minimalisation of women's identity in the social mapping of 'development and progress', the loss of historical memory when building the future by collective action, the threat of several fundamentalisms ...these are issues the women's movement has been struggling with. We respect that struggle and we would like to see how the issue of sex selection can be addressed further from the strength of the history of the women's movement. National attention needs to return more seriously (with sustained advocacy) to the rights of the girl child.

Hivos India Regional Office
7th February, 2005

Draft
Programme Schedule

Roundtable on Sex Selection in India: Issues and Approaches
Hivos India Regional Office
17th – 18th February 2005
Bangalore

THURSDAY 17 FEBRUARY 2005

09.30 – 09.40	**Welcome and Introduction** Jamuna Ramakrishna, Ireen Dubel and Shobha Raghuram
09.40 – 10.30	**Introductions** Participants will speak briefly about their work, gaps between theory and practice and what they look forward to in the workshop (2 mins each)

Session I:

Historical Overviews
(15 mins presentation followed by 30 mins discussion to be initiated by Respondent)

10.30–11.15	**Contextualising Sex Selection: Patriarchy, Position and Situation of Women** C.P. Sujaya
11.15-12.00	**What the Census Data Show** Satish Agnihotri
12.00-12.45	**Campaign Efforts and Public Interest Litigation** Sabu George
12.45-01:00	**Concluding Remarks by Chair** Chair: Vina Mazumdar Respondent: Malati Das
01.00 – 02.00	Lunch

Session II:

Diverse Responses: Campaigns, Social Mobilisation, Legal Reforms
(15 mins presentation followed by 15 mins discussion to be initiated by Respondent)

02.00 – 03.30	**Campaigns and Social Mobilisation** CASSA (Representative), Deepa Sinha, Lenin Raghuvanshi
03:30 - 03:45	**Concluding Remarks by Chair** Chair: Akhila Sivadas Respondent: Abha Bhaiya
03.45-04.00	**Tea Break**

04.00-05.00	**Legal Reforms** Ossie Fernandes, Kamayani Mahabal
05:00-05:15	**Concluding Remarks by Chair** Chair: Sabu George Respondent: Elizabeth Vallikad
06.45-07.30	**Steering Group Meeting**
08.00	**Dinner buffet at St. Mark's Hotel**

FRIDAY 18 FEBRUARY 2005

9.30 – 09.35	**Steering Group Spokesperson– Recap of Highlights (5 mins)**

Session III:

A Meeting Place of Diverse Worldviews and Perspectives

(15 mins presentation followed by 15 mins discussion to be initiated by Respondent)

09:35 – 11:30	**Women's Health** N.B. Sarojini **Campaign on PNDT Act in Gujarat** Trupti Shah **Effects of Two-Child Norm in Maharashtra** Audrey Fernandes **Maternal Health in Karnataka** Poornima Vyasulu Chair: Shoba Nambissan Respondent: Donna Fernandes
11:30-11:45	**Concluding Remarks by Chair**

Public Policy Advocacy

(10 mins presentation followed by 10 mins discussion to be initiated by Respondent)

11.45 – 12.45	**Sex Selection & Pre Birth Elimination of Girl Child** Vibhuti Patel **Civil Society Perspectives** Sanjeev Kulkarni **Role of Media in Shaping Public Policy** Akhila Sivadas **People's Health Assembly** Thelma Narayan

	Chair: H. Sudarshan Respondent: Basavaraj
12.45 – 01.00	**Concluding Remarks by Chair**
01.00 – 02.00	**Lunch**
	Small Group Discussions on Priorities, Strategies, Alliance Building
02.00 – 03.30	**Working Groups (11/2 Hrs)**
03.30 – 03.45	**Coffee/ tea break**
03.45 – 04.15	**Presentation of Reports** Chair: Ireen Dubel
04.15-04.45	**Discussion**
04.45- 05.00	**Concluding remarks by Chair**
	Concluding Session
05.00-05.30	**Open House Feedback Session**
	Final Comments Jamuna Ramakrishna, Vina Mazumdar, Shobha Raghuram
Vote of Thanks	Reena Fernandes

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Roundtable on Sex Selection in India: Issues and Approaches
Hivos India Regional Office
17th – 18th February 2005
Bangalore

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Kalpana Kannabiran

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Dr. Erma Manoncourt, Deputy Director, UNICEF-India Country Office

3. Rights of the Girl Child: Covered under Important National and International Instruments
CASSA

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2. Amendments to PNDT Act - Critical Appraisal of PNDT Act and Suggested Amendments
CASSA

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Dr. Reema Bhatia, University of Delhi

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P. Phavalam, Convenor, CASSA

Campaigns and Interventions

1. Tackling Female Infanticide: Social Mobilisation in Dharmapuri, 1997-99
Venkatesh Athreya, Sheela Rani Chunkath, Economic and Political Weekly, December 2, 2000

2. Indicators
CASSA

3. Public Interest Litigation Filed in Supreme Court
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4. Resolutions of Campaign against Sex Selective Abortion - Resolutions
CASSA

5. Monitoring the Declining Child Sex Ratio – a Suggested Method
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6. Minutes of the Two Days National Consultation on Enforcement of PCPNDT Act

Gender Inequality; Patriarchy - Broad Overviews, Analysis and History

Sex Selection & Pre Birth Elimination of Girl Child

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Presented at A Round Table on Sex Selection
organised by HIVOS, Banglore on 17-18, February, 2005

Abstract

Consumerist Culture oriented economic development, commercialisation of medical profession and sexist biases in our society, combined together have created a sad scenario of 'missing girls'. Global comparisons of sex ratios shows that Sex ratios in Europe, North America, Caribbean, Central Asia, the poorest regions of sub Saharan Africa are favourable to women as these countries neither kill/ neglect girls nor do they use NRTs for production of sons. The lowest sex ratio is found in some parts of India.

Deficit of women in India since 1901 -Violence against Women over the Life Cycle, from womb to tomb- female infanticide, neglect of girl child in terms of health and nutrition, child marriage and repeated pregnancy taking heavy toll of girls' lives- **Selective Elimination of Female Foetuses and selection of male at a preconception stage**-Legacy of continuing declining sex ratio in India in the history of Census of India has taken new turn with widespread use of new reproductive technologies (NRTs) in India. NRTs are based on principle of selection of **the desirable** and rejection of **the unwanted.** In India, the desirable is the baby boy and the unwanted is the baby girl. The result is obvious. The Census results of 2001 have revealed that with sex ratio of 927 girls for 1000 boys, India had deficit of 60 lakh girls in age-group of 0-6 years, when it entered the new millennium- **Female infanticide was practiced among selected communities, while the abuse of NRTs has become a generalised phenomenon encompassing all communities irrespective of caste, class, religious, educational and ethnic backgrounds.** Demographers, population control lobby, anthropologists, economists, legal experts, medical fraternity and feminists are divided in their opinions about gender implications of NRTs. NRTs in the context of patriarchal control over women's fertility and commercial interests are posing major threat to women's dignity and bodily integrity. The supporters of sex selective abortions put forward the argument of "Women's Choice" as if women's choices are made in social vacuum. In this context, the crucial question is-

Can we allow Asian girls to become an endangered species?

Prenatal Diagnostic Techniques Act was enacted in 1994 as a result of pressure created by Forum Against Sex-determination and Sex –preselection. But it was not implemented. After another decade of campaigning by women's rights organisations and public interest litigation filed by CEHAT, MASUM and Dr. Sabu George, The Pre-natal Diagnostics Techniques (Regulation and Prevention of Misuse) Amendment Act, 2002 received the assent of the President of India on 17-1-2003. The Act provides "for the prohibition of sex selection, before or after conception, and for regulation of pre-natal diagnostic techniques for the purposes of detecting genetic abnormalities or metabolic disorders or sex-linked disorders and for the prevention of their misuse for sex determination leading to female foeticide and for matters connected therewith or incidental thereto". The Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Amendment Rules, 2003 have activated the implementation machinery to curb nefarious practices contributing for MISSING GIRLS. We have a great task in front of us i.e. to change the mindset of doctors and clients, to create a

socio-cultural milieu that is conducive for girl child's survival and monitor the activities of commercial minded techno-docs thriving on sexist prejudices. Then only we will be able to halt the process of declining sex ratio resulting into deficit of girls/women.

Introduction

Asian countries are undergoing a demographic transition of low death and birth rates in their populations. The nation-states in S. Asia are vigorously promoting small family norms. India has adopted two-child norm and China has ruthlessly imposed 'one child per family' rule.

Historically, most Asian countries have had strong son-preference. The South Asian countries have declining sex ratios. This presentation tries to examine gendered socio-cultural and demographic implications of new reproductive technologies, with special focus on sex-determination and sex-pre-selection technologies.

Sex Ratios – A Global Scenario

Sex ratios in Europe, North America, Caribbean, Central Asia, the poorest region- sub Saharan Africa are favourable to women as these countries neither kill/ neglect girls nor do they use (New Reproductive Technologies) NRTs for production of sons. Only in the South Asia the sex ratios are adverse for women as the following table reveals. The lowest sex ratio is found in India.

Table 1- Women per 100 men

Europe & North America	105
Latin America	100
Caribbean	103
Sub Saharan Africa	102
South East Asia	100
Central Asia	104
South Asia	95
China	944
India	**93**

Source: The World's Women- Trends and Statistics, United Nations, NY, 1995

There is an official admission to the fact that "it is increasingly becoming a common practice across the country to determine the sex of the unborn child or foetus and eliminate it if the foetus is found to be a female. This practice is referred to as pre-birth elimination of females (PBEF). PBEF involves two stages: determination of the sex of the foetus and induced

termination if the foetus is not of the desired sex. It is believed that one of the significant contributors to the adverse child sex ratio in India is the practice of female foetuses." [1]

Historical Legacy of Declining Sex Ratio in India:

In the beginning of the 20th century, the sex ratio in the colonial India was 972 women per 1000 men, it declined by –8, -11, -5 and –5 points in 1911, 1921, 1931 and 1941 respectively. During 1951 census it improved by +1 point. During 1961, 1971, 1981 and 1991 it declined by –5, -11, -4, -7 points respectively. Eventhough the overall sex ratio improved by +6 points, decline in the juvenile sex ratio (0-6 age group) is of –18 points which is alarmingly high.

Table-2 Sex Ratio in India, 1901 to 2001

Year	Number of Women per 1000 Men	Decadal Variation
1901	972	
1911	964	- 8
1921	955	-11
1931	950	-5
1941	945	-5
1951	946	+1
1961	941	- 5
1971	930	-11
1981	934	- 4
1991	927	-7
2001	933	+6

Source: Census of India, 2001

Prof. Amartya Kumar Sen, in his world famous article "MISSING WOMEN", has statistically proved that during the last century, 100 million women have been missing in South Asia due to 'discrimination leading to death' experienced by them from womb to tomb in their life cycles.

Dynamics of Missing Women in the contemporary India

Legacy of continuing declining sex ratio in India in the history of Census of India has taken new turn with widespread use of new reproductive technologies (NRTs) in urban India. NRTs are based on principle of selection of **the desirable** and rejection of **the unwanted**. In India, the desirable is the baby boy and the unwanted is the baby girl. The result is obvious. The

[1] "Missing...Mapping the Adverse Child Sex Ratio in India", **Office of the Registrar General and Census Commissioner, India, Ministry of Health and Family Welfare and United Nations Population Fund, 2003**

Census results of 2001 have revealed that with sex ratio of 933 women for 1000 men, India had deficit of 3.5 crore women when it entered the new millennium.

Table-3 Demographic Profile

Population of India	102.7 crores
Males	53.1 crores
Females	49.6 crores
Deficit of women in 2001	**3.5 crores**
Sex ratio (no. of women per 1000 men)	**933**

Source: Census of India, 2001.

Political Economy of Missing Girls

The declining juvenile sex ratio is the most distressing factor reflecting low premium accorded to a girl child in India.[2] As per the Census of India, juvenile sex ratios were 971, 945 and 927 for 1981, 1991 and 2001 respectively. In 2001, India had 158 million infants and children, of which 82 million were males and 76 million were females. There was a deficit of 6 million female infants and girls. This is a result of the widespread use of sex determination and sex pre-selection tests throughout the country (including in Kerala), along with high rates of female infanticide in the BIMARU states, rural Tamilnadu and Gujarat. Millions of girls have been missing in the post independence period. According to UNFPA (2003) [3], 70 districts in 16 states and Union Territories recorded more than a 50point decline in the child sex ratio in the last decade.

To stop the abuse of advanced scientific techniques for selective elimination of female foetuses through sex -determination, the government of India passed the PNDT Act in 1994. But the techno-docs based in the metropolis, urban and semi-urban centres and the parents desirous of begetting only sons have subverted the act.

Sex determination and sex pre-selection, scientific techniques to be utilized only when certain genetic conditions are anticipated, are used in India and among Indians settled abroad to eliminate female babies. People of all class, religious, and caste backgrounds use sex determination and sex pre selection facilities. The media, scientists, medical profession, government officials, women's groups and academics have campaigned either for or against their use for selective elimination of female foetuses/ embryo. Male supremacy, population control and moneymaking are the concerns of those who support the tests and the survival of women is the concern of those who oppose the tests. The Forum Against Sex Determination and Sex Pre Selection had made concerned efforts to fight against the abuse of these scientific techniques during the 1980s.

Science in Service of Femicide :

Advances in medical science have resulted in sex-determination and sex pre-selection techniques such as Sonography, fetoscopy, needling, chorion villi biopsy (CVB) and the most popular, amniocentesis and ultrasound have become household names not only in the urban India but also in the rural India. Indian metropolis are the major centres for sex determination (SD) and sex pre-selection (SP) tests with sophisticated laboratories; the techniques of

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[2] Patel, Vibhuti (2003) "The Girl Child: Health Status in the Post Independence Period", **The National Medical Journal of India**, AIIMS- Delhi, Vol.16, Supplement 2, pp. 42-45.

[3] UNFPA (2003) **Missing**, New Delhi.

amniocentesis and ultrasound are used even in the clinics of small towns and cities of Gujarat, Maharashtra, Karnataka, Uttar Pradesh, Bihar, Madhya Pradesh, Punjab, West Bengal, Tamil Nadu and Rajasthan. A justification for this has been aptly put by a team of doctors of Harkisandas Narottamdas Hospital (a pioneer in this trade) in these words, "...in developing countries like India, as the parents are encouraged to limit their family to two offspring, they will have a right to quality in these two as far as can be assured, Amniocentesis provides help in this direction"[4]. Here the word '**quality**' raises a number of issues that we shall examine in this paper.

At present, ultrasound machines are most widely used for sex determination purposes. "Doctors motivated in part by multinational marketing muscle and considerable financial gains are increasingly investing in ultrasound scanners."[5] But for past quarter century, Amniocentesis, a scientific technique that was supposed to be used mainly to detect certain genetic conditions, has been very popular in India for detection of sex of a foetus. For that purpose, 15-20 ml of amniotic fluid is taken from the womb by pricking the foetal membrane with the help of a special kind of needle. After separating a foetus cell from the amniotic fluid, a chromosomal analysis is conducted on it. This test helps in detecting several genetic disorders, such as Down's Syndrome, neurotube conditions in the foetus, retarded muscular growth, 'Rh' incompatibility, haemophilia, and other physical and mental conditions. The test is appropriate for women over 40 years because there are higher chances of children with these conditions being produced by them. A sex determination test is required to identify sex specific conditions such as haemophilla and retarded muscular growth, which mainly affect male babies.

Other tests, in particular CVB, and preplanning of the unborn baby's sex have also been used for SD and SP tests. Diet control method, centrifugation of sperm, drugs (tablets known as SELECT), vaginal jelly, 'Sacred' beads called RUDRAKSH and recently advertised Gender Select kit are also used for begetting boys.[6]

Compared to CVB and pre-selection through centrifugation of sperm, amniocentesis is more hazardous to women's health. In addition, while this test can give 95-97% accurate results, in 1% of the cases the test may lead to spontaneous abortions or premature delivery, dislocation of hips, respiratory complications or needle puncture marks on the baby. [7]

Popularity of the test

Amniocentesis became popular in the last twenty-five years though earlier they were conducted in government hospitals on an experimental basis. Now, this test is conducted mainly for SD and thereafter for extermination of female foetus through induced abortion carried out in private clinics, private hospitals, or government hospitals. This perverse use of

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[4] Patanki, M. H., Banker, D. D. Kulkarni, K. V. & Patil, K. P. (1979, March). "Prenatal Sex-prediction by Amniocentesis- Our Experience of 600 Cases", Paper presented at the First Asian Congress of Induced Abortion and Voluntary Sterilization, Bombay.

[5] George, Sabu and Ranbir S. Dahiya (1998) " Female Foeticide in Rural Haryana", **Economic and Political Weekly**, Vol. XXXIII, No.32, August 8-14, pp. 2191- 2198.

[6] Kulkarni, Sanjeev (1986) "Prenatal SD Tests and Female Foeticide in Bombay City- a Study", **Foundation for Research in Community Health**, 64-A, R.G. Thadani Marg, Worli, Bombay – 400018.

[7] Ravindra, R.P. (1986, January) "The Scarcer Half – A Report on Amniocentesis and Other SD Techniques, SP Techniques and New Reproductive Technologies" **Centre for Education and Documentation**, Health Feature, Counter Fact No. 9, Bombay.

modern technology is encouraged and boosted by money minded private practitioners who are out to make Indian women "male-child- producing machines." As per the most conservative estimate made by a research team in Bombay, sponsored by the Women's Centre, based on their survey of six hospitals and clinics; in Bombay alone, 10 women per day underwent the test in 1982.[8] This survey also revealed the hypocrisy of the 'non-violent,' 'vegetarian,' 'anti-abortion' management of the city's reputable Harkisandas Hospital, which conducted antenatal sex determination tests till the official ban on the test was clamped in 1988 by the Government of Maharashtra. The hospital's handout declared the test to be 'humane and beneficial'. The hospital had outpatient facilities, which were so overcrowded during 1978-1994 that couples desirous of the SD test had to book for the test one month in advance. As its Jain management did not support abortion, the hospital recommended women to various other hospitals and clinics for abortion and asked them to bring back the aborted female foetuses for further 'research'.

Scenario During the 1980s:

During 1980s, in other countries, the SD tests were very expensive and under strict government control, while in India the SD test could be done for Rs. 70 to Rs. 500 (about US $6 to $40). Hence, not only upper class but even working class people could avail themselves of this facility. A survey of several slums in Bombay showed that many women had undergone the test and after learning that the foetus was female, had an abortion in the 18th or 19th week of pregnancy. Their argument was that it was better to spend Rs. 200 or even Rs. 800 now than to give birth to a female baby and spend thousands of rupees for her marriage when she grew up.

The popularity of this test attracted young employees of Larsen and Tubero, a multinational engineering industry. As a result, medical bills showing the amount spent on the test were submitted by the employees for their reimbursement by the company. The welfare department was astonished to find that these employees were treating sex determination tests so casually. They organized a two-day seminar in which doctors, social workers, and representatives of women's organisations as well as the family planning Association were invited. One doctor who carried on a flourishing business in SD stated in a seminar that from Cape-Comorin to Kashmir people phoned him at all hours of the day to find out about the test. Even his six-year-old son had learnt how to ask relevant questions on the phone such as, "Is the pregnancy 16 weeks old, etc.[9]

Three sociologists conducted micro-research in Bijnor district of Uttar Pradesh. Intensive field work in two villages over a period of a year, and an interview survey of 301 recently delivered women drawn from randomly selected villages in two community developed blocks adjacent to Bijnor town convinced them of the fact that "Clinical services offering amniocentesis to inform women of the sex of their foetuses have appeared in North India in the past 10 years. They fit into cultural patterns in which girls are devalued".[10] According to

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[8] Abraham, Ammu and Shukla, Sonal (1983) "Sex Determination Tests", **Women's Centre**, 104 B, Sunrise Apartment, Nehru Road, Vakola Santacruz (E), Bombay.

[9] Abraham, Ammu (1985, October). "Larsen and Turbo Seminar on Amniocentesis", **Women's Centre Newsletter**, Bombay, 1 (4), 5-8.

[10] Jeffery,Roger and Jeffery,Patricia & Lyon,,Andrew (1984) "Female Infanticide and Amniocentesis"' **Social Science and Medicine**, (U.K) 19(11), 1207-1212.

the 1981 Census, the sex ratio of Uttar Pradesh and Bijnor district respectively, were 886 and 863 girls per 1000 boys. The researchers also discovered that female infanticide practiced in Bijnor district until 1900, had been limited to Rajputs and Jats who considered the birth of a daughter as a loss of prestige. By contrast, the abuse of amniocentesis for the purpose of female foeticide is now prevalent in all communities.

In Delhi, the All India Institute of Medical Science began conducting a sample survey of amniocentesis in 1974 to find out about foetal genetic conditions and easily managed to enroll 11000 pregnant women as volunteers for its research. [11] Main interest of these volunteers was to know sex of the foetus. Once the results were out, those women who were told that they were carrying female fetuses, demanded abortion.[12] This experience motivated the health minister to ban SD tests for sex selection in all government run hospitals in 1978. Since then, Private sector started expanding its tentacles in this field so rapidly that by early eighties Amniocentesis and other sex selection tests became bread and butter for many gynaecologists.

A sociological research project in Punjab in 1982 selected, in its sample, 50% men and 50% women as respondents for their questionnaire on the opinions of men and women regarding SD tests. Among male respondents were businessmen and white-collar employees of the income group of Rs. 1000/- to Rs. 3500/- per month, while female respondents were mainly housewives. All of them knew about the test and found it useful.[13] Why not? Punjab was the first to start the commercial use of this test as early as in 1979. It was the advertisement in the newspaper regarding the New Bhandari Ante-Natal SD Clinics in Amritsar that first activised the press and women's groups do denounce the practice.

A committee to examine the issues of sex determination tests and female foeticide, formed at the initiative of the government of Maharashtra in 1986, appointed Dr. Sanjeev Kulkarni of the Foundation of Research in Community Health to investigate the prevalence of this test in Bombay. Forty-two gynecologists were interviewed by Dr. Sanjeev Kulkarni, who is himself a gynaecologist. His findings disclosed that about 84% of the gynaecologists interviewed were performing amniocentesis for SD tests. These 42 doctors were found to perform on-an-average 270-amniocentesis tests per month. Some of them had been performing the tests for 10-12 years. But the majority of them started doing so only in the last five years. Women from all classes, but predominantly middle class and lower class of women, opted for the test. About 29% of the doctors said that up to 10% of the women who came for the test already had one or more sons. A majority of doctors feel that by providing this service they were doing humanitarian work. Some doctors feet that the test was an effective measure of population control. With the draft of the 8th Five-Year Plan, the Government of India aimed to achieve a Net Reproduction Rate of one (i.e. the replacement of the mother by only one daughter). For this objective SD and SP were seen as handy; the logic being a lesser number of women means less reproduction. [14]

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[11] Mazumdar, Veena (1994), "Amniocentesis and Sex Selection", **Centre for Women's Development Studies**, Delhi, Occassional Paper Series No. 21.

[12]Chhachhi, Amrita & Stayamala, C. (1983, November) "Sex-determination Tests: A Technology, Which Will Eliminate Women", **Medico Friend Circle Bulletin**, India; No. 95, 3-5.

[13] Singh, Gurmeet and Sunita Jain (1983). "Opinion of Men and Women Regarding Amniocentesis", College of Home Science", Punjab Agricultural University, Ludhiana, India.

[14] Kulkarni, 1986, opcit.

Controversy Around Amniocentesis and other SD & SP Tests

Twenty years ago a controversy around SD and SP started as a result of several investigative reports published in popular newspapers and magazines such as India Today, Eve's Weekly, Sunday and other national and regional English language journals. One estimate that shocked many, from academicians to activists, was that between 1987 and 1983, about 78000 female foetuses were aborted after SD tests as per Times of India editorial in June, 1982. The article by Achin Vanayak[15] in the same paper revealed that almost 100% of 15914 abortions during 1984-85 by a well-known abortion centre in Bombay were undertaken after SD tests.

All private practitioners in the SD tests who used to boast that they were "doing social work" by helping miserable women, exposed their hypocrisy when they failed to provide facilities of amniocentesis to pregnant women during the Bhopal gas tragedy, in spite of repeated requests by women's groups and in spite of many reported cases of the birth of the deformed babies as a result of the gas carnage. Thus it is clear that this scientific technique is in fact not used for humanitarian purposes, not because of "empathy towards poor Indian women" as has been claimed. Forced sterilization of males during the emergency rule brought politically disastrous consequences for the Congress Party. As a result in the post emergency period, there has been a shift in the policy and women became the main target of population control. SD and SP's after effects, harmful effects of hormone based contraceptive pills and anti-pregnancy injections and camps for mass IUD insertion and mass sterilization of women with their unhygienic provisions, are always overlooked by enthusiasts of the Family Planning Policy. Most population control research is conducted on women without consideration for the harm caused by such research to the women concerned.[16]

India has had a tradition of killing female babies (custom of DUDHAPITI) by putting opium on the mother's nipple and feeding the baby, by suffocating her in a rug, by placing the afterbirth over the infant's face, or simply by ill-treating daughters.[17] A survey by *India Today*, 15.6.1986, revealed that among the Kallar community in Tamilnadu, mother who gave birth to baby girls may be forced to kill their infant by feeding them milk from poisonous oleander berries. This author is convinced that researcher could also find contemporary cases of female infanticide in parts of western Gujarat, Rajasthan, Uttar Pradesh, Bihar, Punjab and Madhya Pradesh. In addition, female members of the family usually receive inferior treatment regarding food, medication and education.[18] When they grow up, they are further harassed with respect to dowry. Earlier, only among the higher castes, the bride's parents had to give dowry to the groom's family at the time of engagement and marriage. As higher caste women were not allowed to work outside the family, their work had no social recognition. The women of the higher castes were seen as a burden. To compensate the husband for shouldering the burden of his wife, dowry was given by the girl's side to the boy's side. Lower class women always worked in the fields, mines, plantations, and factories and as artisans. Basic survival needs of the family such as collection of firewood and water, horticulture and assistance in agricultural & associated activities; were

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[15] Vanaik, Achin (1986, June 20) "Female Foeticide in India", Times of India.

[16] Mies, Maria (1986 August) "Sexiest and Racist Implications of New Reproductive Technologies", Paper presented at XI World Congress of Sociology, 18-22, New Delhi.

[17] Clark, Alice (1983) "Limitation of Female Life Chances in Rural Central Gujarat", **The Indian Economic and Social History Review**, Delhi 20 (1), 1-25.

[18] Kynch, Jocelyn & Sen, Amartya (1983) "Indian Women: Well-being and Survival", *Cambridge Journal of Economics*, 7, 363-380.

provided by the women of lower castes and lower classes. Hence women were treated as productive members among them and there was no custom of dowry among the toiling masses.

Historically, practice of female infanticide in India was limited among the upper caste groups due to system of hypergamy (marrige of woman with a man from a social group above hers) because of the worry as to how to get a suitable match for the upper caste woman?[19]

Males in the upper class also thought that a daughter would take away the natal family's property to her in-laws after her marriage. In a patri-local society with patri-lineage, son preference is highly pronounced. In the power relations between the brides and grooms family, the brides side always has to give in and put up with all taunts, humiliations, indignities, insults and injuries perpetrated by the grooms family. This factor also results into further devaluation of daughters. The uncontrollable lust of consumerism and commercialisation of human relations combined with patriarchal power over women have reduced Indian women to easily dispensable commodities. Dowry is an easy money, 'get rich quick' formula spreading in the society as fast as cancer. By the late eighties, dowry had not been limited to certain upper castes only but had spread among all communities in India irrespective of their class, caste and religious backgrounds. Its extreme manifestation was seen in the increasing state of dowry related murders. The number of dowry deaths was 358 in 1979, 369 in 1980, 466 in 1981, 357 in 1982, 1319 in 1986 and 1418 in 1987 as per the police records. These were only the registered cases; the unregistered cases were estimated to be ten times more.

Academicians Plunged in the Debate:

In such circumstances, "Is it not desirable that a woman dies rather than be ill-treated?" asked many social scientists. In Dharam Kumar's[20] words: "Is it really better to be born and to be left to die than be killed as a foetus? Does the birth of lakhs or even millions of unwanted girls improve the status of women?"

Before answering this question let us first see the demographic profile of Indian women. There was a continuous decline in the ratio of females to males between 1901 and 1971. Between 1971 and 1981 there was a slight increase, but the ratio continued to be adverse for women in 1991 and 2001 Census. The situation is even worse because SD is practiced by all-rich and poor, upper and the lower castes, the highly educated and illiterate - whereas female infanticide was and is limited to certain warrior castes.[21]

Many economists and doctors have supported SD and SP by citing the law of supply and demand. If the supply of women is reduced, it is argued, their demand as well as status will be enhanced.[22] Scarcity of women will increase their value.[23] According to this logic, women will cease to be an easily replaceable commodity. But here the economists forget the socio-cultural milieu in which women have to live. The society that treats women as mere sex and

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[19] Sudha, S. and S. Irudaya Raja (1998) "Intensifying Masculinity of Sex Ratios in India: New Evidence 1981-1991", Centre for Development Studies, Thiruvananthpuram.

[20] Kumar Dharma (1983, June 11) "Amniocentesis Again", **Economic and Political Weekly**, (Bombay).

[21] Jeffery Roger and Jeffery Patricia (1983, April) "Female Infanticide and Amniocentesis", **Economical and Political Weekly**, (Bombay).

[22] Sheth, Shirish (1984, September) "Place of Prenatal Sex determination" , Larson and Turbo Seminar, Bombay

[23] Bardhan Pranab (1982, Sept 5) "Little girls and Death in India", **Economic and Political Weekly** (Bombay).

reproduction object will not treat women in more humane way if they are merely scarce in supply. On the contrary, there will be increased incidences of rapes, abduction and forced polyandry.

Agents Hired to buy the Brides and Forced Polyandry:

In Madya Pradesh, Haryana, Rajasthan and Punjab, among certain communities, the sex ratio is extremely adverse for women. There, a wife is shared by a group of brothers or sometimes even by patrilateral parallel cousins.[24] Recently, in Gujarat, many disturbing reports of reintroduction of polyandry (Panchali system- woman being married to five men) have come to the light. In villages in Mehsana District, the problem of decling number of girls has created major social crisis as almost all villages have hundreds of boys who are left with no choice but to buy brides from outside.[25]

To believe that it is better to kill a female foetus than to give birth to an unwanted female child is not only short- sighted but also fatalistic. By this logic it is better to kill poor people or Third World masses rather than to let them suffer in poverty and deprivation. This logic also presumes that social evils like dowry are God- given and we cannot do anything about it. Hence, victimise the victims.

Another argument is that in cases where women have one or more daughters they should be allowed to undergo amniocentesis so that they can plan a 'balanced family' by having sons. Instead of continuing to produce female children in the hope of giving birth to a male child, it is better for the family's and the country's welfare that they abort the female foetus and produce a small and balanced family with daughters and sons. This concept of the 'balanced family' however, also has a sexiest bias. Would the couples with one or more sons request amniocentesis to get rid of male foetuses and have a daughter in order to balance their family? Never! The author would like to clarify the position of feminist groups in India. They are against SD and SP leading to male or female foeticide.

What price should women pay for a 'balanced family?' How many abortions can a woman bear without jeopardising her health?

Do Women Have A Choice?

Repeatedly it has been stated that women themselves enthusiastically welcome the test of their free will. "It is a question of women's own choice." But are these choices made in a social vacuum? These women are socially conditioned to accept that unless they produce one or more male children they have no social worth.[26] They can be harassed, taunted, even deserted by their husbands if they fail to do so. Thus, their 'choices' depend on fear of society. It is true that feminists throughout the world have always demanded the right of women to control their own fertility, to choose whether or not to have children and to enjoy facilities for free, legal and safe abortions. But to understand this issue in the Third World context, we must see it against the background of imperialism and racism, which aims at control of the 'coloured population.' Thus," It is all too easy for a population control advocate to heartily endorse women's rights, at the same time diverting the attention from the

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[24] Dubey, Leela (1983, Feburary) "Misadventure in Amniocentesis", **Economic and Political Weekly**, (Bombay).

[25] The Times of India, 8-7-2004.

[26] Rapp, Rayna (1984 April) "The Ethics of Choice", **Ms. Magazine**, USA.

real causes of the population problem. Lack of food, economic security, clean drinking water and safe clinical facilities have led to a situation where a woman has to have 6.2 children to have at least one surviving male child. These are the roots of the population problem, not merely desire to have a male child"[27].

Economics and Politics of Femicide

There are some who ask, "If family planning is desirable, why not sex-planning?". The issue is not so simple. We must situate this problem in the context of commercialism in medicine and health care systems, racist bias of the population control policy and the manifestation of patriarchal power.[28] Sex choice can be another way of oppressing women. Under the guise of choice we may indeed exacerbate women's oppression. The feminists assert; survival of women is at stake.

Outreach and popularity of sex pre-selection tests may be even greater than those of sex determination tests, since the former does not involve ethical issues related to abortion. Even anti - abortionists would use this method. Dr. Ronald Ericsson, who has a chain of clinics conducting sex preselection tests in 46 countries in Europe, America, Asia and Latin America, announced in his hand out that out of 263 couples who approached him for begetting off-springs, 248 selected boys and 15 selected girls.[29] This shows that the preference for males is not limited to the Third World Countries like India but is virtually universal. In Erricsson's method, no abortion or apparent violence is involved. Even so, it could lead to violent social disaster over the long term. Although scientists and medical professionals deny all responsibilities for the social consequences of sex selection as well as the SD tests, the reality shatters the myth of the value neutrality of science and technology. Hence we need to link science and technology with socio-economic and cultural reality.[30] The class, racist and sexiest biases of the ruling elites have crossed all boundaries of human dignity and decency by making savage use of science. Even in China, after 55 years of "revolution", "socialist reconstruction" and the latest, rapid capitalist development SD and SP tests for femicide have gained ground after the Chinese government's adoption of the "one-child family" policy.[31] Many Chinese couples in rural areas do not agree to the one child policy but due to state repression they, while sulking, accept it provided the child is male. This shows how adaptive the system of patriarchy and male supremacy is. It can establish and strengthen its roots in all kinds of social structures- pre-capitalist, capitalist and even post-capitalist - if not challenged consistently.[32]

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[27] Chhachhi & Sathyamla, 1983, opcit.

[28] Wichterrich, Christa (1988) "From the Struggle Against 'Overpopulation' to the Industrialisation of Human Production", **Reproductive and Genetic Engineering – journal of International Feminist Analysis**, RAGE , Vol.1, No. 1, pp. 21-30.

[29] Patel, Vibhuti (2003) " Locating the Context of Declining Sex Ratio and New Reproductive Technologies", ***VIKALP- Alternatives***, Vikas Adhyayan Kendra, Mumbai.

[30] Holmes, Helen Bequart & Hoskins, Betty B. (1984, April) "Pre natal and pre conception sex choice technologies – a path to Femicide", Paper presented at the International Interdisciplinary Congress on Women, the Netherlands.

[31] Junhong, Chu (2001) "Prenatal Sex Determination and Sex Selection Abortion in Rural Central China", **Population and Development Review**, Vol. XXVII, No. 2, PP. 259-281.

[32] Patel, Vibhuti (1984, September). "Amniocentesis – Misuse of Modern Technology", **Socialist Health Review**, 1(2), 69-71.

Action against SD and SP

How can we stop deficit of Indian Women? This question was asked by feminists, sensitive lawyers, scientists, researchers, doctors and women's organisations such as Women's Centre (Bombay), Saheli (Delhi), Samata (Mysore), Sahiar (Baroda) and Forum Against SD and SP (FASDSP) - an umbrella organisation of women's groups, doctors, democratic rights groups, and the People's Science Movement. Protest actions by women's groups in the late 70s got converted into a consistent campaign at the initiative of FASDSP in the 1980s. Even research organisations such as Research Centre on Women's Studies (Mumbai)), Centre for Women's Development Studies (Delhi) and Voluntary Health Organisation, Foundation for Research in Community Health also took a stand against the tests. They questioned the "highly educated", "enlightened" scientists, technocrats, doctors and of course, the state who help in propagating the tests.[33] Concerned group in Bangalore, Chandigarh, Delhi, Madras, Calcutta, Baroda and Bombay have demanded that these tests should be used for limited purpose of identification of serious genetic conditions in selected government hospitals under strict supervision. After a lot of pressure, media coverage and negotiation, poster campaigns, exhibitions, picketing in front of the Harkisandas Hospital in 1986, signature campaigns and public meetings and panel discussions, television programmes and petitioning; at last the Government of Maharashtra and the Central Government became activised. In March 1987, the government of Maharashtra appointed an expert committee to propose comprehensive legal provisions to restrict sex determination tests for identifying genetic conditions. The committee was appointed in response to a private bill introduced in the Assembly by a Member of Legislative Assembly (MLA) who was persuaded by the Forum. In fact the Forum approached several MLA's and Members of the Parliament to put forward such a bill. In April 1988, the government of Maharashtra introduced, a bill to provide for the regulation of the use of Medical or Scientific techniques of pre natal diagnosis solely for the purpose of detecting genetic or metabolic disorders or chromosomal abnormalities or certain congenital anomalies or sex linked conditions and for the prevention of the misuse of prenatal sex determination leading to female foeticide and for matters connected therewith or incidental thereto (L. C. Bill No. VIII of 1988). In June 1988, the Bill was unanimously passed in the Maharashtra Legislative Assembly and became an Act. The Acts preview was limited only to SD tests, it did not say anything about the SP techniques. It admitted that medical technology could be misused by doctors and banning of SD tests had taken away the respectability of the Act of SD tests. Not only this, but now in the eyes of law both the clients and the practitioners of the SD tests are culprits. Any advertisement regarding the facilities of the SD tests is declared illegal by this Act. But the Act had many loopholes.

Two major demands of the Forum that no private practice in SD tests be allowed and in no case, a woman undergoing the SD test be punished, were not included in the Act. On the contrary the Act intended to regulate them with the help of an 'Appropriate Authority' constituted by two government bureaucrats, one bureaucrat from the medical education department, one bureaucrat from the Indian Council of Medical Research, one Gynaecologist and one geneticist and two representatives of Voluntary Organisations, which made a mockery of 'peoples participation'. Experiences of all such bodies set by the government have shown that they merely remain paper bodies and even if they function they are highly inefficient, corrupt and elitist.

The Medical mafia seemed to be the most favoured group in the act. It, " has scored the most in the chapter on Offences and Penalties...last clause of this chapter empowers the

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[33] Patel, Vibhuti (1987) "Sex Determination and Sex Pre-selection Tests in India- Recent Techniques in Femicide", **Reproductive and Genetic Engineering RAGE**, Vol. II, No. 2, 1989, pp. 111-119.

court, if it so desires and after giving reasons, to award less punishment than the minimum stipulated under the Act. That is, a rich doctor who has misused the techniques for female foeticide, can with the help of powerful lawyers, persuade the court to award minor punishment," said Dr. Amar Jesani in his article in Radical Journal of Health, 1988. The court shall always assume, unless proved otherwise, that a woman who seeks such aid of prenatal diagnosis procedures on herself has been compelled to do so by her husband or members of her family." [34] In our kind of social milieu, it is not at all difficult to prove that a woman who has a SD test went for it of her "free will". The Act made the victim a culprit who could be imprisoned up to three years. For the woman, her husband and her in-laws, using SD tests became a "cognisable, non-bailable and non-compoundable" offence! But the doctors, centres and laboratories were excluded from the above provision. The Act also believed in victimising the victim. With this act, the medical lobby's fear that the law would drive SD tests underground, vanished. They could continue their business above ground. A high powered committee of experts had been appointed by the Central Government to introduce a bill applicable through out India to ban SD tests leading to female foeticide.

The Forum accepted that with the help of the law alone, we can't get rid of female foeticide. Public education and the women's right movement are playing a much more effective role in this regard. Some of the most imaginative programs of the Forum and women's groups have been a rally led by daughters on 22.11.86, a children's fair challenging a sex stereotyping and degradation of daughters, picketing in front of the clinics conducting the SD tests, promoting a positive image of daughters through stickers, posters and buttons, for example, 'daughters can also be a source of support to parents in their old age,' 'eliminate inequality, not women', 'Dimolish dowry, not daughters', 'make your daughter self sufficient, educate her, let her take a job, she will no longer be a burden on her parents.' The Forum also prepared "Women's struggle to survive," a mobile fair that was organised in different suburbs of Bombay, conveyed this message through its songs, skits, slideshows, video films, exhibitions, booklets, debates and discussions.

Recent Studies on Socio-Cultural Background of Son Preference and Neglect of Daughters:

Recent studies have revealed that, in South Asia, we have inherited the cultural legacy of strong son-preference among all communities, religious groups and citizens of varied socio-economic backgrounds. Patri-locality, patri-lineage and patriarchal attitudes manifest in, women and girls having subordinate position in the family, discrimination in property rights and low-paid or unpaid jobs. Women's work of cooking, cleaning and caring is treated as non-work. Hence, women are perceived as burden.[35] At the time of marriage, dowry is given by the bride's side to the groom's side for shouldering 'the burden of bride'. In many communities female babies are killed immediately after birth either by her mother or by elderly women of the households to relieve themselves from the life of humiliation, rejection and suffering. In the most prosperous state of Punjab, the conventional patriarchal preference of male children leads to thousands of cases of sex selective abortions.[36] Recently a man drowned and killed his 8-year old daughter and also tried to kill his wife for having borne him the girl child. According to the Chandigarh (Punjab) based Institute for Development and

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[34] Jesani, Amar (1988) " Banning Pre-natal Sex Determination – Scope and Limits of Maharashtra Legislation", **Radical Journal of Health,** Vol. II, No. 4, March.

[35] Patel, Vibhuti (2003, July-August) "Declining Sex Ratio and New Reproductive Technologies", **Health Action**, Vol.16, No. 7-8, pp.30-33

[36] Patel, Vibhuti (2003, June) "So Much for Son", **One India, One People**, Vol 6, No.11, pp.45-46.

Communication, during 2002-2003 every ninth household in the state acknowledged sex selective abortion with the help of ante-natal sex determination tests.[37]

Recently, Voluntary Health Association of India has published its research report based on fieldwork in Kurukshetra in Haryana, Fatehgarh Sahib in Punjab and Kangra in Himachal Pradesh that have worst child sex ratio as per 2001 Census. The study surveyed 1401 households in villages, interviewed 999 married women, 72 doctors and 64 Panchayat members. It revealed that "The immediate cause for the practice of female foeticide is that daughters are perceived as economic and social burden to the family due to several factors such as dowry, the danger to her chastity and worry about getting her married." [38]

In this context, commercial minded techno-docs and laboratory owners have been using new reproductive technologies for femicide for over two and half decades. Among the educated families, adoption of small family norm means minimum one or two sons in the family. They can do without daughter. The propertied class do not desire daughter/daughters because after marriage of the daughter, the son-in-law may demand share in property. The property-less classes dispose off daughters to avoid dowry harassment. But they don't mind accepting dowry for their sons. Birth of a son is perceived as an opportunity for upward mobility while birth of a daughter is believed to result in downward economic mobility. Though stronghold of this ideology was the North India, it is increasingly gaining ground all over India.

Table 4: Index of Son Preference for Major States in India, 1990

States	Index of Son Preference*	Rank
Andhra Pradesh	13.8	11
Bihar	24.5	4
Gujarat	23	6
Haryana	14.3	10
Karnataka	20	8
Kerela	11.7	12
Madhya Pradesh	27.1	2
Maharashtra	18	9
Orissa	23.4	5
Punjab	20.3	7
Rajasthan	25	3
Tamilnadu	9.2	13
Uttar Pradesh	21.6	1
West Bengal	14.3	10
All India	***20***	

Index of Son preference =100 (E/C)

Where, E =the excess number of sons over daughters considered ideal

C= the ideal family size.

Sources: Rajan S.I., U.S. Mishra and T.K. Vimla (1996) "Choosing a Permanent Contraceptives: Does Son Preference Matter?" Economic and Political Weekly, July p.20, p.1980.The Third All India Survey of Family Planning Practices in India, ORG, Vadodara,1990. Calculated by Eapen and Kodoth (2001).

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[37] **The Asian Age**, Mumbai, 25-4-2003.

[38] **Voluntary Health Association of India** (2003) " Darkness at Noon- Female Foeticide in India", Delhi.

BIMARU states (Bihar, Madhya Pradesh, Rajastan, Uttar Pradesh) were at the top of the rank for son preference in 1990. Orissa was 5th in the rank. Avers Prof. Ashish Bose (2001), "The unholy alliance between tradition (son-complex) and technology (ultrasound) is playing havoc with Indian Society." [39] Kerala ranked 12th in the index of son-preference. However the sharp decline in fertility and strong preference for small family norm does raise the possibility of enhanced gender bias. In several states of India- Maharashtra, Gujarat, Bihar, Uttar Pradesh, Rajasthan, Madhya Pradesh, Punjab, Haryana and Tamilnadu sex-selective abortions of female foetuses have increased among those who want small families of 1 or 2 or maximum 3 children. [40] Communities, which were practicing female infanticide, started using sex-selective abortions. [41] Many doctors have justified female foeticide as a tool to attain Net Reproduction Rate (NRR) of 1 i.e. to attain population stabilisation; mother should be replaced by only one daughter. [42] But here also there is a gender bias. To attain population stabilisation, a fertility rate of 2.1 is envisaged. There is an evidence to indicate a sex ratio in favour of males and a prolonged duration of gender differentials in survivorship in the younger ages, results in a tendency to masculining of the population sex ratio.

Even this does not worry the western scholars who have no inkling of the ground reality in the subcontinent. For example, Prof. Dickens avers, "Son preference has produced, but might also mitigate, the sex ratio imbalance...If sons wish, as adults, to have their own sons, they need wives. The dearth of prospective wives will, in perhaps short time, enhance the social value of daughters, reversing their vulnerability and the force of male dominance."[43]

Table-5 Sex Ratio and Literacy Rate of different States & UTs of India

State	Overall Sex Ratio	Child Sex Ratio (0-6 yrs)	Total Literacy Rate	Male Literacy Rate	Female Literacy Rate
India	933	**927**	**65**	**76**	**54**
Andaman& Nicobar Islands	846	965	81	86	75
Andhra Pradesh	978	964	61	71	51
Arunachal Pradesh	901	961	55	64	44
Assam	932	964	64	72	56
Bihar	921	938	48	60	34
Chandigarh	773	845	82	86	77
Chhatisgarh	990	975	65	78	52
Dadra & Nagar Haveli	811	973	60	73	43
Daman & Diu	709	925	81	88	70
Delhi	821	865	82	87	75
Goa	960	933	82	89	76
Gujarat	921	878	70	81	59
Haryana	861	820	69	79	56
Himachal Pradesh	970	897	77	86	68

[39] Bose, Ashish (2001) "Without My Daughter- Killing Fields of the Mind", **The Times of India**, 25th April.
[40] Patel, Vibhuti (2002) "Adverse Juvenile Sex Ratio in Kerala", **Economic and Political Weekly**, Vol.XXXVII, No. 22 June 1, pp.2124-5.
[41] Jeffrey, Roger, Patricia Jeffrey and Andrew Lyon (1984) "Female Infanticide and Amniocentesis", **Social Science and Medicine**, Vol. 19, No. 11, pp.1207-12.
[42] Patel, Vibhuti (2002) ***Women's Challenges of the New Millennium***, Gyan Publications, New Delhi.
[43] Dickens, B .M (2002) "Can Sex Selection be Ethically Tolerated?" **Journal of Medical Ethics**, No. 28, pp. 335-336.

Jammu & Kashmir	900	927	54	66	42
Jharkhand	941	966	54	68	39
Karnataka	964	949	67	76	57
Kerala	1058	963	91	94	88
Lakshadweep	947	974	88	93	82
Madya Pradesh	920	929	64	76	51
Maharashtra	922	917	77	86	68
Manipur	978	961	69	78	60
Meghalaya	975	975	63	66	60
Mizoram	938	971	89	91	86
Nagaland	909	975	67	72	62
Orissa	972	950	64	76	51
Pondicherry	1001	958	81	89	74
Punjab	857	793	70	76	64
Rajasthan	922	909	61	76	44
Sikkim	875	986	70	77	61
Tamil Nadu	986	939	73	82	65
Tripura	950	975	74	81	65
Uttarpradesh	898	916	57	70	43
Uttaranchal	964	906	72	84	60
West Bengal	934	963	69	78	60

Source: Census of India, 2001.

Overall literacy rates in all states and Union territories have gone up as compared with the 1991 census. Even states and Union Territories with high female literacy-Goa, Delhi, Mizoram, Pondicherry, Lakshadweep, Kerala, Andaman & Nicobar, Daman & Deo, Chandigarh have experienced decline in Child Sex Ratio. In a micro-study of Kolkata, the Census Report observes, " Out of 141 municipal wards, the percentage of child population has declined in 134 wards since 1991. More importantly, the child sex ratio has declined sharply, from a high of 1011 females per 1000 male children in 1951 to abysmal 923 in 2001. This is the lowest child sex ratio for Kolkata in the last 50 years. A major cause for the decline is 'sex selective foeticide'".[44] Rates of female foeticide have increased along with the increase in female literacy rates.[45]

This neo-classical logic of Law of Demand and Supply does not apply to the complex social forces where patriarchy controls sexuality, fertility and labour of women without any respect to her bodily integrity. Hence, the real life experiences speak to the contrary. In fact, shortage of women in Haryana, Punjab and the BIMARU states have escalated forced abduction and kidnap of girls, forced polyandry, gang rape and child-prostitution.[46]

It has been noted that the fertility rates in Kerala have declined over the past few decades and currently the Crude Birth Rates (CBR) for the State is as low as 17.9 per thousand population in 1997 (RGI, 1998). The Infant Mortality Rates (IMR) is also one of the lowest experienced

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[44] Sen, Vikram (2002) "2001 Census of India- Report for Kolkata", **Director of Census Operations**, West Bengal.

[45] Chattopadhyay, Dhinman (2003) "Child sex Ratio on the Decline in Rengal: Report", **The Times of India**, 10th March.

[46] Patel, Vibhuti (1992) "Girl Child- An Endangered Species" in Viney Kripal(ed) ***The Girl Child in the 20th Century English Literature***, Sterling Publishers Private Limited, New Delhi.

among Indian States, about 12 per thousand live births again in 1997 (RGI, 1998). The indicators of human well being in Kerala are among the best in relation to the different states of India. With modernisation and changing life styles wrought by both external migration and incomes from remittances there has been a qualitative change in the lives of the people. There has been a proliferation of private health care in the state and this in addition to the demand driven factors has contributed to the better access to health care in the state. One of the factors associated with the proliferation of health care facilities, especially in the private sector, has been the improvement in the availability of medical diagnostics. Medical personnel have also sought the use of such facilities not only to improve diagnostics, but also to avoid the complications of expensive litigation in the light of the inclusion of private medical practice within the preview of Consumer Protection Act, 1986. All this has resulted in the increasing trend of use of medical diagnostic facilities and increasing the cost of health care for the consumer. A micro study in Trivandrum city found that the known number of ultra- sonographs in the city alone was about 37, of which only 6 were in the public sector.[47]

Attitude Towards Women's Health

Social discrimination against women results into systematic neglect of women's health, from womb to tomb. Female infanticide and female foeticide are widely practiced in BIMARU (Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh) and DEMARU (Punjab, Haryana, Himachal Pradesh and Gujarat) states.[48] The overall sex ratio is favourable to women is Kerala. But, in Kerala also, in the 0-6 age group, the sex ratio was 963, as per 2001 census. Total 0-6 age-group population of Kerala was 36.5 lakhs. Out of this 18.6 lakhs were male babies and infants and 17.9 lakhs were female babies and infants. Thus, 79760 female babies and infants were missing in 2001 in Kerala. This masculanisation of sex ratio is as a result of selective abortion of female foetuses after the use of ultra-sound techniques to determine sex of the foetus.[49]

In Andhra Pradesh, Chattisgarh, Goa, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Maharshtra, Manipur, Orissa, Pondicherry, Punjab, Rajasthan, Tamilnadu, Uttaranchal and West Bengal; the juvenile sex ratio is lower than the overall sex ratio of the respective states. A community- based study conducted by a doctor couple revealed that 16.8 % of abortions were after detection that foetus female.[50]

As a result of sex-determination and sex-preselection tests leading to selective abortions of female foetuses, sex ratio of the child population has declined to 927 girls for 1000 boys. Sixty lakh female infants and girls are "missing" due to abuse of amniocentesis, chorion villi Biopsy, sonography, ultrasound and imaging techniques. Sex pre-selection techniques prevent arrival of female baby at a pre-conception state. Even anti- abortionists use this method to get baby boys, as it does not involve "Blood-bath".
CEHAT study[51]showed that 64% of providers of NRTs revealed that they were against sex selective abortions, 10 % of them stated that they too were against it but they had to do it,

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[47] Sunita and Joy Elamon (2000) "Medical Technology: Its Uses and Abuses in Trivandrum City", **Achyutha Menon Centre for Health Sciences Studies**, Thiruvananthapuram.
[48] Bose, Ashish (2001) "Without My Daughter- Killing Fields of the Mind", **The Times of India**, 25th April.
[49] Eapen, Mridul and Praveena Kodoth (2001) Demystifying the "High Status" of Women in Kerala, An Attempt to Understand the Contradictions in Social Development, **Centre for Development Studies**, Kerala.
[50] Ganatra, B. R, S.S. Hirve, S.Walealkar et al (1997)"Induced Abortion in a Rural Community in Western Maharashtra": Prevalence and Patterns", Mimeograph, Pune.
[51] Bandewar, Sunita (2003) "Abortion Services and Providers' Perceptions: Gender Dimensions", ***Economic and Political Weekly***, Vol. XXXVIII, No. 21, May 24, pp. 2075-2081.

while 24% of them approved of sex selective abortions of female foetuses. Among them, gender –based responses were quite interesting. 28% of total male and 17% of total female providers supported sex selective abortions, 68% of total female and 61 % of total male providers were against it. Those who opposed it, also said that "It should be banned", "It is inhumane & Criminal", "It is against medical ethics and human rights" and "It amounts to discrimination against women".

Table-6: Population in the age group 0 to 6 years in 2001, India

infants and children – all	15.8 crores
male infants and children	8.2 crores
female infants and children	7.6 crores
deficit of female infants and girls	60 lakhs
sex ratio of child population	927

Source: Census of India, 2001.

Sex ratio (number of women per 1000 men) of Greater Bombay has reduced from 791 in 1991 to 774 in 2001 in spite of rise in its literacy rate. Doctors are using code language so that they can not be booked by police. They don't give anything in writing and nor do they maintain any records to avid medico-legal complications later. Economic globalisation has made import of portable ultrasound machines and sonographic machines very easy. Bombay branch of Indian Medical Association has circulated posters for awareness generation to stop sex selective abortions of female foetuses.

Table-7 POPULATION OF GREATER BOMBAY

year	1991	2001
Population	99 lakhs	1 crore 19 lakhs
sex – ratio	791	774
literacy rate	84	87

Source: Census of India, 2001

To stop female infanticide, the Tamilnadu government introduced 'Cradle Baby Scheme' urging parents to leave their unwanted baby girls at cradles provided in hospitals, primary health centres and orphanages and encouraging them to take them back if they changed their minds.[52] The cradle baby scheme was introduced in Tamilnadu in 2000. [53] Between July 2000 and March 2002, Eighty two (82) babies were dumped in the cradles. The number rose to 140 between 1992-1996. In addition to these babies received at Salem Reception Centre, 19 babies abandoned at railway stations and dustbins in other districts were rescued by the state. The babies are raised by shelter homes and orphanages run by NGOs. The government has also resolved to set up 188 extra reception cradles in 6 other districts.[54] Negative attitude towards women's health is the major reason for high levels of perinatal mortality and morbidity including low birth weight babies.[55] Girl child is discriminated against, even when it comes to breast feeding, supplementary nutrition and care giving.[56]

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[52] Sridhar, Lalitha (Women's Feature Service) (2001) : **India: Killing in Cradle**, POPULI- The UNFPA magazine, Vol.28, No.2, September, pp.10-12.

[53] Philipose, Pamela (2000) "A Peddy Grain in the Mouth of An Infant", **The Indian Express**, October,4.

[54] Kannan, Ramya (2002) "More Babies Being Abandoned Now", **The Hindu**, 1st April.

[55] Wal, S. and Ruchi Mishra (2000) *Encyclopaedia of Health, Nutrition and Family Welfare*, Volume 1, Health and Family Welfare in Developing Countries, Sarup and Sons, New Delhi, 2000. Pp.254-255.

[56] International Institute of Population Science (2002) National Family Health Survey, **NFHS-2**, 1998-99.

Violence and Health Issues of Women Over the Life Cycle

As unborn children, they face covert violence in terms of sex-selection and overt violence in terms of female foeticide after the use of amniocentesis, chorion villai biopsy, sonography, ultrasound and imaging techniques.[57] IVF (In Vitro Fertilization) clinics for assisted reproduction are approached by infertile couples to produce sons. Doctors are advertising aggressively, "Invest Rs. 500 now, save Rs.50000 later" i.e. "If you get rid of your daughter now, you will not have to spend money on dowry".
As girls under 5 years of age, women in India face neglect in terms of medical care and education, sexual abuse and physical violence. As adolescent and adult women in the reproductive age group, they face early marriage, early pregnancy, sexual violence, domestic violence, dowry harassment, torture in case of infertility; if they fail to produce son, then face desertion/ witch hunt. The end result is a high maternal mortality. Causes of maternal deaths in our country are haemorrhage, abortion, infection, obstructed labour, eclampsia (blood pressure during pregnancy), sepsis, and anaemia. Proliferation of NRTs should be analysed in this context.

Important Research Studies on Missing girls

Human Development Report in South Asia 2000: *The Gender Question* recorded 3178 cases of female infanticide in six districts of Tamilnadu in 1995. In Mumbai only, in 1984, 84% of gynaecologists admitted that they were performing amniocentesis and there were 40000 known cases of female foeticide. Supporters of sex-selection tests for selective elimination of girls/female foetuses, apply law of demand i.e., " reduction in the supply of girls will enhance their status." but historical evidences don't support this argument. There had been a continuous decline in the sex ratio since 1901 to1971, from 972 women per 1000 men to 930 women per 1000 men respectively. In 1981 the sex ratio was 933 women per 1000 men, slight increase but in 1991 it became the lowest in the history of the Census, 929 women per 1000 men. In 2001, the sex ratio for the total population is again 933 women per 1000 men. Haryana had the most depressive scenario as a result of misuse of these tests. The current sex ratio in Haryana is 861 men for thousand women, the lowest among the major states in India. The current slogan is " Sons are rising and daughters are setting." The techno-docs owning cars pay home visit to pregnant women's home for extraction of amniotic fluid and deliver the results in the next visit. As per the UNFPA study female foeticide has been the main cause of widening sex ratio in Haryana. According to The Hindu, 19-10-2001."In the last six years, number of sex-selective abortions has increased from 6200O to 69000 in Haryana and from 51000 to 57000 in Punjab. This reckless scale has pushed the fertility rate down from 3.2 to 2.9 in Haryana and from 2.9 to 2.2 in Punjab. "Reduction of birth rate, at what cost?

A study was conducted in 9 provinces viz. Andhra Pradesh, Bihar, Gujarat, Haryana, Madhya Pradesh, Punjab, Rajasthan, Tamilnadu and Uttar Pradesh, which were known for high rates of abortion. This study revealed that the impact of sex-selective abortion is seen in terms of widening gender gap among (O-6) age group, in Punjab and Haryana, two of the most economically prosperous states.

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[57] Patel, Vibhuti (1992) "Girl Child: An Endangered Species?" in Viney Kripal (ed) ***The Girl Child in 20th Century Indian Literature***, Sterling Publications Pvt. Ltd., New Delhi, P.9.

Table 8 **Sex Ratio among the States with Widespread Use of Sex Determination Tests (O-6 year age group)**

States	1991	2001
Punjab	875	793
Haryana	879	820
Gujarat	928	878
Maharashtra	946	917

Source: Census of India, 2001.

Another argument that prenatal diagnostic tests give women a choice to select a child of desired sex is also unacceptable as women's "Choices" are made within the patriarchal compulsions to produce sons. Women are not taking decision autonomously. Threat of desertion, divorce and ill treatment force them to opt for sex-determination and sex-preselection tests.

Between 1975 and 2003, there has been gross violation of The Medical Termination of Pregnancy Act (1972) and Prenatal Diagnostic Techniques Regulation and Prevention of Misuse Act (1994). Amniocentesis, chorion villai biopsy and pre-conception sex-selection tests were provided by the technodocs on the door-to-door service basis in some states. Private nursing homes and laboratories in several towns and cities in Maharashtra, Punjab, Gujarat, Uttar Pradesh, Tamilnadu have provided these tests by charging extremely high fees and without maintaining records so that they can't be caught. Those who perform the SD and SP tests are different from those who perform abortion so that the link cannot be established.

New Reproductive Technologies (NRTs) and Women

NRTs perform 4 types of functions. In Vitro Fertilisation (IVF) and subsequent embryo transfer, GIFT (Gamete Intra Fallopian Transfer), ZIFT and cloning assist reproduction.[58] In Mumbai girls are selling their eggs for Rs. 20000. Infertility clinics in Mumbai receive 4-5 calls per day from young women who want to donate their eggs.[59]
Contraceptive Technologies prevent conception and birth. Amniocentesis, chorion villai Biopsy, niddling, ultrasound and imaging are used for prenatal diagnosis.[60]Foetal cells are collected by the technique of amniocentesis and CVB. Gene technologies play crucial role through genetic manipulation of animal and plant kingdoms.[61] Genomics is " the science of improving the human population through controlled breeding, encompasses the elimination of disease, disorder, or undesirable traits, on the one hand, and genetic enhancement on the other. It is pursued by nations through state policies and programmes".[62]
It is important to examine scientific, social, juridical, ethical, economic and health consequences of the NRTs. NRTs have made women's bodies site for scientific experimentations.

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[58] Nandedkar, Tarala D. and Medha S. Rajadhyaksha (1995): ***Brave New Generation***, Vistas in Biotechnology, CSIR, Department of Biotechnology, Government of India, Delhi .
[59] The Asian Age, 11-6-2004.
[60] Patel, Vibhuti (2000): **Sex Selection, in** ***Routledge International Encyclopedia of Women- Global Women's Issues and Knowledge***, Vol.4, pp.1818-1819.
[61] Agnihotri Gupta, Jyotsana (2000) ***New Reproductive Technologies- Women's Health and Autonomy, Freedom* or *Dependency?*** Indo Dutch Studies in Development Alternatives-25, Sage Publications, New Delhi..
[62] Heng Leng, Chee (2002)"Genomics and Health: Ethical, Legal and Social Implications for Developing Countries", Issues in Medical Ethics, Bombay, Vol.X, No. 1, Jan.- March, pp.146-149.

New Reproductive Technologies in the neo-colonial context of the third world economies and the unequal division of labour between the first and the third world economies have created a bizarre scenario and cut throat competition among body chasers, clone chasers, intellect chasers and supporters of femicide. There are mainly three aspects to NRT -assisted reproduction, genetic or pre-natal diagnosis and prevention of conception and birth. It is important to understand the interaction among NRT developers, providers, users, non-users, potential users, policy makers, and representatives of international organisations. [63]

Assisted Reproduction

The focus of assisted reproduction experts is on the healthy women who are forced to menstruate at any age backed by hazardous hormones and steroids. The processual dimensions involve- Use of counsellors, technodocs and researchers to know the details of personal life of women to delegitimise victim's experience. Utter disregard for woman's pain, carcinogenic and mutogenic implications, vaginal warts, extreme back pain, arthritis, sclerosis, heavy bleeding, growth of hair on face, nose, chin, cheeks, joint pain associated with uterine contractions for production of egg-cells are dismissed as Mood-Swings. Network between stake groups has only one goal- impregnating women for embryo production which in the technodocs' language is *assisted reproduction.* Embryos and foetuses are used for cure of Parkinson's disease among influential and wealthy aging patriarchs. Side- effects on women's health are totally ignored. Growth of moustache, deformation of teeth and dietary requirements are totally ignored.

Political Economy of Assisted Reproduction

By using phallocentric and misogynist psychologists, psychiatrists, state and the politicians (ever ready for plastic smile and neat presentation) have found a ruthless weapon to cretinise, dehumanise, degrade, humiliate, terrorise, intimidate, and cabbagify women. Through advertisement in newspapers, poor/needy women are asked to lend their womb for IVF on payment of money. Through websites rich clients are sought.

Selective Elimination of Female Foetuses and Selection of Male at a Preconception Stage

Rapid advances in the field of new reproductive technologies has "created a situation where there has been a breakdown of the moral consensus"[64] with respect to medical ethics and gender justice. Techno-docs refuse the see larger contexts, future implications and gender implications.

Sharp remark of the Member Secretary of Maharashtra State Commission for Women represents the concerns of women's rights organisations in these words, "The attempt at legitimising the vetoing of female life even before it appears, is worse than the earlier abortion related violence in the womb, precisely because it is so sanitised and relies on seemingly sane arguments against the policing of 'human rights' in a democracy in the intensely personal matter of procreation. This needs to be resisted at all cost."[65]
Diametrically opposite views come from Dr. Anniruddha Malpani, the most articulate proponent of sex-preselection tests. When asked, " Is it ethical to selectively discard female

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[63] Finnarage-Feminist International Network of Resistance to Reproductive and Genetic Engineering, Germany, 2000 and UBINIG: Women's Declarations on Reproductive Technologies and Genetic Engineering", Dhaka, 2004.
[64] Rupsa, Malik (2003) " 'Negative Choice' Sex Determination and Sex Selective Abortion in India", **Urdhva Mula**, Sophia Centre for Women's Studies Development, Mumbai, Vol 2, No. 1, May.
[65] Thekkekara, T. F. (2001) "On the Road to Extinction", The Indian Express, December 5.

embryos?" he said, "Where does the question of ethics come in here? Who are we hurting? Unborn girls?"[66]

My questions are: Can we allow Indian women to become an endangered species? Shall we be bothered only about endangered wild life- tigers, Lions, so on & so forth? Massive resources are invested in OPERATION TIGER. When shall we start OPERATION GIRL CHILD?

Population Control Policies

There is a serious need to examine Population policies and Global funding from the perspective of statisation of Medical Market and marketisation of the nation states in the context of newly emerging culture of daily changes of sponsors. Financial economists have reigned supreme to generate moment-to-moment existence among population so that they can get an unending supply of cannon fodder for the NRT experimentation. Budgetary provision on health has a hidden agenda of NRT. The victims are not given scientific details and by labelling them as parasites and beneficiaries, their consent is not sought. It has burdened women with backbreaking miseries. The nation states have been coached to implement the use of NRT in Secrecy -in line with the programmes executed by G8 in Thailand, Indonesia, Philippines and Bangladesh. To achieve population stabilisation, 2.1% growth rate of population and NRR -net reproduction rate of 1(i.e. mother should be replaced by 1 daughter only) are envisaged. These have inherent sexist bias because it desires birth of 1 daughter and 1.1 sons. Those who support sex-determination (SD) and sex-preselection (SP) view these tests as helpful to achieve NRR1. Recent study of Haryana revealed that out of 160 mothers and grand mothers interviewed by AIIMS study team, 40 % supported SD on the ground that it contributed to population control and prevented families from having series of females in an attempt that a male was born.[67]

This will further widen the gap between number of girls and number of boys in the country .As it is 100 million women have been missing due to femicide (female infanticide, ill treatment and discrimination leading to higher mortality rate among women/girls in the first three quarters of 19th century and in the last quarter of 19th century due to misuse of SD and SP) over a period of 1901 to 2001.

Gendered Power-relations and NRT

Search for "perfect' baby through genetic screening, ante natal sex determination tests, pre-implantation diagnosis, commercialisation of sperm and /or egg donation, commercialisation of motherhood and hormonal contraceptives raise many socio-legal and ethical questions.

Division of labour among women to control women's sexuality, fertility and labour by utilising homophobia and pitting women of different race, religions, age and looks to suit the interest of NRT will serve the interest of patriarchy, medical mafia, pharmaceutical industries, scientists, technodocs at the cost of vulnerable human beings as raw material. If the NGOs don't want to get criminalised, they must dissociate from NRTs and divert the funding for public health, library, education, skill building, employment generation as a long-term investment and channelise their energies towards formation of self-help groups.

It is important to understand that reproduction has an individual and a social dimension. While examining birth control practices, an individual is a unit of analysis. While examining

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[66] Banerjee, Piali (2001) "The Battle Against Chromosome X", **The Times of India**, November,25.

[67] Bardia, A., Paul, E, Kapoor S.K. and Anand K (2004) "Declining Sex Ratio: Role of Society, Technology and Government Regulation in Haryana- A Cpmprehensive Study", Comprehensive Rural Health Services Project, All India institute of Medical Sciences, New Delhi.

the population control policies we have to analyse pros & cons of NRTs, national governments, population control organisations, multinational pharmaceutical industries, public and private funded bodies, medical researchers and health workers who shape women's "choices"- women's autonomy or control at micro and macro levels. Thus choices are not made in vacuum. NRT as a choice for some women (educated career women) can become coercion for others (powerless and less articulate women). Hence it is important to be vigilant about power relations determined by race, age, class and gender while examining implications of NRT on different stake groups.

Informed consent and medical malpractice- Power relations in the medical market favour the technodocs and the clients are not given full details of the line of treatment and its consequences. . Respect for diversity, adoption of child/children is a far simpler and more humane solution than subjecting women to undergo infertility treatment. Obsession about creation of designer baby boys has made development agenda subsidiary.

Initiatives by the State and NGOs:

Prenatal Diagnostic Techniques (Regulation and Prevention of Misuse) Act was enacted in 1994 by the Centre followed by similar Acts by several state governments and union territories of India during 1988 (after Maharahstra legislation to regulate prenatal sex determination tests), as a result of pressure created by Forum Against Sex-determination and Sex –preselection. But there was a gross violation of this central legislation.

In response to the public interest petition filed by Dr. Sabu George, Centre for Inquiry into Health and Allied Themes Mumbai) and MASUM fought on their behalf by the Lawyers Collective (Delhi)[68]; the Supreme Court of India gave a directive on 4-5-2001 to all state governments to make an effective and prompt implementation of the Pre-natal Diagnostics Techniques (Regulation and Prevention of Misuse) Act (enacted in 1994 and brought into operation from 1-1-1996). Now, it stands renamed as " The Pre-conception and Pre-natal Diagnostic Techniques (Prohibition of Sex Selection) Act".

Recently enacted Prenatal Daignostic Techniques (Prohibition of Sex Selection) Act, 2003 tightens the screws on sex selection at pre-conception stage and puts in place a string of checks and balance to ensure that the act is effective.[69] The Pre-natal Diagnostics Techniques (Regulation and Prevention of Misuse) Amendment Act, 2002 received the assent of the President of India on 17-1-2003. The Act provides "for the prohibition of sex selection, before or after conception, and for regulation of pre-natal diagnostic techniques for the purposes of detecting genetic abnormalities or metabolic disorders or sex-linked disorders and for the prevention of their misuse for sex determination leading to female foeticide and for matters connected therewith or incidental thereto".

Uner the Act, the person who seeks help for sex selection can face, at first conviction, imprisonment for a 3-year period and be required to pay a fine of Rs. 50000. The state Medical Council can suspend the registration of the doctor involved in such malpractice and, at the stage of conviction, can remove his/her name from the register of the council.

The Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Amendment Rules, 2003 have activated the implementation machinery to curb nefarious practices contributing for MISSING GIRLS. According to the rules this all bodies under PNDT Act namely Genetic Counselling Centre, Genetic Laboratories or Genetic Clinic cannot function

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[68] Basu, Asmita: "Sex Selective Abortions", Lawyers Collective, Vol.18, No. 11, Nov. 2003, pp.20-23.
[69] Kamdar, Seema " Sex Selection Law Tightened", Times of India, 6-6-2003.

unless registered.[70] The Bombay Municipal Corporation has initiated a drive against the unauthorised determination of gender of the foetus as per the directive of the Ministry of Law and Justice. All sonography centres are required to register themselves with the appropriate authority- the medical officer of the particular ward. The registration certificate and the message that under no circumstances, sex of foetus will be disclosed, are mandatory to be displayed.[71]

The shortcomings of the PNDT Act (2003) lie in criteria set for establishing a genetic counselling centre, genetic laboratory and genetic clinic/ultrasound clinic/imaging centre and person qualified to perform the tests.

- The terms genetic clinic/ultrasound clinic/imaging centre can't be used interchangeably. But the Act does.
- Moreover, The amended Act should have categorically defined persons, laboratories, hospitals, institutions involved in pre-conception sex-selective techniques such as artificial reproductive techniques and pre-implantation genetic diagnosis.
- Who is a qualified medical geneticist? As per the Act, " a person who possesses a degree or diploma or certificate in medical genetics in the field of PNDT or has minimum 2 years experience after obtaining any medical qualification under the MCI Act 1956 or a P.G. in biological sciences". Many medical experts feel that a degree or diploma or 2 years experience in medical genetics can't be made synonymous.[72]
- As per the Act, an ultrasound machine falls under the requirement of genetic clinic, while it is widely used also by the hospitals and nursing homes not conducting Pre-implantation Genetic Diagnosis (PGD) and PNDT.

Ban on the Advertisements of SD & SP Techniques

Another important initiative that has been taken is against any institution or agency whose advertisement or displayed promotional poster or television serial is suggestive of any inviting gestures involving/supporting sex determination. MASUM, Pune made a complain to the Maharashtra State Women's Commission against Balaji Telefilms because its top rated television serial's episode telecast during February 2002 showed a young couple checking the sex of their unborn baby. The Commission approached Bombay Municipal Corporation (BMC) and a First Investigation Report (FIR) was lodged at the police station. After an uproar created by the Commission, the Balaji tele-film came forward to salvage the damage by preparing an ad based on the Commission's script that conveyed that sex determination tests for selective abortion of female foetus is a criminal offence. Now there is another battle brewing. The women's groups insist that the ad should be telecast for 3 months before each episode, while the Balaji Tele-films found it too much. [73]

Conclusion:

We need to counter those who believe that it is better to kill a female foetus than to give birth to an unwanted female child. Their logic eliminates the victim of male chauvinism, does not empower her. The techno-docs don't challenge anti-women practices such as dowry, instead

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[70] Handbook on PNDT Act, 1994, Department of Family Welfare, Government of India, for use by Appropriate Authorities in States/ Union Territories, New Delhi, 2002.

[71] Patel, Vibhuti (2003) "Sons Are Rising- Daughters Are Setting", Humanscape, September.

[72] Pradhan, Mandakini, Renu Singh, Manisha, Sarita Agrawal (2004) "The Shortcoming of Prenatal Diagnostic Techniques Act", Department of Medical Genetics, Sanjay Gandhi Post Graduate Institute of Medical Science, Lucknow, India.

[73] The Indian Express, Mumbai, 19-5-2003.

display an advertisement, "Better Rs.5000 now than Rs.5 lakhs later" i.e. Better spend Rs.5ooo for female foeticide than Rs. 5 lakhs as dowry for a grown up daughter. By this logic, it is better to kill poor people or third world masses rather than let them suffer in poverty and deprivation. This logic also presumes that social evils like dowry are God-given and that we cannot do anything about them. Hence victimise the victim. Investing in daughter's education, health and dignified life to make her self dependent are far more humane and realistic ways than brutalising pregnant mother and her would be daughter. Recently series of incidents in which educated women have got their grooms arrested at the time of wedding ceremony for demand and harassment for dowry, is a very encouraging step in the direction of empowerment of girls. Massive and supportive media publicity has empowered young women from different parts of the country to cancel marriages involving dowry harassment. They have provided new role models.

Hence, our slogans are

"Eliminate Inequality, not Women", "Destroy Dowry, not Daughters",

Say "No" to Sex-determination, Say "Yes" to Empowerment of Women,

Say "No" to Sex Discrimination, Say "Yes" to Gender Justice.

Philosophical and medical details of NRT need public debate without iron wall of secrecy, in all Indian languages as NRT is penetrating even in those areas where you don't get even safe drinking water or food. Technologies for population control are primarily concerned about efficiency of techniques to avert births rather than safety of women. Women have to put up with the side effects of NRTs. New reproductive technologies are provider/doctor controlled, not women controlled. Hence the women's groups repeatedly state that NRTs have inherently anti women bias. In the petition filed by CEHAT-MASUM in the Supreme Court of India and supported by the women's rights groups, Dr. Sabu George, the petitioner's demand of expansion of the scope of the Pre Natal Diagnostic Techniques Act to include sex pre-selection techniques and effective implementation of the PNDT ACT[74] has not only been accepted but also rules have been formulated for its implementation. The state governments are also organising state level seminars for doctors from the government and private sectors to focus on raising awareness to the fact of sex selective foeticide as a discriminatory practice. They are also trying to deal with the issue from the point of view of responsibility of science towards gender justice, medical ethics and human rights. Recent publication of CEHAT "Sex Selection- Issues and Concerns" selected important writings of spokespersons, who have examined the problem of "missing girls" from these angles.

There is a need to clarify the gender-just position from the anti- abortionist position. "Women should have a right to their bodies and unconditional access to abortion is not in conflict with the claim that sex selection and sex selective abortions are unethical. It is not the abortion which makes the act unethical, but the idea of sex selection." [75]

We have a great task in front of us i.e. to change the mindset of doctors and clients, to create a socio-cultural milieu that is conducive for girl child's survival and monitor the activities of commercial minded techno-docs thriving on sexist prejudices. Then only we will be able to halt the process of declining sex ratio resulting into the phenomenon of missing girls. To stop a gender imbalanced society we will have to convince doctors and clients, state and civil society that **"Daughters are not for slaughter".**

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[74] Contractor, Qudsiya (2002) "Sex Selection and the Law", Combat Law, Vol.1, No. 1, , April-May.

[75] Madhiwalla, Neha (2001) "Sex Selection: Ethics in the Context of Development", Issues in Medical Ethics, October- December.

The Social Context of Sex Selection and the Politics of Abortion in India

Radhika Balakrishnan *

Reviewing third world development strategies with an eye to the status of women adds a new and important perspective. Women's position, relative to men, can be viewed from many vantage points; in this chapter I look at gender relations through the examination of the ratio of women to men in the population. I will argue as others have before me, that the sex ratio is the manifestation of an interplay between biological and social factors. Identification of some of the key social, particularly socioeconomic, reasons that explain the circumstances of women's excess mortality is crucial to the formulation of development policy. Such an approach can indicate how certain development policies may not only enhance the lives of women but, more important, save their very lives.

In this paper I will focus on the practice of sex-selective abortion within the cultural and material context of India. In India, this practice is only the latest manifestation of a long history of gender bias, evident in the historically low, and declining population ratio of women to men. In order to combat the practice of using technology to abort female fetuses, one needs to look at the wider social and historical context of gender bias on the population. I examine legal activism against amniocentesis by placing the issue of sex-selective abortion against the larger backdrop of socioeconomic, cultural and ideological factors that contribute to the neglect and murder of females beyond the fetal stage. I call for a radical rethinking of our focus on technology, and question the underlying concepts of 'normality' that lie uninterrogated.

Comparative Data

The relationship between economic well-being and population size has long been examined, since the early theoretical work by Thomas Malthus (An Essay on Population was published in 1798). Catherine Gallagher's interpretive research (1986) establishes the longevity of Malthusian ideology, which exhibits a "zest" for checks in the population (death by starvation, infanticide) within the context of an inexorable competition between population growth and economic well-being. Building on this, I use the connection between the ideology behind the analysis of population growth and gender as the basis for exploring the question of sex differentials. This Malthusian ideology, in conjunction with an examination of existing power hierarchies based on gender relations, may shed new light on the discussion of sex differentials in the population.

Comparative data on sex ratios worldwide indicate many differences between countries, as well as between regions within national borders. A cross-national and intra-regional examination of demographic variations in India highlights the impact of economic and cultural differences on the relative number of women in any population.

In 1901, the sex ratio for all of India (female/1000 males) was 972; in 1971 the ratio had declined to 930 and after a small climb in 1981 to 936 the ratio in 1991 was 929. Table 13-1 compares the female death rates of 10 Third World countries, selected because they represent a broad cross-section of the Third

World. This data does not control for emigration or under-counting of females by the census. While there are various problems with using Indian census data, especially when studying questions regarding women, I agree with Sen that the sharp decline in the population cannot be answered by the under-counting of females alone (Sen and Sengupta 1983). The percentage of females to males over the last few decades has shown a marked decline, barring the very small increase in 1981.

The biological sex ratio (rather than a cultural one) is commonly accepted as 105 males per 100 females at birth (Kelly 1975). For example, the sex ratio in the United States is 105.5 males to 100 females (below the age of one) (Miller 1981) Following birth, male infants have a lower chance of survival than females primarily due to respiratory distress syndrome among males. Using a teleological argument, it is hypothesized that the biological sex ratio compensates for the greater vulnerability of male infants, allowing the sex ratio to even out as children grow older (Miller 1981). Therefore, in a perfect world where both sexes are treated equally, and the only reason for differential survival is the sex-linked biological ability to survive in the same environment, the sex ratio will approach unity with the possibility of a slightly higher female survival rate.

Table 13-1 Number of girls who die for every 100 boys who die
(Most recent year since 1986)

Country	< I Yr Old	1-4 Yr Old
Bangladesh	93	112
Egypt	100	122
Nepal	97	110
Peru	89	102
India	109	300
Pakistan	89	126
S. Korea	86	105
Ecuador	89	105
Malta	52	133

Source: Seager and Olson 1986.

Intra regional variations

There have been many studies that have analyzed the connection between social variables and sex ratios. While a thorough analysis of the socio-cultural and gender dynamics as they relate to sex ratios is beyond the scope of this chapter, I will briefly summarize key arguments pertinent to South Asia in order to illuminate the complex nature of the association (see Balakrishnan 1990).

Since India is a country made up of many different cultural groups, the study of sex ratios permits an analysis of the impact of cultural differences and socioeconomic practices on sex differential in the population. Variances among regions are evident in language, food habits, clothing, inheritance patterns, purdah (female seclusion), and female work force participation. Isolating the co-variates of intra-regional variations in the sex ratio may illuminate which cultural practices enhance the ability of women to survive (see Table 13-2).

I will summarize several studies from South Asia, predominantly from different parts of India which,

taken together, illustrate the complicated linkage of cultural, economic and social conditions which increase female mortality. This review attempts to tease out the factors that have led a society as complex as India's to practice male preference to such an extent that the relative population of females is significantly decreasing, even today (see Table 13-3). Karkal (1987) emphasizes the need for examining connections between social practices and demographic variables; Caldwell (1982) hypothesizes that increased payment of dowry costs may lead to deterioration in the status of women; Das Gupta (1987) reminds us of the importance of kinship patterns and the economics of the family, and Kumar (1989) calls for more investigation into women's political mobilization. In my own work I suggest the need to explore the relationship between access to property and sex ratios (Balakrishnan 1990). Finally, I review key papers which illustrate the mechanisms through which male and female children are provided differential care.

Table 13-2: Sex ratio in Indian states that show the greatest variation in sex ratios. (Number of females per 1000 males)

Census years

Source	1901	'11	'21	'31	'41	'51	'61	'71	'81
INDIA	972	964	955	950	945	946	941	930	936
Bengal	945	925	905	890	852	865	878	891	911
Bihar	1054	1044	1016	994	996	990	994	954	947
Kerala	1004	1008	1011	1022	1027	1028	1022	1016	1034
Mysore	983	981	969	965	960	966	959	957	963
Punjab	832	780	799	815	836	844	854	865	886

Source: Mitra 1979.

Karkal (1987) argues that differences in female mortality rates for South Asia, in general, and India in particular, are related to the relative status of women. Karkal disagrees with the widely accepted argument that high female mortality rates are symptomatic of the poor health conditions prevalent in Third World countries, or merely signs of innate biological differences between the sexes. Instead, she attributes these differentials to the subordinate status of women:

> *It has been suggested that differentials in mortality of the two sexes reflect the differences in their biological makeup. In societies such as India, high mortality for females is a reflection of the role and status of females, both within the family and in society at large, as much as they represent the health consequences of social, economic and cultural discrimination against them. (Karkal 1987)*

Table 13-3: Age-wise grouping of the percentage of females to males for the census years 1951, 1961, and 1971

Age	1951	1961	1971

0-1	97.4	99.5	92.5
1-4	99.8	97.1	94.3
5-9	96.7	96.6	95.1
10-14	93.8	94.8	90.6
15-19	94.6	94.2	94.4
20-24	97.1	94.8	97.6
25-29	96.0	94.9	97.4
30-34	92.9	92.8	95.0
35-39	89.9	89.0	90.6
40-44	88.4	87.2	87.1
45-49	88.6	86.7	85.2
50-54	90.4	87.0	85.7
55-59	93.8	89.0	88.3
60-64	98.1	93.4	90.2
65+	101.8	106.1	93.5

Source: Mitra 1979.

Caldwell, Caldwell and Reddy (1982), charting demographic changes in Karnataka state, describe changes in marriage customs that may indicate why sex ratios have been declining in Karnataka.

> *The major change was the coming of dowry. In the early 1950s the first dowries in Bangalore were paid by some Brahmin families. Not until the beginning of the 1960s did the first Brahmin landlord family in the study area provide a dowry, and not until 1965 was this done by the first Vokkaliga (the major peasant caste) family. It is still not paid by Harijans, although in the largest village they ceased paying the Tera five years ago, and the payment is still small among some of the backward castes. Nevertheless, they all anticipate its arrival. In all castes, the bride's family now bears the major portion of the wedding costs, and it is they who seek loans and sell land. (Caldwell, Caldwell and Reddy 1982)*

Looking at family life in Punjab, Das Gupta (1987) reports that discrimination against girls is not general, but closely related to individual family building strategies. Using data from 11 villages in Ludhiana district, Das Gupta points out that excess female mortality is seen in girls who are born to a woman who already has one or more surviving daughters. The educational attainment of mothers is an important effect modifier, such that mortality of daughters is 50 percent higher if mothers have no education (relative to mothers with some education). Among women who already have one or more surviving daughters, land holding size makes no difference to female child mortality.

Das Gupta also reports a gender differential in the allocation of food, clothing and medical care to children, especially during the first two years of life; I people who owned land seemed to discriminate less in terms of food allocation and health care expenditure than the landless.

Offering an hypothesis of how cultural practices in Punjab contribute to Punjab having one of the lowest sex ratios in the country,' Das Gupta emphasizes that patrilineal descent is a key organizing principle of the Jat kinship system. [3] "There is no question of women owning land. If she should insist on her right to inherit land equally under the civil law, she would stand a good chance of being murdered" (Das Gupta 1987). The resource flow is always from the woman's father to the man's family. This occurs even after the initial payment of dowry.

> *Son preference is the interest of the lineage, whose continuity depends on sons alone. It is also in the interest of the household, for whom daughters are transitory members .... Indeed a woman's position in her husband's home is not consolidated unless she produces at least one son. [Das Gupta 1987:94]*

Das Gupta suggests that state policies or propaganda campaigns providing women the right to hold property may be a primary way to, redress the high female mortality. The flow of resources is unidirectional from the woman's father to the man; a man inherits property and the wealth acquired from his wife's parents. These practices strongly reinforce son preference.

Das Gupta's study is important because it draws connections between inheritance patterns and sex ratios. Gopalakrislina Kumar (1989) also emphasizes the importance of exploring the influence of women's political and economic power to regional variation in sex ratios. Reporting that excess female mortality in Kerala does not decrease with increases in life expectancy, Kumar emphasizes that sex differentials stem from factors other than overall level of well-being. In particular, Kumar argues that Kerala disturbs some of the convenient North-South topology described by others; existing theories are not easily applicable to the case of Kerala.

Kerala is the only state in India that has historically shown an absence of sex bias. Kumar dismisses arguments that attribute this positive sex ratio to male emigration; Kerala has shown this positive sex ratio consistently over the past century. Relative to other regions of India, Kerala also has other characteristics that suggest better gender equity: it has generally had the lowest fertility rates, the highest level of female literacy, a high age at marriage and fairly good receptivity to contraception. Kumar points to the preponderance of matrilineal inheritance as a possible explanatory reason for both the positive sex ratio and the greater gender equity that set Kerala apart.

Land reform measures in Kerala required the partitioning of large landholding into smaller cultivating units. Kumar suggests that this agrarian transformation pushed women in increasing numbers into the labor market. Because these new wage labor opportunities are increasingly outside the agricultural sector (in rural household industry or urban trade services), over 78 percent of women in Kerala perform non-agricultural work. Kumar argues that, at a general level, there exists a relationship between female participation and reduced discrimination. He suggests that further work that links women's labor force participation and the gender dynamics within the household is vital.

Kumar also points to the manner in which increased social status of women translates into political action. He asserts that the increased level of literacy throughout Kerala has led to many protest movements.

> *Protest movements focusing on the advancement of low caste women seem to have been particularly successful and the results were manifest from the 1920s onwards, particularly in the expanding wage-earning opportunities and occupational diversification of the Ezhava caste. Indeed, the occupational diversification may reflect the influence of these factors. Grassroots pressures resulted ultimately in demonstrations demanding equal pay*

> *for equal work, and educational facilities for girls from destitute families. The impact of the incipient radicalization of this period is difficult to underestimate [sic], and forms an important element in an explanation of the relatively less disadvantaged position of women in more recent times (Kumar 1989).*

This approach to understanding women's relative position is indeed new and much needed. The creation of a grass roots movement that empowers women to claim an equal position in society is recommended by many authors as a policy prescription. Though it is difficult to point precisely to such mobilization as the crucial remedy, a more in-depth study of political movements in Kerala that dealt with women's issues is warranted.

A close examination of the history of matrilineal inheritance as affects women's relative position and status is also important to understand the dialectic between cultural practice and material condition (Balakrishnan1990). 1 have examined the history of matrilineal inheritance in Kerala to better understand the cultural and material impact of inheritance on sex ratios in Kerala. In my work, by closely examining the history of Kerala, I show that access to property as well as women's labor force participation has a definite impact on the population ratio. Focusing in particular on inheritance, we see that if women inherit property, the burden that parents have toward their daughter is minimized. Daughters have access to whatever the parents can accumulate. The birth of a daughter among the Nayars is awaited, since only through her can the property be passed down. Daughter preference as a cultural phenomenon is guided by real economic factors. Gender relations, examined through inheritance patterns within a community, are therefore a determining factor in sex composition of the population.

Nutritional Allocation

A gender difference in food allocation has been cited by many scholars as a key contributing factor to the higher mortality of girls in South Asia. Chen (1982), D'Souza and Chen (1980) and Chen, Huq and D'Souza(1981) use data from rural Bangladesh to investigate whether a decline in the sex ratio is due to differential mortality rates by sex, and they examine household dynamics for important insights about the value of females and sex ratios.

Chen (1982) shows that the predominance of males over females in Matlab is attributable to both differential migration and mortality between males and females. Migration has accounted for an increased number of women in the rural areas of Matlab, for male out-migration has been much more common than female migration. The mortality patterns indicate that differential survival occurs, and predominantly during childhood.

D'Souza and Chen (1980) indicate that there are higher female mortality rates than males shortly after birth and through childbearing ages. They Point out that son preference in parental care, feeding patterns, intra-family food distribution, and treatment of illness favoring males, are possible causes of the differences in child mortality rates.

Chen, Huq and D'Souza (1981) examine the validity of the assumption that sex differentials in mortality are due to son preference in the are as mentioned above. Utilizing extensive field data on dietary patterns demonstrate that some of the disparities in nutritional status between the sexes can be attributed to sex discrimination against females in intra-family allocation of food. They also indicate that male children are brought to the hospital much more frequently than female children. These data provide important evidence of the social mechanisms by which sex preference is manifest in access to health and nutrition.

Chen's research is important in that it highlights several methodological problems with Bangladeshi (and Indian) data. Contradicting the National Bangladesh Nutrition survey, his data indicate that caloric intake for females is less than that of males; for the population cohort ages 0 to4 years, females received 14 percent fewer calories than males. Chen calls for in-depth regional studies as a basis for improving data collection and quality, and for providing comparable data for India. Indeed, his research provides a solid understanding of the Madlab District. Its micro-perspective strength, however, renders it less useful in under-standing the overall dynamics of sex differentials in a country like India.

Overall, this body of research demonstrates quite conclusively that the low sex ratio can be attributed to the son preferential behavior on the part of the parents. Chen, Huq, and D'Souza can only speculate as to the reasons why females are undervalued in this area. A reversal of this trend, they argue, would require an overall structural change in the role, status and economic value of women. Chen (1982) recommends a closer examination of Kerala to be able to find the specific nature of Kerala's society that would explain its consistently high sex ratio. Chen sees that this problem cannot be easily addressed by minor policy revisions (i.e., increased education of females). Long-term solutions rest in fostering an overall change in the position of women.

> *Rather, it seems likely that fundamental structural changes in the role, status and economic value of women in society will be required, in addition to the alleviation of economic poverty. (Chen 1982)*

The authors conclude with the suggestion that an important social indicator for evaluating the performance of development programs should be the reduction in sex differentials.

The range of factors emphasized by these studies makes it clear that gender preference is articulated at numerous stages in a female life, and that it does not start or stop before birth. The entrenchment of gender preference in social custom, and the number of female deaths is an urgent reminder that, while sex-selective abortion is an important manifestation of son preference, the significant decrease in the female population occurs after birth and before the age of four. From 1978 to 1983, 78,000female fetuses were reported to have been aborted following using amniocentesis (Kelkar 1992). During the same time period, of the twelve million girls born each year, only 9 million will live to be fifteen (Patel1991).

Abortion

It is within the context described above that we need to analyze the issue of sex-selective abortion. India has allowed abortion on broad medical and social grounds since the Medical Termination of Pregnancy Act was passed in 1971. Abortion can only be performed in institutions that are government-approved, and by authorized physicians. By themid-1980s, with over 106 million women of reproductive age, only 4,600medical facilities and fewer than 15,000 physicians had received official approval. It has been estimated that four to six million illegal abortions are conducted in India every year (Dixon-Muller 1993).

Therefore, access to safe abortion, although legal, is still denied to a majority of women. Technology that allows genetic selection has posed a very complicated challenge to feminists. Son preference, and the introduction of technology that helps in determining the sex of a fetus, leads to a great number of female fetuses being aborted.

The problem of the abortions of female fetuses is one that is being addressed by feminists throughout

India. In the face of increasing abuse of amniocentesis, Maharashtra state decided to ban this medical procedure in 1987.

In one hospital, from June 1976 to June 1977, 700 individuals sought prenatal sex determination. Of these fetuses, 250 were determined to be male and 450 were female. While all of the male fetuses were kept to term, 430 of the 450 female fetuses were aborted. (Miller 1985)

Until recently, the technology was prohibitively expensive. Presently, however, as a result of increased demand, amniocentesis is available on the market for as little as Rs.500 (and some claim that it is as little as Rs.50). Regardless of the cost, there is still serious concern over the consequences of this technology in a culture saturated with son preference.

The Changing Nature of Gender Relations

In order to convey the complex nature of the crises of sex selection I will describe an incident from a recent visit to India. While visiting a women's reproductive health program in Gujarat, I was in a village with an NGO (nongovernmental organization) representative, who had worked in the region for several years. I asked my colleague the extent of abortions that occurred in this village, and whether, and how, the NGO hospital handled abortions. She explained that the hospital had decided against providing abortion services because of the increasing number of women who came for sex-selective abortions. (Though the hospital itself did not provide the technology for sex determination, there was a "shop" not far away that claimed to provide the test.) Consequently, in the last few years there had been an increase in the number of women and girls going to a traditional birth attendant for abortions. This factor contributed to an increase in female mortality in the village.

Until recently, the community in this village had traditionally accepted sex outside of marriage and premarital sex. Children born to unmarried women were incorporated into the family. A recent censure of unmarried pregnant women, my colleague suggested, had resulted from the introduction of television and through its programs, a new perception that sex outside of marriage was immoral. Consequently, more unmarried women and girls were seeking abortions. Dowry and son preference were also a fairly new phenomena; sex-selective abortion was only the most recent addition. As we walked and talked to people who were busy making clay pots I noticed a satellite dish in one of the mud huts, and many villagers conversing while watching television.

This visit posed a very complicated set of issues for me, as I reconsidered policy solutions to improve reproductive health. There was an increase in the number of women dying from unsafe abortions because the hospital would not provide abortions, but the hospital's policy was a response to the large number of women requesting sex-selective abortions, based on information from an unauthorized clinic.

This case illustrates the many technologies that are operative in changing the character of gender and health relations. Technology was complicit here in enabling sex-selective abortion, and through television, having an impact on the sexual mores of the community to the extent that a premarital pregnancy was now to be terminated. For feminists to be able to respond to the issue of sex-selective abortion in a context where poor women do not have access to basic health care, we need to take account of the multiple dimensions by which technology is affecting women's lives.

Legislative Strategy

Amniocentesis was introduced to India by the All India Institute of Medical Sciences in 1975. It was designed and promoted for detecting abnormalities in the fetus. Yet, couples who used this technology increasingly aborted fetuses that were known to be female.

> *Subsequently, through an order of the Indian Council of Medical Research the use of amniocenteses was restricted to suspected cases of genetic diseases. Between 1977 and 1985 three Circulars to government departments at the centre and in the states made use of pre-natal sex determination for the purpose of abortion a penal offence (Menon 1993).*

This ban on government institutions led to the commercialization of the technology; private clinics providing sex determination tests through amniocentesis multiplied rapidly and widely. These tests were made available in areas that did not even have potable water, with marginal farmers willing to take loans at 25 percent interest to have the test (Menon1993). Advertisements began appearing that blatantly encouraged people to abort their female fetuses in order to save the future cost of dowry.

It was in this climate that feminists began to organize against this use -of amniocentesis. In 1984 a coalition was formed, the Forum Against Sex Determination and Sex Preselection. With the need to do something fast and bring attention to this problem, one strategy they used was to campaign for legislative action. They were successful in bringing about the Maharastra policy and have publicized the incidence of sex-selective abortion (Menon 1993).

Drawbacks

With hindsight, several drawbacks to the legislative strategy are evident. I would like to explore three points of concern which this strategy, and its outcome, highlight for feminists: notions of normality, our focus on legal remedies, and the complexity of attempting to regulate technology.

The value of female "normality" is protected by the legislative restriction against using amniocentesis for sex selection; but other social concepts of "normality" may be indirectly endorsed by such a policy. Amniocentesis is a technology providing genetic information. Societal norms establish which genetic characteristics are abnormalities and which are normal. As feminists, we need to be very careful in agreeing to the use of technology for one kind of genetic selection and not another. After all, the justifications used to abort female fetuses are often the same as those used by people who want to abort fetuses that have been diagnosed with "medical abnormalities." An "abnormal" fetus and a female fetus are accorded similar drawbacks: expensive to maintain, less productive than "normal" (or mate) persons, detrimental to the parents' emotional and financial well-being, and is better off not being born. Arguing for restrictions against one specific application of genetic selection may suggest we are endorsing other applications of the technology, which themselves promote eugenically-prescribed notions of normality and value.

How effective was the legal remedy that was sought? When there was pressure to restrict information regarding the sex of the fetus, the information did not disappear but went underground. The consequences included reduced access to safe, legal and affordable abortion. There is no guarantee that the clinics claiming to provide the illegal information are even conducting the test. Legalizing and criminalizing access to technology impacts primarily on government hospitals. in the case of abortion, although the procedure was legalized in 1971, access to safe abortion is limited to a few women because of logistical constraints (see above). Criminalizing access to information on fetal sex has made the information more expensive and abolished any possibilities for regulation or quality control.

Rapid and frequent developments in medical technology further complicate our reliance on legislative strategy to control the use of amniocentesis. Ultrasound is already used for sex determination; it is only a matter of time before new blood testing techniques will make it possible to determine fetal sex from a simple maternal blood test. These new kinds of information will be harder to police and regulate. The expansion of medical technological in the service of sex selection threatens to concentrate our efforts in the area of advocating for restrictions, diverting political capital from changing the existing social structures and norms that encourage son preference and daughter neglect.

Possible Remedies

We need to approach this very difficult issue by going back to the broader question of the material and ideological conditions that create a world in which women are dying. Bina Agarwal (1988) has emphasized the connection between ideology and its material manifestations. In her critical evaluation of India's post-independence policies and their impact on women, she highlights the economic factors which affect the relative valuation of males and females in the family. While stressing the importance of cultural factors that lead to the high payment of dowry, thereby reinforcing daughter neglect, Agarwal suggests wider interplay between economic position and cultural practice, thereby making the important dialectical connection between ideology and material conditions.

A closer look at dowry and inheritance practices is wan-anted. just as position within a class system can determine the number of children born to different groups, so too the relative position within a gender hierarchy can determine the sex of the children who survive. Further, within an economic system, sex differences in the demand for labor and the reward for labor create incentives for the survival of one sex over the other, thereby contributing to the sex ratio in the population. However, demands and rewards for labor are not the only conditions that give incentives to sex-selective behavior. People who are not dependent on the wage labor market may still exhibit sex-selective parenting if there is sufficient economic reward guaranteed when one sex survives over another.

As Krishnaji (1987) points out, land-holding communities are less influenced by labor market conditions. Nevertheless, inheritance pat-terns, including the connection to the payment of dowry, provide incentives for sex selection.

In India, the character of wage and inheritance practices remains sex-specific. Wages that men and women receive depend on a specific sexual division of labor, as well as the broader ideological constructs that place women's work in a lower position than men's. The origins of particular systems of sexual division of labor are beyond the scope of this study. But accepting the existing set of gender relations that form, and are formed by, the dialectic between ideology and material conditions, I assume that the patterns of inheritance as well are derived from existing sex-specified rules.

In most of India, both the sexual division of labor and the inheritance pattern that predominate establish the male as more valuable, because he can earn higher wages and he inherits property. In general practice, despite some carefully circumscribed legal rights, a woman has no right to her familial property except for the right to be maintained until marriage. Most families that do not allow female inheritance give property to a woman's husband and his family in the form of dowry (Liddle and Joshi 1986). The amount given in dowry is determined by the groom's caste, his earning potential, and the specific demands of his family. Wealth of the bride's family is not a significant determinant of dowry.

Payment of dowry is closely linked to the inheritance system. Das Gupta (1987) shows evidence of the association between patrilineal inheritance patterns and payments of dowry. When women do not inherit

property from their parents, a payment of dowry becomes a substitute.

The female child represents a heavy economic drain on her family. As a woman, she will either be excluded entirely from the wage labor market or relegated to its least remunerative position. Her exclusion from family property creates the impetus for large dowry payments at the time of marriage. The male, on the other hand, receives better wages, inherits the wealth that is accumulated by his family, and also gains a dowry.

Policy Implications

In India, dowry has been treated as a paramount social evil and many government programs have been dedicated to education about the social evils of dowry. Women's organizations have actively campaigned over the years to end that practice. Many stories of bride burnings and female infanticide due to dowry have been publicized by the media. Brides have been murdered by their in-laws, so that the groom can marry again and receive more dowry. These incidents cross class boundaries. The payment of dowry is linked to inheritance patterns. When women receive inheritance from their parents, dowry payments are less frequently necessary.

However, while the elimination of dowry as a practice is most certainly an important goal, I feel that looking at dowry alone without examining any other form of access to property is problematic. For example, dowry is often viewed as a form of inheritance.

> *Most women see their dowry as the only share they will get of their parental property. In a situation where women do not have effective inheritance rights, dowry is the only wealth to which they can lay claim on. (Kishwar 1988)*

If we view the decline in the female population as partially due to lack of access to property, several policy options may be considered. Equal inheritance to family property can be campaigned for, while continuing to work toward a corresponding decline in the practice of dowry. An increase in female work participation and increasing wages for women will decrease the obvious material disadvantages that females are seen to pose to the family.

A grass roots movement that works toward changing the ideology of sexism can be enhanced with evidence that shows that access to property through inheritance and increased wages can impact on the lives of women. Examples from regions in India where there have been, for example, matrilineal groups can illustrate that the relationship between property and gender is not a concept imported from outside of India.

I would argue that the strategy of seeking legislative restriction of sex-selective abortions has not been effective in combating sex preference, and has decreased women's access to safe medical care. We need, rather, to attempt more broad-reaching strategies that will address the economic and cultural roots of the problem. One such strategy would be to advocate for female inheritance of parental property as an alternative to dowry, as well as sustained efforts to reduce the level of dowry. Such reforms will require more than legislative advocacy, but require changing cultural norms that effect women's position in society.

Although sex-selective abortion is appalling, we must not minimize the tragedy of the millions of girls who are born every day, but were never meant to survive.

Acknowledgements

Parts of this paper is taken from the research I conducted for my dissertation (Balakrishnan 1990), and for this portion I would like to thank Temisan Agbeyegbe, Lourdes Beneria, William Milberg, Michele Naples, Nina Shapiro and Robert Stuart. I would like to thank Arati Rao whose advice, editing and support made finishing this paper possible. I would also like to thank Emanuela Toma and Pearl Harrison for their technical and moral support. I would like to thank Gita Sen and Rachel Snow for inviting me to be a part of this exciting collection, and for their and Jennifer Poulous' editing help. Lastly, I would like to thank David Gillcrist for his support, in this paper and in all that I do.

Notes

1. Clothing expenditure is significantly bigger for boys than for girls, an important factor in a region that can experience freezing temperatures.
2. Despite high rates of female literacy and a high age of marriage, the sex ratio in Punjab is one of the lowest in the country.
3. The dominant group in this area are the Jats, a land owning caste.

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EPW Special Articles **May 29, 2004**

Female Infanticide

The Colonial Experience

Archival records on female infanticide show the different perceptions, colonisers and their 'subjects' had on the issue. Colonial officials characterised it as 'inhumane' and a 'crime'; on the other hand, castes which practised it, usually those higher in the hierarchy, justified it on the grounds that they could not afford the huge dowries or the incalculable marriage expenses having a daughter entailed. British efforts to stop female infanticide or change the social norms that contributed to the practice proved a failure. The failure of the colonial state shows the resilience of institutionalised norms to which female infanticide was related and about which little still remains known.

L S Vishwanath

Archival records on female infanticide during colonial rule tell us about castes which practised female infanticide, societal and more specifically the institutional ramifications of the practice, how female infanticide was related to caste dominance, status maintenance and dowry avoidance, the complications of British revenue policies for the castes which practised female infanticide and finally, the strategies adopted by the colonial rulers to get rid of the practice.

In December 1789, Jonathan Duncan, the British resident at Benares first found female infanticide among rajkumar rajputs in Jaunpur district of Benaras division. The discovery was made when he was touring the district to settle its revenues. Right from the time of Duncan's discovery, the rajputs in north, west and central India which means undivided Punjab, Rajasthan, UP Malwa and Saurashtra figure very prominently in the records as a caste which resorted to extensive female infanticide. British officials reported in the 1817 that female infanticide was so extensive among the jadejas, a rajput clan in peninsular Gujarat, that whole taluks inhabited by the clan were without any jadeja female children. In 1856, an official appointed to investigate female infanticide in Benares division found after taking a census in 418 villages that rajput female children were deficient in 308 villages; of these, 62 villages, nearly one-fifth had no rajput female children below six years. The other castes, which the records say killed their female children, were: the lewa kanbis and patidars of central Gujarat and jats, ahirs, gujars, khutris and moyal brahmins in north India

When the census enumerations were launched in the last quarter of the 19th century, we find that the same castes, which the archival records say practised female infanticide also, figure in the census reports as having low female sex ratios. Perhaps taking the cue from the records, the author of more than one census report refer to the rajputs and lewa patidars as having a 'stigma' or 'a tradition' of female infanticide since 'olden times'. The 1921 census reports classifies castes into two categories, namely, castes having 'a tradition' of female infanticide and castes without such a tradition (see **table**). This census provides figures from 1901 to 1921 to show that in Punjab, United Provinces and Rajputana castes such as Hindu rajputs, Hindu jats and gujars with 'a tradition' of female infanticide had a much lower number of females per thousand males compared to castes without such a tradition which included: Muslim rajputs, Muslim jats, chamar, kanet, arain, kumhar, kurmi, brahmin, dhobi, teli and lodha. What is interesting about this census classification is that in Punjab, the Hindu rajputs are shown as having 822 (1901), 756 (1911) and 796 (1921) females per thousand males, while Muslim rajputs had 883 (1901), 841(1911) and 864 (1921) females per thousand males. The Hindu jats had fewer females: 795 (1901), 774(1911), and 789(1921) compared to 859(1901), 807(1911) and 820(1921) females per thousand males among the Muslim jats.[1]

Table: Sex Ratios of Castes in North India

Caste	Category	Number of Females per 1,000 Males 1901	1911	1921
Punjab				
Jat (Hindu)	A	795	774	789
Khutri	A	808	802	811
Rajput (Hindu)	A	822	756	796
Gujar	A	799	763	778
Jat (Muslim)	B	859	807	820
Rajput (Muslim)	B	883	841	864
Chamar	B	871	836	845
Kanet	B	924	947	936

Arain	B	877	807	830
United Provinces				
Jat (Hindu)	A	852	769	763
Rajput (Hindu)	A	887	873	877
Gujar	A	802	755	785
Brahmin	B	923	899	895
Chamar	B	986	958	960
Kumhar	B	931	941	931
Kurmi	B	970	929	909
Rajputana				
Rajput (Hindu)	A	794	778	722
Jat (Hindu)	A	830	851	840
Gujar	A	834	846	837
Brahmin	B	925	937	920
Dhobi	B	916	962	922
Teli	B	908	930	941
Lodha	B	911	916	895

A= Castes with 'a tradition' of female infanticide.

B= Castes without a tradition of female infanticide.

Source: Census of India (Report), 1921, Vol 1, Appendix VI.

The classification in the 1921 Census also seems to suggest that the lower castes which did not own much landed property such as chamars, kumhars, dhobis, telis, lodhas and kurmis had a much higher proportion of females; at that point in time, they did not have 'a tradition' of female infanticide perhaps because the problem of status maintenance through dowry avoidance and female infanticide which clearly existed among the hypergamous and propertied upper castes did not exist among them. However, it is difficult to conclude from this that the lower castes will not or will never practice female infanticide because sanskritisation, acquisition of assets, modern education and dowry adoption can push the lower castes towards female neglect and infanticide. Indeed recent data for the chamars and scheduled castes in UP suggest that the dalit castes are moving in the direction of deficiency of females and possibly female infanticide or foeticide. Thus in 1901, the chamars in UP had a female to male ratio of 986; but by 1981 the female to male ratio among chamars in the same state had dropped to only 880. Again in 1901, the female to male ratio among SCs in UP was 970; by 1981, it was down to 892. Drawing attention to these figures Dreze and Sen (1995: 156) note that "so far as gender relations are concerned, the scheduled castes in Uttar Pradesh are now more like the higher castes than they used to be".

The records provide information on the lower castes being influenced by the higher so far as female infanticide is concerned. For example, E G Jenkinson, the officiating magistrate of Saharanpur district found on investigation in mid-1830s, that the pureer clan of rajputs in the district practised female infanticide. He also found that two other castes, the tuggas and kolis who had a 'fair proportion' of girls all over the district, practised female infanticide only in one tehsil. "They have probably" says Jenkinson "adopted the practice of female infanticide from the rajputs in the midst of whom they have been living for so many years"

Sex Ratios and Institutional Ramifications

When one examines the female infanticide records, what strikes one is the overwhelming evidence of the dominant castes like the patidars, rajputs, jats and ahirs – all of them were hypergamous- trying to maintain their socio-economic status through dowry avoidance and female infanticide. British officials often speak in their reports of rajputs of high status seeking 'lofty marriage alliances' for their daughters and resorting to female infanticide to avoid substantial dowry payment, which could lead to alienation of their hereditary agricultural lands. Thomason, the magistrate of Azamgarh district (then part of the North-Western Provinces) found in 1836 that "among a body of rajputs numbering 10,000 not a single daughter was forthcoming". Thomason goes on to state that the bais rajputs prefer 'high alliances' which are "difficult to be obtained, and attended with great expense which they can ill bear and are almost certain to cause the alienation of the whole or a great part of their hereditary lands. Hence the birth of a daughter is considered a most serious calamity, and the unfortunate infant is very seldom spared."

Since the high status, rajputs had a martial ethos as noted by anthropological studies [Hitchcock 1959, Steed 1955] they generally did not take advantage of the avenues for social mobility, which opened up

during colonial rule. By freezing the political boundaries, the British certainly complicated matters for the dominant rajput lineages in north India and peninsular Gujarat. Since territorial expansion was ruled out, the rajputs only economic resource was agricultural land. A further complication introduced by colonial rule was the stricter mode of collecting land revenue, sale of land for revenue arrears of those who failed or were unable to pay revenue and doing away with the lucrative revenue contract system of precolonial times.

B S Cohn (1987), after a detailed study of the archival records for the Benares region, found that in the 19th century, the rajputs in the region engaged in a running battle with the auction purchaser to somehow prevent sale of their hereditary lands. Cohn further notes that faced with the prospect of sale of their hereditary lands, the revenue demands of the British and heavy dowry demands from the grooms' side, the rajputs had to make a choice between expensive marriages(s) of daughters and maintenance of their socio-economic status. They chose the latter, avoided heavy dowries and practised female infanticide.

As regards the British doing away with the lucrative revenue contract system of precolonial times in certain regions [Shah 2002] and the complications of this policy for the marriage of daughters, we find the lewa patidars of Nadiad, Borsad, Napad and Mahuda parganas telling the collector of Kaira district, J Webb in 1849 that:

> Respectable persons give their daughters in marriage incurring the expenses according to their abilities, but amongst our people the expenses are daily increasing; whilst during the former administration (maratha rule), we used to obtain the management of the villages from the state on our own responsibility and therefore made the collections on our own authority, consequently our means were kept up; at present we have no such means.

The interviews of patidars and rajputs with British officials point to the new difficulties they faced. The patidars telling the officials (the members of this caste told the same thing to the Ahmedabad collector in 1847) of their inability to pay land revenue and large dowries demanded by the groom's side since the revenue contracts were done away with, does provide a clue. However, it is not possible to say what impact this problem had on female sex ratios and if female infanticide was accentuated due to British revenue policies. Figures on female to male ratios for the precolonial period, which would enable a comparison with sex ratios during colonial rule, are not available.

We find qualitative and quantitative data in the historical records, which relate sex ratio to the social status of clans, and lineages, which controlled territory during the 19th century. The data reveal that among rajputs, the clan, which controlled the largest territory and occupied the topmost position in the rajput hypergamous hierarchy, resorted to very extensive female infanticide. Thus in mid-19th century, among rajputs of Benares division, the top position in the rajput hierarchy was held by the suryavamshis of Amroha pargana in Gorakhpur district. They controlled 78 villages and were acknowledged to be the highest by all the rajputs in the region. A census of 1856 revealed that the suryavamshis had in the 78 villages 721 boys to only 129 girls below six years of age. That is, only 15 per cent were girls. The same census also revealed that 10 of the suryavamshi villages had no rajput girls and marriage of rajput girls was a "rare occurrence" in many suryavamshi villages. Though placed in a tight spot due to British revenue policies and lack of mobility as noted above, rajput clans, which ranked below the suryavamshis, had somewhat better female to male child sex ratios. Thus, the Rajkumars of Ungli pargana in Jaunpur district controlled 42 villages. They gave the daughters they preserved to the suryavamshis and had a CSR of 283 boys to 80 girls below 6 years, that is 22 per cent were girls.

In peninsular Gujarat, the jadejas occupied the top position in the Gujarati rajput hierarchy and controlled the largest chunk of territory (9931 sq ml). A census of 1834 showed that in 32 talukas where they resided, the jadejas had 102 males and only 20 females in the age group, one year and below. The same census also showed that jadeja males of 20 years of age and below were 1422 and Jadeja females of all ages were only 603. Female infanticide was no less extensive among the jethwa rajputs who held the number two position below the jadejas in the Gujarati rajput hierarchy. Alexander Walker, the resident at Baroda reported to Duncan in 1800 that his enquiries showed that in the family of the Rana of Porbandar, the head of the jethwa clan, not a single female child had been preserved for more than a hundred years.

The data on sex ratios in the records for the lewa patidars and kanbis reveal that the top stratum in this caste comprising the lewa patidars of 12 villages known as Baragam in the Charotar area of central Gujarat had much worse female sex ratios than other lewa kanbis. The kanbis had 73 to 75 females per hundred males for a major part of the 19th century [Clark 1983]; from 1847 onwards, British local officials talk of very low numbers of females in what they called the 'aristocratic' patidar villages in Charotar. A census of 1872 showed that the number of females in the 12 top ranking patidar villages in Charotar ranged from 39 to 53

girls to 100 boys below 12 years of age. The census of 1891, 1901 and 1911 also showed that the patidar villages in Charotar had very low proportion of females. For example, the census of 1911 showed that five of the 12 patidar villages under Baroda had less than 700 females per 1,000 males.

For Sikh khutris of Punjab, the records again suggest that the top rung in the hypergamous ladder consisting of bedi khutris who claimed descent from Guru Nanak, the founder of the Sikh faith practiced female infanticide more extensively than other khutris. The information on female infanticide for bedi khutris range from Lake's report of 1851 to the Punjab Board of Administration that "the bedees are an influential caste of Sikh khutris ... who have destroyed all their female offspring for the last four hundred years" to figures from the Punjab correspondence for the years 1848-49 to 1850-51 showing that the bedi khutris had 28 boys to only 10 girls in 1848-49, 24 boys to only 6 girls in 1849-50 and 20 boys to 12 girls in 1850-51.

Though the female infanticide records and later the census refer to low female sex ratios among jats, ahirs and gujars in north India, detailed information on whether the top rung in these castes resorted to more extensive female infanticide than those of lower status is not available. There is information that the princely jat houses of Bharatpur, Nabha, Jind, Kythal, Patiala and Faridkot practised female infanticide 'extensively'.

Since the lewa patidars, the jadejas and suryavamshi rajputs were acknowledged to be highest in the hypergamous hierarchy in the respective region, they wished to maintain that position. Moreover, the top stratum had restricted options in selecting eligible grooms. Consequently, they practised more extensive female infanticide than others in their caste. The point is that for those at the top of the hypergamous hierarchy, the complications of bringing up girls went beyond dowry avoidance. Going by the reports of British officials in the records, this is how the establishment perceived the extensive female infanticide among the high status patidars and rajputs. It seems to me to have substance and it may be erroneous to regard it as the colonisers perception. As noted before, the British certainly complicated matters for the castes, which resorted to female infanticide; however, it would be simplistic to suggest as some scholars have done that the complications contributing to female infanticide were mainly due to British revenue policies or the support to the dominant castes by the political rulers.[2] A close reading of the socio-political history of Gujarat region shows that even during precolonial maratha rule and Muslim rule, there were influential patidars in the Charotar villages who were tax collectors and rulers of villages. The maratha and Muslim rulers tried to be friendly to the charotar patidars. Even during pre-colonial rule, the patidari or narwadari villages which paid fixed revenues enjoyed a higher status than senja villages inhabited mostly by kanbis who paid variable revenue [Shah: 2002]. Hence the complications of status hierarchy, hypergamy and the friendship between the political authority and the local dominant caste existed before colonial rule. Among Gujarati rajputs, the freezing of the political boundaries giving clans like the jadejas the highest position among Gujarati rajputs happened before colonial rule. It is not possible to date it precisely but it is safe to assume that the rajput territorial boundaries got frozen after the conquest of Gujarat by the Mughal emperor, Akbar which gave the rajputs of peninsular Gujarat the top position in the regional rajput hierarchy.

Continuity and Change

Since caste census was discontinued after independence, it is difficult now to relate sex ratios to caste and status within caste which one could do earlier on the basis of the female infanticide records and the census. Nevertheless, it is possible to point to continuity and change which arguably has been a core feature of Indian society for millennia. When one compares the information in the records on female infanticide to the region specific census data on sex ratios since independence, one is struck by the fact that though caste no longer figures now in the census, the regions which the records speak as having female infanticide are the same. Thus while the records speak of undivided Punjab as having female infanticide among certain castes, now it is Punjab and, Haryana which have shown very consistently as having not only low but also declining female to male sex ratios since independence. The child sex ratio (girls per 1,000 boys aged 0-6) in Punjab declined from 894 in 1961 to 793 in 2001. In Haryana, the child sex ratio plummeted from 910 in 1961 to 820 in 2001. Gujarat, Rajasthan and Uttar Pradesh, which figured in the records as areas where a number of castes practiced female infanticide, continue to figure as areas with low female to male sex ratios. Given the low female to male sex ratios in the jat dominated districts in UP and also in Punjab and Haryana, it is not difficult to surmise that this caste which resorted to female infanticide in colonial times is now practising female foeticide. A look at the districtwise sex ratios for Gujarat from 1901 to 1971 shows that compared to other districts, Kheda district (Kaira during colonial days) which was the site of the patidar dominance since precolonial and colonial times, has not only lower but also declining female to male sex ratio. The sex ratio in Kheda district dropped from 897 in 1901 to 894 in 1971. It was only 865 in 1911 and 875 in 1931.

A suggestive pattern which emerges from the female infanticide records is that (a) the hypergamous castes which practised female infanticide were dominant at the local level in parts of north and west India and (b) they claimed kshatriya status and tried to cultivate a martial ideology. It is interesting to note here that the

records never refer to trading or merchant castes such as the banias who were mostly urban based as practising female infanticide. Nor do the kayasths who were scribes or took to service since medieval times find a mention. Except in Punjab, the brahmins do not figure in the records in connection with female infanticide in any other part of north, west or south India though they were dominant in some rural areas.

The records speak of the lower level rajputs and kanbis seeking wives from the kolis or tribals due to shortage of marriageable women at the lower levels of the hypergamous hierarchy. Established brokers were approached who procured women for a fee. Invariably the lower level rajputs and kanbis paid bride price and brokerage. The deal was, however, kept a secret and generally came to light when the women was ill-treated in her husband's household. At the middle and lower levels of the status hierarchy among kanbis and rajputs, families faced a double financial burden of dowry payment for marrying their daughter's hypergamously and bride price for marrying sons.

The caste specific information on female infanticide available in the records and the data on sex ratios for regions are clearly indicative of how long the practice has been around in certain communities. The first reference to female infanticide among jats in Punjab is in an 1857 publication by John Cave Brown on *Indian Infanticide*. The census data for the colonial period and the recent 2001 census suggests that the jats in Punjab have been practising female infanticide, now foeticide for over 150 years. For Iewa patidars and kanbis of central Gujarat, the first mention of low female sex ratios goes back to 1847. The long history of female infanticide in these castes shows how well entrenched the practice is. There is no getting away from the fact that the practice is embedded in the social structure of certain dominant castes. Unfortunately, for reasons of status mobility and possibly other reasons we can guess, the other non-dominant castes are following their bad example. Once we accept the fact that female infanticide is rooted in the social structure of certain castes for a century and a half, the reality that it is not easy to eradicate it also needs to be faced. The colonial ruler's efforts to stop female infanticide may be instructive but perhaps inoperative in democratic India.

Efforts at Suppression

The official records on female infanticide do not tell us everything we want to know, particularly how the castes, which practised female infanticide, viewed it. In addition, there is always the problem of an official bias. Despite these limitations, the records show the very different perceptions of the coloniser and the other. While the colonial officials who were called upon to deal with female infanticide in the course of their official career, called it 'inhuman', 'obnoxious' 'barbaric' and 'a crime', the castes which practised female infanticide in their interviews with the officials justified it by saying that they killed their female infants because they could not afford huge dowries. This prompted officials like Walker to call the Jadejas an 'avaricious' lot who wished to keep their wealth intact by destroying their female children. The differing viewpoints3 bring out the fact that on one side there was a modern, reformist colonial state which viewed female infanticide as an 'obnoxious custom' or a crime, which should be eradicated. On the other side, the castes which practised female infanticide had well entrenched social norms such as dowry, hypergamy, caste endogamy, clan exogamy and so on which made the marriage of daughters a very complicated affair. These castes did not regard female infanticide as a crime. That there was no meeting ground between these perceptions is evident from the fact that British efforts to stop female infanticide or change social norms, which contributed, to the practice were a failure. Coercion yielded temporary results. Starting from Duncan's efforts among the rajkumar rajputs of Jaunpur district in 1789 to the passing of the Female Infanticide Act in March, 1870, British efforts to stop female infanticide covered a period of nearly hundred years. The continuing low female to male sex ratios among castes known to practise female infanticide as revealed by the census from 1891 onwards is proof enough that the British efforts at eradicating female infanticide did not make a dent in the problem.

Jonathan Duncan was an orientalist by conviction. As the resident at Benares and as governor of Bombay (1795-1812) he obtained written agreements signed by rajkumar rajputs in 1789 and jadeja rajputs in 1808. The agreements stated that the signatories would thenceforth desist from killing their female children since such an act was a sin according to the Hindu shastras. How successful Duncan was is clear from major Ballantine's report of June 20, 1817 which showed that many talukas in Kathiawad inhabited by jadeja rajputs had only one female child and some not even one. Ballantine cited the case of Drappa taluka, which contained more than 400 jadeja families but "not a single female child in any of them". As for the rajkumars, this paper had earlier mentioned the low female to male sex ratios in this rajput clan as revealed by a census of 1856.

To stop female infanticide, the British tried persuading the castes, which practised it to reduce dowry, and wedding expenses. In the 1840s and 1850s meetings were organised in the North Western Provinces and Punjab to obtain agreements from the castes that they will resort to 'self-regulation' by cutting down on

wedding expenditure. The agreements did not lead to any concrete result. Later, British officials admitted that the agreements were a non-starter because the 'problem' of hypergamy, which mainly contributed to expensive weddings of girls, had not been addressed. Perhaps taking a cue from this experience, the British tried to curb hypergamy and encouraged reciprocal marriages to stop female infanticide.

Since the lewa kanbis who sought marriage alliances for their daughters in aristocratic lewa patidar families of Charotar were excluded by the latter unless they offered a huge dowry, the kanbis formed endogamous circles known as 'ekadas' or 'gols'. These endogamous circles had rules, which were sometimes written on stamp paper; the rules prohibited the members of the gol from marrying their daughter in a higher status family or circle. To counter hypergamy and female infanticide, the British encouraged the formation of gols and tried to strengthen the existing ones. British efforts bore fruit in terms of the number of gols formed; by 1872 there were 49 gols in Kaira district alone. However, the gols failed to check hypergamy. Ambitious members of the gols flouted its rules and married their daughters hypergamously with large dowries. British efforts to promote the gols started in 1847. A census of 1849 showed that there were in British Kaira, 72.84 kanbi females per hundred males. This moved by 1872 to a sex ratio of 73 kanbi females per hundred males. In 23 years, the sex ratio 'improved' by less than one percentage point. It shows the degree of success attained by the British in checking hypergamy and female infanticide by promoting endogamous marriage circles. The efforts of Wilkinson in 1836 to curb hypergamy to stop female infanticide among the rajput chiefs in central India and similar efforts of Mcloyd in 1853 among the bedi khutris of Punjab also did not yield the desired results.

That the Female Infanticide Act of 1870 also did not produce any significant result so far as suppression of the practice is concerned is evident from the census figures and comments of census officials. The author of the 1911 (India) report says: "the figures for certain communities show that there is still in their case a great dearth of females but there is very little direct evidence that it is due to actual infanticide and it may equally well be the result of more or less deliberate neglect of girls".There is evidence that deliberate neglect of girls was there even before the Female Infanticide Act was passed. One is reminded of W R Moore's observation in his report of 1856. Designated as the infanticide commissioner, Moore was asked to investigate female infanticide in the Benares division of the North Western Provinces and submit a detailed report. When he asked the rajputs why they had no female children, they told him: 'Sookh jatain hain' (they dry up).

Post Independence Scenario

When one looks at the knowledge gained about female infanticide and the socio-economic institutions related to it from the colonial period to the present, it is clearly diminishing knowledge which confronts the researcher and all those deeply concerned with the problem. Based on the interviews of British officials with castes which practised female infanticide, the records throw considerable light. The census till 1931, continues to relate caste to female infanticide as the records do, but they are bereft of the kinds of information which the records provide. What we find after 1931 and in the post-independence period is a whole lot of regionwise statistics, which shows that female infanticide, has changed to female foeticide wherever sex determination facilities are available. It is certainly alarming to find that the practice is spreading like wild fire. However, none of the detailed information, which the records throw up on the socio-economic matrix in which female infanticide was located, is now available. This is an important point, which needs stressing in the present day context. It is sometimes assumed that since female infanticide and female foeticide is related to dowry, the problem will be solved once dowry is eradicated through efficient law enforcement or some other method like generating public opinion against it. However, what leads to dowry in the first place is often not asked. The colonial experience is instructive. From the use of the shastra to coercion to social engineering, the colonial state tried almost everything to stop the practice. Its failure shows the resilience of institutionalised norms to which female infanticide was related and about which we still know so little. It is not surprising therefore, that facile suggestions are being made that this most blatant form of discrimination against females can be tackled by somehow removing son preference and dowry. Matters don't seem that simple. How does one tackle firmly entrenched institutionalised norms of which dowry and son preference are a part? Faced with a daunting task such as removing gender discrimination, the governmental and non-governmental agencies who are doing their bit to solve the problem certainly deserve praise and admiration. But we must know what we are up against and here the colonial records and experience are a pointer.

Putting together the information in the records, anthropological studies and other sources, the perception of the analyst of female infanticide during colonial rule is in terms of its caste specificity, hypergamy, hierarchy, status maintenance, dowry avoidance and so on. However, is that all there is to analysing the records? Is female infanticide just a matter of a sex ratios and statistics? Were the perpetrators of female infanticide all heartless souls who steeled themselves from human emotions and sacrificed their female infants at the altar

of pride and social status to protect their ancestral lands through dowry avoidance? Does not the element of compulsion leading to female infanticide reported by more than one British official give some indication that those who practised female infanticide felt caught up in the social structure of which they were a part? Raising such questions is not to say that the practice is any way justified because of social compulsions. Following Durkheim one may say that there is no wishing away the social compulsions and these need to be addressed to get rid of female infanticide and female foeticide.

Finally, it is necessary to ask if female infanticide, now foeticide in urban centres, is the only one to persist since colonial times. A number of pernicious social practices concerning women, which the social reformers of the colonial era tried to eradicate, are still with us. Sati in UP and Rajasthan has been reported; child marriage persists in rural India. The prohibition on widow re-marriage among upper caste Hindus and the sanskritising lower castes is still to be reckoned with. Given the persistence of these customs, it can be argued that modernity with its ideology of equality of the sexes intruded into Indian society without significant changes in the position of women.

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Notes

[This is a revised version of the paper presented at a workshop on 'Missing Girls in India: Science, Gender Relations and the Political Economy of Emotions' organised by the Department of Sociology, Delhi University on 30th-31st October, 2003. I thank Tulsi Patel for inviting me to the workshop.]

1 The figures in 1921 Census do not imply that castes, which convert to Islam, will not practise female infanticide. The records refer to the pathan khanzadas of Jaunpur district in NWP who practised female infanticide in mid-19th century. The records also mention that the pathan khanzadas were rajkumar rajputs before conversion and converted to Islam during the medieval period to "secure to themselves the proprietary possession of a village".
2 Alice Clark in her paper 'Limitations on Female Life Chances in Rural Central Gujarat', argues that "partly unwittingly and partly by feigning blindness, British administrators ultimately supported the continuation of female infanticide and female child neglect". Clark's argument has merit if we take a restricted view only of the colonial period. However, if we go back to pre-colonial rule, it is clear from the studies of scholars [Shah 1964, 2002] that in central Gujarat, the Maratha rulers allowed the patidars to maintain their high status by permitting them to pay fixed revenues. The British continued the same policy. As I have argued, the complications of status hierarchy and hypergamy existed before colonial rule. Moreover, regardless of the practice of female infanticide by a dominant caste, the ruling political authority generally took into account the local power of the dominant caste to collect taxes and maintain law and order.
3 Perceptions of female infanticide and ways of eradicating it varied within the British establishment. Some perceived it as an 'abomination', which should be firmly eradicated since it was their duty as rulers to stop such customs. This view gained ground around the 1830s. The earlier generation of administrators like Jonathan Duncan and Monstuart Elphinstone were more cautious. They too regarded it as an 'abomination' but favoured a persuasive approach to suppress it. The missionaries, of course, viewed female infanticide, sati, child marriage and also superstition as a sure sign of the 'decadence' of Hindu society.

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Frontline

Volume 18 - Issue 22, Oct. 27 - Nov. 09, 2001
India's National Magazine
from the publishers of THE HINDU

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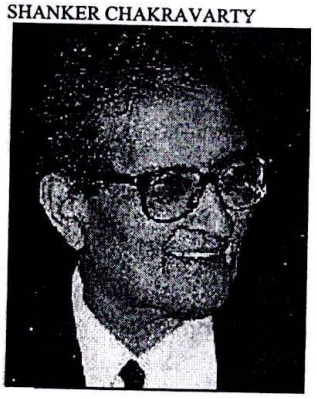
COVER STORY

MANY FACES OF GENDER INEQUALITY

An essay by Amartya Sen.

Nobel Laureate Amartya Sen's work on gender inequality is of seminal importance. His work on the theory of the household represents the household not as an undifferentiated unit, but as a unit of cooperation as well as of inequality and internal discrimination. He has worked on problems of discrimination against women in the development process, on survivorship differentials between men and women under conditions of social discrimination against women, and on women's agency in the process of social development. Along with his academic collaborator Jean Drze, Professor Sen proposed and popularised the concept of "missing women" - estimated to exceed 100 million round the world - which has given us a new way of understanding and mapping the problem.

SHANKER CHAKRAVARTY



In this Cover Story essay, which is based on the text of his inauguration lecture for the Radcliffe Institute at Harvard University, Professor Sen takes a comprehensive and deeply concerned look at the "many faces of gender inequality." Focussing on South Asia, he discovers in the data thrown up by the Census of 2001 an interesting phenomenon - a split India, "something of a social and cultural divide across India, splitting the country into two nearly contiguous halves, in the extent of anti-female bias in natality and post-natality mortality." He concludes by identifying the principal issues, emphasising the need to "take a plural view of gender inequality," and calling for a new agenda of action to combat and put an end to gender inequality.

Frontline features this important essay by Amartya Sen as its Cover Story.

I. Seven Types of Inequality

IT was more than a century ago, in 1870, that Queen Victoria wrote to Sir Theodore Martin complaining about "this mad, wicked folly of 'Woman's Rights'." The formidable empress certainly did not herself need any protection that the acknowledgment of women's rights might offer. Even at the age of eighty, in 1899, she could write to A.J. Balfour, "We are not interested in the possibilities of defeat; they do not exist." That, however, is not the way most people's lives go - reduced and defeated as they frequently are by adversities. And within each community, nationality and class, the burden of hardship often falls disproportionately on women.

The afflicted world in which we live is characterised by deeply unequal sharing of the burden of adversities between women and men. Gender inequality exists in most parts of the world, from Japan to Morocco, from Uzbekistan to the United States of America. However, inequality between women and men can take very many different forms. Indeed, gender inequality is not one homogeneous phenomenon, but a collection of disparate and interlinked

problems. Let me illustrate with examples of different kinds of disparity.

(1) Mortality inequality: In some regions in the world, inequality between women and men directly involves matters of life and death, and takes the brutal form of unusually high mortality rates of women and a consequent preponderance of men in the total population, as opposed to the preponderance of women found in societies with little or no gender bias in health care and nutrition. Mortality inequality has been observed extensively in North Africa and in Asia, including China and South Asia.

(2) Natality inequality: Given a preference for boys over girls that many male-dominated societies have, gender inequality can manifest itself in the form of the parents wanting the newborn to be a boy rather than a girl. There was a time when this could be no more than a wish (a daydream or a nightmare, depending on one's perspective), but with the availability of modern techniques to determine the gender of the foetus, sex-selective abortion has become common in many countries. It is particularly prevalent in East Asia, in China and South Korea in particular, but also in Singapore and Taiwan, and it is beginning to emerge as a statistically significant phenomenon in India and South Asia as well. This is high-tech sexism.

KAMAL KISHORE/REUTERS

A woman worker in New Delhi.

(3) Basic facility inequality: Even when demographic characteristics do not show much or any anti-female bias, there are other ways in which women can have less than a square deal. Afghanistan may be the only country in the world the government of which is keen on actively excluding girls from schooling (it combines this with other features of massive gender inequality), but there are many countries in Asia and Africa, and also in Latin America, where girls have far less opportunity of schooling than boys do. There are other deficiencies in basic facilities available to women, varying from encouragement to cultivate one's natural talents to fair participation in rewarding social functions of the community.

(4) Special opportunity inequality: Even when there is relatively little difference in basic facilities including schooling, the opportunities of higher education may be far fewer for young women than for young men. Indeed, gender bias in higher education and professio training can be observed even in some of the richest countries in the world, in Europe and North America.

Sometimes this type of division has been based on the superficially innocuous idea that the respective "provinces" of men and women are just different. This thesis has been championed in different forms over the centuries, and has had much implicit as well as explicit following. It was presented with particular directness more than a hundred years before Queen Victoria's complaint about "woman's rights" by the Revd James Fordyce in his Sermons to Young Women (1766), a book which, as Mary Wollstonecraft noted in her A Vindication of the Rights of Women (1792), had been "long made a part of woman's library." Fordyce warned the young women, to whom his sermons were addressed, against "those masculine women that would plead for your sharing any part of their province with us," identifying the province of men as including not only "war," but also "commerce, politics, exercises of strength and dexterity, abstract philosophy and all the abstruser sciences."[1] Even though such clear-cut beliefs about the provinces of men and women are now rather rare, nevertheless the presence of extensive gender asymmetry can be seen in many areas of education, training and professional work even in Europe and North America.

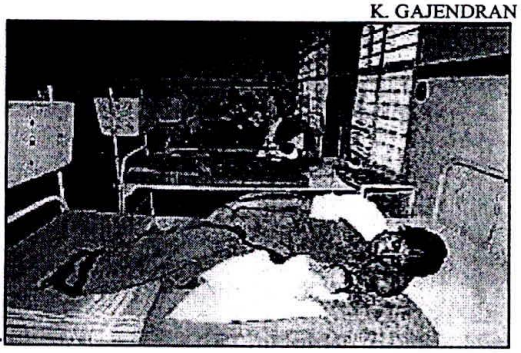
(5) Professional inequality: In terms of employment as well as promotion in work and occupation, women often face greater handicap than men. A country like Japan may be quite egalitarian in matters of demography or basic facilities, and even, to a great extent, in higher education, and yet progress to elevated levels of employment and occupation seems to be much more problematic for women than for men.

In the English television series called "Yes, Minister," there is an episode where the Minister, full of reforming zeal, is trying to find out from the immovable permanent secretary, Sir Humphrey, how many women are in really senior positions in the British civil service. Sir Humphrey says that it is very difficult to give an exact number; it would require a lot of investigation. The Minister is still insistent, and wants to know approximately how many women are there in these senior positions. To which Sir Humphrey finally replies, "Approximately, none."

(6) Ownership inequality: In many societies the ownership of property can also be very unequal. Even basic assets such as homes and land may be very asymmetrically shared. The absence of claims to property can not only reduce the voice of women, but also make it harder for women to enter and flourish in commercial, economic and even some social activities.[2] This type of inequality has existed in most parts of the world, though there are also local variations. For example, even though traditional property rights have favoured men in the bulk of India, in what is now the State of Kerala, there has been, for a long time, matrilineal inheritance for an influential part of the community, namely the Nairs.

K. GAJENDRAN

At a family welfare centre in Tamil Nadu.



(7) Household inequality: There are, often enough, basic inequalities in gender relations within the family or the household, which can take many different forms. Even in cases in which there are no overt signs of anti-female bias in, say, survival or son-preference or education, or even in promotion to higher executive positions, the family arrangements can be quite unequal in terms of sharing the burden of housework and child care. It is, for example, quite common in many societies to take it for granted that while men will naturally work outside the home, women could do it if and only if they could combine it with various inescapable and unequally shared household duties. This is sometimes called "division of labour," though women could be forgiven for seeing it as "accumulation of labour." The reach of this inequality includes not only unequal relations within the family, but also derivative inequalities in employment and recognition in the outside world. Also, the established fixity of this type of "division" or "accumulation" of labour can also have far-reaching effects on the knowledge and understanding of different types of work in professional circles. When I first started working on gender inequality, in the 1970s, I remember being struck by the fact that the Handbook of Human Nutrition Requirement of the World Health Organisation (WHO), in presenting "calorie requirements" for different categories of people, chose to classify household work as "sedentary activity," requiring very little deployment of energy.[3] I was, however, not able to determine precisely how this remarkable bit of information had been collected by the patrician leaders of society.

II. Focussing on South Asia

It is important to take note of the variety of forms that gender inequality can take. First, inequality between women and men cannot be confronted and overcome by any one set of all-

purpose remedy. Second, over time the same country can move from one type of gender inequality to harbouring other forms of that inequity. I shall presently argue that there is new evidence that India is undergoing just such a transformation right at this time. Third, the different forms of gender inequality can impose diverse adversities on the lives of men and boys, in addition to those of women and girls. In understanding the different aspects of the evil of gender inequality, we have to look beyond the predicament of women and examine the problems created for men as well by the asymmetric treatment of women. These causal connections, which (as I shall presently illustrate) can be very significant, can vary with the form of gender inequality. Finally, inequalities of different kinds can also, frequently enough, feed each other, and we have to be aware of their interlinkages.

Even though part of the object of this paper is to discuss the variety of different types of gender inequality, a substantial part of my empirical focus will, in fact, be on two of the most elementary kinds of gender inequality, namely, mortality inequality and natality inequality. I shall be concerned, in particular, with gender inequality in South Asia, or the Indian subcontinent. While I shall separate out the subcontinent for special attention, I must also warn against the smugness of thinking that the United States or Western Europe is free from gender bias simply because some of the empirical generalisations that can be made about the subcontinent would not hold in the West. Given the many faces of gender inequality, much would depend on which face we look at.

For example, India, along with Bangladesh, Pakistan and Sri Lanka, has had female heads of governments, which the United States or Japan has not yet had (and does not seem very likely to have in the immediate future, if I am any judge). Indeed, in the case of Bangladesh, where both the Prime Minister and the Leader of the Opposition are women, one might begin to wonder whether any man could possibly rise to a leadership position there in the near future. To take another example, I had a vastly larger proportion of tenured women colleagues when I was a Professor at Delhi University - as early as the 1960s - than I had at Harvard University in the 1990s, or presently have at Trinity College, Cambridge. To take another type of example (of a rather personal kind), in preparing my last book, Development as Freedom,[4] when I was looking for a suitably early formulation of the contrast between the instrumental importance of income and wealth, on the one hand, and the intrinsic value of human life, on the other (a point of departure for my book), I found it in the words of Maitreyee, a woman intellectual depicted in the Upanishads (from the eighth century B.C.). The classic formulation of this distinction would, of course, come about four centuries later, from Aristotle, in Nicomachean Ethics, but it is interesting that the first sharp formulation of the value of living for men and women should have come from a woman thinker in a society th has not yet - three thousand years later - been able to overcome the mortality differential between women and men.

Indeed, in the scale of mortality inequality, India - as well as Pakistan and Bangladesh - is close to the bottom of the league in gender disparity. And, as I shall presently argue, natality inequality is also beginning to rear its ugly head very firmly and very fast right at this time in the subcontinent.

III. Exceptions and Trends

In the bulk of the subcontinent, with only a few exceptions (such as Sri Lanka and the State of Kerala in India), female mortality rates are very significantly higher than what could be expected given the mortality patterns of men (in the respective age groups). This type of gender inequality need not entail any conscious homicide, and it would be a mistake to try to explain this large phenomenon by invoking the occasional cases of female infanticide that are reported from China or India; these are truly dreadful events when they occur, but they are

relatively rare. Rather, the mortality disadvantage of women works mainly through a widespread neglect of health, nutrition and other interests of women that influence survival.

It is sometimes presumed that there are more women than men in the world, since that is well-known to be the case in Europe and North America, which have a female to male ratio of 1.05 or so, on the average (that is, about 105 women per 100 men). But women do not outnumber men in the world as a whole; indeed there are only about 98 women per 100 men on the globe. This "shortfall" of women is most acute in Asia and North Africa. For example, the number of females per 100 males in the total population is 97 in Egypt and Iran, 95 in Bangladesh and Turkey, 94 in China, 93 in India and Pakistan, and 84 in Saudi Arabia (though the last ratio is considerably reduced by the presence of male migrant workers from elsewhere who come to Saudi Arabia).

It has been widely observed that given similar health care and nutrition, women tend typically to have lower age-specific mortality rates than men do. Indeed, even female foetuses tend to have a lower probability of miscarriage than male foetuses have. Everywhere in the world, more male babies are born than female babies (and an even higher proportion of male foetuses are conceived compared with female foetuses), but throughout their respective lives the proportion of males goes on falling as we move to higher and higher age groups, due to typically greater male mortality rates. The excess of females over males in the population of Europe and North America comes about as a result of this greater survival chance of females in different age groups.

BRENNAN LINSLEY/AP

There is relatively little bias against women in terms of health care and social status in sub-Saharan Africa.

However, in many parts of the world, women receive less attention and health care than men do, and particularly girls often receive very much less support than boys. As a result of this gender bias, the mortality rates of females often exceed those of males in these countries. The concept of "missing women" was devised to give some idea of the enormity of the phenomenon of women's adversity in mortality by focussing on the women who are simply not there, due to unusually high mortality compared with male mortality rates. The basic idea is to find some rough and ready way to understand the quantitative difference between (1) the actual number of women in these countries, and (2) the number we could expect to see if the gender pattern of mortality were similar in these countries as in other regions of the world that do not have a significant bias against women in terms of health care and other attentions relevant for survival.

For example, if we take the ratio of women to men in sub-Saharan Africa as the standard (there is relatively little bias against women in terms of health care, social status and mortality rates in sub-Saharan Africa, even though the absolute numbers are quite dreadful for both men and women), then its female-male ratio of 1.022 can be used to calculate the number of missing women in women-short countries.[5] For example, with India's female-male ratio of 0.93, there is a total difference of 9 per cent (of the male population) between that ratio and the standard used for comparison, namely, the sub-Saharan African ratio of 1.022. This yielded a figure of 37 million missing women already in 1986 (when I first did the estimation). Using the same sub-Saharan standard, China had 44 million missing women, and it was evident that for the world as a whole the magnitude of shortfall easily exceeded 100 million.[6] Other standards and different procedures can also be used, as has been done by Ansley Coale and Stephan Klasen, getting somewhat different numbers, but invariably very

large ones (Klasen's total number is about 80 million missing women).[7] Gender bias in mortality does take an astonishingly heavy toll.

How can this be reversed? Some economic models have tended to relate the neglect of women to the lack of economic empowerment of women. While Ester Boserup, an early feminist economist, discussed how the status and standing of women are enhanced by economic independence (such as gainful employment), others have tried to link the neglect of girls to the higher economic returns for the family from boys compared with girls.[8] I believe the former line of reasoning, which takes fuller note of social considerations that take us beyond any hard-headed calculation of relative returns from rearing girls vis-a-vis boys, is both appropriately broader and more promising, but no matter which interpretation is taken, women's gainful employment, especially in more rewarding occupations, clearly does play a role in improving the deal that women and girls get. And so does women's literacy, and other factors that can be seen as adding to the status, standing and voice of women in family decisions.[9]

An example that has been discussed in this context is the experience of the State of Kerala in India, which provides a sharp contrast with many other parts of the country in having little or no gender bias in mortality. Indeed, not only is the life expectancy of Kerala women at bi above 76 (compared with 70 for men), the female-male ratio of Kerala's population is 1.06 according to the 2001 Census (possibly somewhat raised by greater migration for work by men, but certainly no lower than the West European or North American ratios, which are around 1.05 or so). With its 30 million population, Kerala's example also involves a fair number of people. The causal variables related to women's empowerment can be seen as playing a role here, since Kerala has a very high level of women's literacy (nearly universal for the younger age groups), and also much more access for women to well paid and well respected jobs. One of the other influences of women's empowerment, namely a fertility decline, is also observed in Kerala, where the fertility rate has fallen very fast (much faster, incidentally, than China, despite the rigours of Chinese coercive measures in birth control), and Kerala's present fertility rate around 1.7 or 1.8 (roughly interpretable as an average of 1.7 or 1.8 children per couple) is one of the lowest in the developing world (about the same as in Britain and France, and much lower than in the United States). All these observations link with each other very well in a harmonious causal story.

However, there is further need for causal discrimination in interpreting Kerala's experience. There are other special features of Kerala which may also be relevant, such as fem[illegible] ownership of property for an influential part of the Hindu population (the Nairs), openness to and interaction with the outside world (with the presence of Christians - about a fifth of the population - who have been much longer in Kerala - since around the fourth century - than they have been in, say, Britain, not to mention Jews who came to Kerala shortly after the fall of Jerusalem), and activist left-wing politics with a particularly egalitarian commitment, which has tended to focus strongly on issues of equity (not only between classes and castes, but also between women and men).[10]

IV. Issues that Need Investigation

I now move away from the old - and by now much discussed - problems of gender bias in life and death (illustrated by the enormity of the size of "missing women") to other issues which are in need of greater investigation at this time. We begin by noting four substantial phenomena that happen to be quite widely observed in South Asia.

(1) Undernourishment of girls over boys: At the time of birth, girls are obviously no more

nutritionally deprived than boys are, but this situation changes as society's unequal treatment takes over from nature's non-discrimination. There has, in fact, been plenty of aggregative evidence on this for quite some time now.[11] But this has been accompanied by some anthropological scepticism of the appropriateness of using aggregate statistics with pooled data from different regions to interpret the behaviour of individual families. However, there have also been some detailed and concretely local studies on this subject, which confirm the picture that emerges on the basis of aggregate statistics.[12] One case study from India, which I myself undertook in 1983, along with Sunil Sengupta, involved the weighing of every child in two large villages. The time pattern that emerged from this micro study, which concentrated particularly on weight-for-age as the chosen indicator of nutritional level for children under five, brings out clearly how an initial condition of broad nutritional symmetry turns gradually into a situation of significant female disadvantage.[13] The detailed local studies tend to confirm rather than contradict the picture that emerges from aggregate statistics.

In interpreting the causal process, it is important to emphasise that the lower level of nourishment of girls may not relate directly to their being underfed vis-a-vis boys. Often enough, the differences may particularly arise from the neglect of health care of girls compared with what boys get. There is, in fact, some direct information of comparative medical neglect of girls vis-a-vis boys in South Asia. Indeed, when I studied, with Jocelyn Kynch, admissions data from two large public hospitals in Bombay (Mumbai), it was very striking to find clear evidence that the admitted girls were typically more ill than boys, suggesting the inference that a girl has to be more stricken before she is taken to the hospital.[14] Undernourishment may well result from greater morbidity, which can adversely affect both the absorption of nutrients and the performance of bodily functions.

JORGE SILVA/REUTERS

A malnourished mother and her daughter in Guatemala.

(2) High incidence of maternal undernourishment: In South Asia maternal undernutrition is more common than in most other regions of the world.[15] Comparisons of Body Mass Index (BMI), which is essentially a measure of weight for height, bring this out clearly enough, as do statistics of such consequential characteristics as the incidence of anaemia.[16]

(3) Prevalence of low birthweight: In South Asia, as many as 21 per cent of children are born clinically underweight (in accepted medical standards) - more than in any other substantial region in the world.[17]. The predicament of being low in weight in childhood seems often enough to begin at birth in the case of South Asian children. In terms of weight for age, South Asia has around 40 to 60 per cent children undernourished compared with 20 to 40 per cent undernourishment even in sub-Saharan Africa. The children start deprived and stay deprived.

(4) High incidence of cardiovascular diseases: South Asia stands out as having more cardiovascular diseases than any other part of the third world. Even when other countries, such as China, have greater prevalence of the standard predisposing conditions, the Indian population seems to have more heart problems than these other countries have.

It is not difficult to see that the first three observations are very likely causally connected. The neglect of the care of girls and of women in general and the underlying gender bias that they reflect would tend to yield more maternal undernourishment, and through that more foetal deprivation and distress, underweight babies, and child undernourishment. But what about the

last observation - the higher incidence of cardiovascular diseases among South Asian adults? In interpreting it, we can, I would argue, draw on some pioneering work of a British medical team, led by Professor D.J.P. Barker.[18]

Based on English data, Barker has shown that low birth weight is closely associated with higher incidence, many decades later, of several adult diseases, including hypertension, glucose intolerance, and other cardiovascular hazards. The robustness of the statistical connections as well as the causal mechanisms involved in intrauterine growth retardation can, of course, be further investigated, but as matters stand these medical findings offer a possibility of causally interconnecting the different empirical observations related to South Asia, as I have tried to discuss in a joint paper with Siddiq Osmani.[19] The application of this medical understanding to the phenomenon of high incidence of cardiovascular diseases in South Asia strongly suggests a causal pattern that goes from the nutritional neglect of women to maternal undernourishment, from there to foetal growth retardation and underweight babies, and thence to greater incidence of cardiovascular afflictions much later in adult life (along with the phenomenon of undernourished children in the shorter run). What begins as a neglect of the interests of women ends up causing adversities in the health and survival of all - even at an advanced age.

Given the uniquely critical role of women in the reproductive process, it would be hard to imagine that the deprivation to which women are subjected would not have some adverse impact on the lives of all - men as well as women and adults as well as children - who are "born of a woman" (as the Book of Job describes every person, not particularly daringly). Indeed, since men suffer disproportionately more from cardiovascular diseases, the suffering of women hit men even harder, in this respect. The extensive penalties of neglecting women's interests rebounds, it appears, on men with a vengeance.

V. What Women's Agency Can Achieve

These biological connections illustrate a more general point, to wit, gender inequality can hurt the interests of men as well as women. There are other - non-biological - connections that operate through women's conscious agency. The expansion of women's capabilities not only enhances women's own freedom and well-being, but also has many other effects on the lives of all.[20] An enhancement of women's active agency can, in many circumstances, contribute substantially to the lives of all people - men as well as women, children as well as adults. As many studies have brought out, the greater empowerment of women tends to reduce child neglect and mortality, cut down fertility and overcrowding, and more generally, broaden social concern and care.

These illustrations can be supplemented by considering the functioning of women in other areas, including in economic and political fields.[21] Substantial linkages between women's agency and social achievements have been noted in many different countries.

AVENTURIER PATRICK/GAMMA

An Afghan mother and children at a refugee camp in Pakistan.

There is, for example, plenty of evidence that whenever social and economic arrangements depart from the standard practice of male ownership, women can seize business and economic initiative with much success. It is also clear that the result of women's participation is not merely to generate income for

women, but also to provide many other social benefits that come from women's enhanced status and independence. The remarkable success of organisations like the Grameen Bank and the Bangladesh Rural Advancement Committee (BRAC) in Bangladesh is a good example of this, and there is some evidence that the high profile presence of women in social and political life in that country has drawn substantial support from women's economic involvement and from a changed image of the role of women. While the Revd James Fordyce might disapprove of "those masculine women," as he called them, straying into men's "province," the nature of modern Bangladesh reflects in many different ways the increasing agency of women. The precipitate fall of the total fertility rate in Bangladesh from 6.1 to 3.0 in the course of two decades (perhaps the fastest such fall in the world) is clearly related to the changed economic and social roles of women, along with increases in family planning facilities. There have also been cultural influences and developments in that direction.[22] Similar changes can be observed also in parts of India where women's empowerment has expanded, with more literacy and greater economic and social involvements outside the home.[23]

VI. Behind a Split India

While there is something to cheer in the developments I have just been discussing, and there is considerable evidence of a weakened hold of gender disparity in several fields in the subcontinent, there is also, alas, some evidence of a movement in the contrary direction, at least in one aspect of gender inequality, namely, natality inequality. This has been brought out particularly sharply by the early results of the 2001 decennial national Census of India, which are now available. Early results indicate that even though the overall female to male ratio has improved slightly for the country as a whole (with a corresponding reduction of the proportion of "missing women"), the female-male ratio for children has had a substantial decline. For India as a whole, the female-male ratio of the population under age 6 has fallen from 94.5 girls for hundred boys in 1991 to 92.7 girls per hundred boys in 2001. While there has been no such decline in some parts of the country (most notably Kerala), it has fallen very sharply in others, such as Punjab, Haryana, Gujarat and Maharashtra, which are among the richer Indian States.

Taking together all the evidence that exists, it is clear that this change reflects not a rise in female child mortality, but a fall in female births vis-a-vis male births, and is almost certainly connected with increased availability and use of gender determination of foetuses. Fearing that sex-selective abortion might occur in India, the Indian Parliament banned some years ago the use of sex determination techniques for foetuses, except when it is a by-product of other necessary medical investigation. But it appears that the enforcement of this law has been comprehensively neglected, and when questioned by Celia Dugger, the energetic correspondent of The New York Times, the police often cited difficulties in achieving successful prosecution thanks to the reluctance of mothers to give evidence of use of such techniques.

I do not believe that this need be an insurmountable difficulty (other types of evidence can in fact be used for prosecution), but the reluctance of the mothers to give evidence brings out perhaps the most disturbing aspect of this natality inequality, to wit, the "son preference" that many Indian mothers themselves seem to have. This face of gender inequality cannot, therefore, be removed, at least in the short run, by the enhancement of women's empowerment and agency, since that agency is itself an integral part of the cause of natality inequality. Policy initiatives have to take adequate note of the fact that the pattern of gender inequality seems to be shifting in India, right at this time, from mortality inequality (the female life expectancy at birth is by now two years higher than male life expectancy in India) to natality inequality.

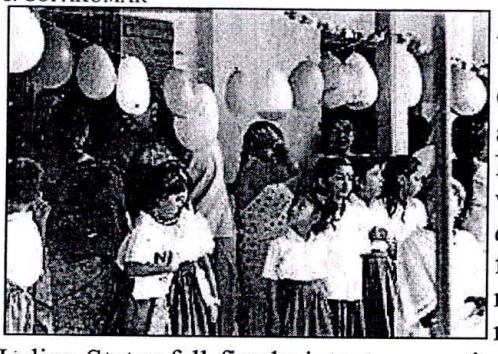
Indeed, there is clear evidence that traditional routes of changing gender inequality, through using public policy to influence female education and female economic participation, may not serve as a path to the removal of natality inequality. A sharp pointer in that direction comes from countries in East Asia, which all have high levels of female education and economic participation. Despite these achievements, compared with the biologically common ratio across the world of 95 girls being born per hundred boys, Singapore and Taiwan have 92 girls, South Korea only 88, and China a mere 86. In fact, South Korea's overall female-male ratio for children is also a meagre 88 girls for 100 boys and China's 85 girls for 100 boys. In comparison, the Indian ratio of 92.7 girls for 100 boys (though lower than its previous figure of 94.5) still looks far less unfavourable.[24]

However, there are more grounds for concern than may be suggested by the current all-India average. First, there are substantial variations within India, and the all-India average hides the fact that there are States in India where the female-male ratio for children is very much lower than the Indian average. Second, it has to be asked whether with the spread of sex-selective abortion, India may catch up with - and perhaps even go beyond - Korea and China. There is, in fact, strong evidence that this is happening in a big way in parts of the country.

There is, however, something of a social and cultural divide across India, splitting the country into two nearly contiguous halves, in the extent of anti-female bias in natality and post-natality mortality. Since more boys are born than girls everywhere in the world, even without sex-specific abortion, we can use as a classificatory benchmark the female-male ratio among children in advanced industrial countries. The female-male ratio for the 0-5 age group is 94.8 in Germany, 95.0 in the U.K., and 95.7 in the U.S., and perhaps we can sensibly pick the German ratio of 94.8 as the cut-off point below which we should suspect anti-female intervention.

The use of this dividing line produces a remarkable geographical split of India. There are the States in the north and the west where the female-male ratio of children is consistently below the benchmark figure, led by Punjab, Haryana, Delhi and Gujarat (with ratios between 79.3 and 87.8), and also including, among others, Himachal Pradesh, Madhya Pradesh, Rajasthan, Uttar Pradesh, Maharashtra, Jammu and Kashmir, and Bihar (a tiny exception is Dadra and Nagar Haveli, with less than a quarter million people altogether). On the other side of the divide, the States in the east and the south tend to have female-male ratios that are above the benchmark line of 94.8 girls per 100 boys: with Kerala, Andhra Pradesh, West Bengal and Assam (each between 96.3 and 96.6), and also, among others, Orissa, Karnataka and the northeastern States to the east of Bangladesh (Meghalaya, Mizoram, Manipur, Nagaland, Arunachal Pradesh).

S. GOPAKUMAR



At the start of a new school year in Kerala.

One significant exception to this neat pattern of adjoining division is, however, provided by Tamil Nadu, where the female-male ratio is just below 94, which is higher than the ratio of any State in the deficit list, but still just below the cut-off line used for the partitioning (94.8). The astonishing finding is not that one particular State seems to provide a marginal misfit, but how the vast majority of the Indian States fall firmly into two contiguous halves, classified broadly into the north and the west, on one side, and the south and the east, on the other. Indeed, every State in the north and the west (with the slight exception of the tiny Union Territory of Dadra and Nagar Haveli) has strictly lower female-male ratio of children than every State in the east and the south (even

Tamil Nadu fits into this classification), and this indeed is quite remarkable.

The pattern of female-male ratio of children produces a much sharper regional classification than does the female-male ratio of mortality of children, even though the two are also fairly strongly correlated. The female-male ratio in child mortality varies between 0.91 in West Bengal and 0.93 in Kerala, on one side, in the southern and eastern group, to 1.30 in Punjab, Haryana and Uttar Pradesh, with high ratios also in Gujarat, Bihar and Rajasthan, in the northern and western group.

The north and the west have clear characteristics of anti-female bias in a way that is not present - or at least not yet visible - in most of the east and the south. This contrast does not have any immediate economic explanation. The States with anti-female bias include rich ones (Punjab and Haryana) as well as poor States (Madhya Pradesh and Uttar Pradesh), and fast-growing States (Gujarat and Maharashtra) as well as growth failures (Bihar and Uttar Pradesh). Also, the incidence of sex-specific abortions cannot be explained by the availability of medical resources for determining the sex of the foetus: Kerala and West Bengal in the non-deficit list, both with the ratio of 96.3 girls to 100 boys (comfortably higher than the benchmark cut-off of 94.8), have at least as much medical facilities as in such deficit States as Madhya Pradesh or Rajasthan. If commercial facilities for sex-selected abortion are infrequent in Kerala or West Bengal, it is because of a low demand for those specific services, rather than any great supply side barrier.

This suggests that we have to look beyond economic resources or material prosperity or GNP growth into broadly cultural and social influences. There are a variety of potential connections to be considered here, and the linking of these demographic features with the rich subject matter of social anthropology and cultural studies would certainly be important to pursue.[25] There is perhaps a common link with politics as well. Indeed, it has been noted, in other contexts, that the States in the north and the west have, by and large, given much more room to religion-based sectarian politics than have the east or the south, where religion-centred parties have had very little success. For example, of the 197 members of Parliament from the Bharatiya Janata Party (BJP) and the Shiv Sena elected in 1999, as many 169 won from States in the north and the west. Even if we take out the BJP members who, though elected from Bihar or Madhya Pradesh, come from the recently formed relatively "eastern" States of Jharkhand and Chhatisgarh (which, incidentally, do have "eastern" female-male ratios above the benchmark line), the predominance of the north and the west in the representation of the Sangh Parivar remains strong. It is not easy to settle, without further scrutiny, how significant these regional, cultural or political associations are, and how (and even in which direction) the causal influences operate. But the remarkable geographical division of India into two largely contiguous parts in terms of female-male ratio among children (reflecting the combined influence of inequality in natality and post-natal mortality) does call for acknowledgement and further analysis. It would also be important to keep a close watch on whether the incidence of sex-specific abortions will significantly increase in States in which they are at this time quite uncommon.

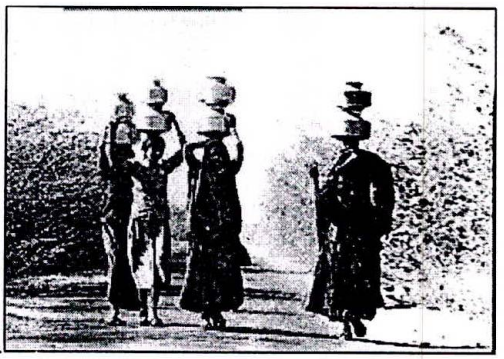
VII. Summing up

I may end by trying briefly to identify some of the principal issues I have tried to discuss. First, I have argued for the need to take a plural view of gender inequality, which can have many different faces. The prominent faces of gender injustice can vary from one region to another, and also from one period to the next.

Second, the effects of gender inequality, which can impoverish the lives of men as well as women, can be more fully understood by taking detailed empirical note of specific forms of

inequality that can be found in particular regions. Gender inequality hurts the interests not only of girls and grown-up women, but also of boys and men, through biological connections (such as childhood undernourishment and cardiovascular diseases at later ages) and also through societal connections (including in politics and in economic and social life).

Fetching water, a scene from rural Rajasthan.



To have an adequate appreciation of the far-reaching effects of disparities between women and men, we have to recognise the basic fact that gender inequality is not one affliction, but many, with varying reach on the lives of women and men, and of girls and boys. There is also the need to reexamine and closely scrutinise some lessons that we have tended to draw from past empirical works. There are no good reasons to abandon the understanding that the impact of women's empowerment in enhancing the voice and influence of women does help to reduce gender inequality of many different kinds, and can also reduce the indirect penalties that men suffer from the subjugation of women. However, the growing phenomenon of natality inequality raises questions that are basically much more complex. When women in some regions themselves strongly prefer having boys to girls, the remedying of the consequent natality inequality calls at least for broader demands on women's agency, in addition to examining other possible influences.

Indeed, in dealing with the new - "high tech" - face of gender disparity, in the form of natality inequality, there is a need to go beyond just the agency of women, but to look also for more critical assessment of received values. When anti-female bias in action (such as sex-specific abortion) reflects the hold of traditional masculinist values from which mothers themselves may not be immune, what is needed is not just freedom of action but also freedom of thought - in women's ability and willingness to question received values. Informed and critical agency is important in combating inequality of every kind. Gender inequality, including its many faces, is no exception.

Based on the text of an inauguration lecture for the new Radcliffe Institute at Harvard University, on April 24, 2001. A shortened version of this paper was published in The New Republic *on September 17, 2001; this is the full text.*

ENDNOTES

1. See William St. Clair, The Godwins and the Shelleys (New York: Norton, 1989), pp. 504-8.

2. Bina Agarwal, among others, has investigated the far-reaching effects of landlessness of women in many agricultural economies; see particularly her A Field of One's Own (Cambridge: Cambridge University Press, 1994).

3. World Health Organisation, Handbook of Human Nutrition Requirement (Geneva: WHO, 1974); this was based on the report of a high-level Expert Committee jointly appointed by the WHO and FAO - the Food and Agriculture Organisation.

4. Development as Freedom (New York: Knopf, and Oxford: Oxford University Press, 1999), Chapter 1.

5. Presented in my "More Than a Hundred Million Women Are Missing," The New York Review of Books, Christmas Number, December 20, 1990, and in "Missing Women," British Medical Journal, 304 (March 1992).

6. The fact that I had used the sub-Saharan African ratio as the standard, rather than the European or North American ratio, was missed by some of my critics, who assumed (wrongly as it happens) that I was comparing the developing countries with advanced Western ones; see for example Ansley Coale, "Excess Female Mortality and the Balances of the Sexes in the Population: An Estimate of the Number of 'Missing Females'," Population and Development Review, 17 (1991). In fact, the estimation of "missing women" was based on the contrasts within the so-called third world, in particular between sub-Saharan Africa, on the one hand, and Asia and North Africa, on the other. The exact methods used were more elaborately discussed in my "Africa and India: What Do We Have to Learn from Each Other?," in Kenneth J. Arrow, ed., The Balance between Industry and Agriculture in Economic Development (London: Macmillan, 1988); and (with Jean Drze), Hunger and Public Action (Oxford: Clarendon Press, 1989).

7. Stephan Klasen, "'Missing Women' Reconsidered," World Development, 22 (1994).

8. See Ester Boserup, Women's Role in Economic Development (London: Allen & Unwin, 1970); M.R. Rosenzweig and T.P. Schultz, "Market Opportunities, Genetic Endowments, and Intrafamily Resource Distribution," American Economic Review, 72 (1982).

9. On this see my "Women and Cooperative Conflict," in Irene Tinker, Persistent Inequalities (New York: Oxford University Press, 1990). See also J.C. Caldwell, "Routes to Low Mortality in Poor Countries," Population and Development Review, 12 (1986); Jere Behrman and B.L. Wolfe, "How Does Mother's Schooling Affect Family Health, Nutrition, Medical Care Usage and Household Sanitation," Journal of Econometrics, 36 (1987); Jean Dreze and Amartya Sen, Hunger and Public Action (Oxford: Clarendon Press, 1989).

10. I have discussed these factors in my "More Than a Hundred Million Women Are Missing" (1990). See also Jean Dreze and Amartya Sen, India: Economic Development and Social Opportunity (Delhi: Oxford University Press, 1995), and particularly V.K. Ramachandran, "Kerala's Development Achievements," in Jean Dreze and Amartya Sen, eds., Indian Development: Selected Regional Perspectives (Delhi: Oxford University Press, 1996).

11. See the literature on this cited in Development as Freedom (1999).

12. One of the earliest and pioneering studies was by Lincoln Chen, E. Huq and S. D'Souza, "Sex Bias in the Family Allocation of Food and Health Care in Rural Bangladesh," Population and Development Review, 7 (1981).

13. See my joint paper with Sunil Sengupta, "Malnutrition of Rural Indian Children and the Sex Bias," Economic and Political Weekly, 19 (1983).

14. See my joint paper with Jocelyn Kynch, "Indian Women: Well-being and Survival," Cambridge Journal of Economics, 7 (1983), and also Resources, Values and Development (Cambridge, MA: Harvard University Press, 1984).

15. See Peter Svedberg, Poverty and Undernutrition: Theory and Measurement (Oxford: Clarendon Press, 2000), for an illuminating and thorough analysis of comparative nutrition in South Asia and sub-Saharan Africa.

16. See S.R. Osmani, "Poverty and Nutrition in South Asia," in ACC/SCN, Nutrition and Poverty (1997), and also Nutrition Policy Paper No. 16 (Geneva: WHO, 1997). This is the First Abraham Horowitz Lecture of the United Nations. See also the references to the literature cited by Osmani.

17. On this see Osmani, "Poverty and Nutrition in South Asia" (1997), and also the references cited there.

18. See D.J.P. Barker, "Intrauterine Growth Retardation and Adult Disease," Current Obstetrics and Gynaecology, 3 (1993); "Foetal Origins of Coronary Heart Disease," British Medical Journal, 311 (1995); Mothers, Babies and Diseases in Later Life (London: Churchill Livingstone, 1998). See also P.D. Gluckman, K.M. Godfrey, J.E. Harding, J.A. Owens, and J.S. Robinson, "Fetal Nutrition and Cardiovascular Disease in Adult Life," Lancet, 341 (1995).

19. Siddiq Osmani and Amartya Sen, "The Hidden Penalties of Gender Inequality: Fetal Origins of Ill-Health," mimeographed, Trinity College, Cambridge, 2001.

20. On the extensive role and reach of capabilities of women, see particularly Martha Nussbaum, Women and Human Development: The Capabilities Approach (Cambridge: Cambridge University Press, 2000).

21. UNDP's Human Development Report 1995 (New York: United Nations, forthcoming: 1995) presents an inter-country investigation of gender differences in social, political and business leadership, in addition to reporting on gender inequality in terms of more conventional indicators. See also Sudhir Anand and Amartya Sen, "Gender Inequality in Human Development: Theories and Measurement," in UNDP, Background Papers: Human Development Report 1995 (New York: United Nations, 1996).

22. The complex influences that operate in fertility decline, including cultural adaptations, have been discussed by Alaka Basu and Sajeda Amin in "Conditioning Factors for Fertility Decline in Bengal: History, Language Identity, and Openness to Innovations," Population and Development Review, 26 (2000).

23. A recent study of local governmental decisions in India brings out the substantial nature of this change, as a consequence of women coming to occupy leadership positions in the "Panchayats" (local administrative bodies); see Raghabendra Chattopadhyay and Esther Duflo, "Women's Leadership and Policy Decisions: Evidence from a Nationwide Randomised Experiment in India," mimeographed, Department of Economics, MIT, 2001.

24. Note, however, that the Chinese and Korean figures cover children between 0 and 4, whereas the Indian figures relate to children between 0 and 6. However, even with appropriate age adjustment, the general comparison of female-male ratios holds in much the same way.

25. See, among other contributions, Irawati Karve, Kinship Organization in India (Bombay: Asia Publishing House, 1965); Pranab Bardhan, "On Life and Death Questions," Economic and Political Weekly, Special Number, 9 (1974); David Sopher, ed., An Exploration of India: Geographical, Perspectives on Society and Culture (Ithaca, NY: Cornell University Press, 1980); Barbara Miller, The Endangered Sex (Ithaca, NY: Cornell University Press, 1981); Tim Dyson and Mick Moore, "On Kinship Structure, Female Autonomy, and Demographic Behaviour in India," Population and Development Review, 9 (1983); Monica Das Gupta, "Selective Discrimination against Female Children in Rural Punjab," Population

and Development Review, 13 (1987); Alaka M. Basu, Culture, the Status of Women and Demographic Behaviour (Oxford: Clarendon Press, 1992); Satish Balram Agnihotri, Sex Ratio Patterns in the Indian Population (New Delhi: Sage, 2000).

Maternal Deaths and Near Deaths

Facts and Figures

> **Maternal death** is defined as "the death of a woman while pregnant or within 42 days of termination of the pregnancy, irrespective of the duration and the site of pregnancy, from an cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.
>
> *International Statistical Classification of Diseases*

Maternal Mortality:

Uttar Pradesh has the highest maternal mortality ratio in the country according to the Sample Registration System of the Government of India (1997). In Uttar Pradesh for 707 cases out of every 1 lakh live childbirths, the mother does not survive. This is about 80% more than the maternal mortality ratio of the country as a whole and over 3 to 4 times more than most other states in the country.

Nearly **40,000 women** of Uttar Pradesh lose their lives due to maternal mortality every year in Uttar Pradesh. Every third woman who loses her life due to pregnancy and related causes is from Uttar Pradesh. Three out of every 100 women in Uttar Pradesh have the risk of dying in pregnancy and childbirth. The risk is far more for poor rural women.

According to the National Family Health Survey conducted in 1998-99, about 78% women had their deliveries without any trained supervisors. Anameia or low levels of haemoglobin in the blood is considered one of the most important contributory factors of maternal death. 48% of women in the state have anaemia.

According to the WHO, over 90% of maternal deaths result from either of **five causes** – bleeding (25%), infection (15%), high blood pressure (13%), obstructed labour (7%) and unsafe abortion (13%). All these are preventable causes, and can be managed with regular antenatal care, trained supervision during labour, appropriate referral and follow up after delivery.

(all data from National Family Health Survey 2- 1998-99)

Abortion:

> Provision of safe abortion services to women who need it is **not** part of the provisions of the UP State Population Policy 2000

Unsafe abortion is one of the most important reasons for maternal deaths. UP has the highest estimated rate of abortion in the country. Over 20 lakh abortions take place in the state of Uttar Pradesh every year of which about 60% are induced. Complications from abortion are responsible for 15 – 30% of all maternal deaths in the state. Serious

complications of unsafe abortion include infection, bleeding, and injuries to the reproductive tract.

(from study report of Johns Hopkins University – www.jhpiego.org/pubs/TR/tr516sum.htm)

Complications during Pregnancy:

> WHO estimates that 15% of all pregnant women develop complications serious enough to require rapid and skilled intervention if the woman is to survive without long term disability

The total percentage of women in Uttar Pradesh receiving any antenatal care was only 36 % and only 5% had a check up in the last three months. Anameia or low levels of haemoglobin in the blood is considered one of the most important contributory factors of maternal death. Only 32% women report having received any iron and folic acid supplements during pregnancy.

A large number of women in Uttar Pradesh had serious complications during their pregnancy
Night blindness – 14%
Blurred vision – 28%
Convulsions – 16.6%
Swelling of the body, legs or face – 24.8%
Excessive fatigue – 44.5%
Anaemia – 30.9%
Vaginal bleeding 4.3%

Complications after childbirth:

Nearly 17 % women had very high fever and 9.4% had massive vaginal bleeding after childbirth. 93 percent of women in UP did not receive any check up within two months of delivery and only about 2% receive a check up within two days. In only 33% of these cases (less than 3% overall) is the mother's abdomen examined. Of the 50 lakh childbirths taking place in UP every year, in 48.5 lakh mothers no abdominal examination is done after childbirth and 40 lakh mothers are not even visited after 2 months of her delivery.

(all data from National Family Health Survey 2- 1998-99)

Maternal Deaths and Near-Deaths In Uttar Pradesh

Case Studies

- Illegal Abortion: Kanpur
- Lack of Emergency Obstetric Care: Hardoi
- Adolescent Abortion: Sitapur
- Complication in pregnancy: Manikpur
- Lack of Post-delivery Care: Mirzapur

Illegal abortion services by government health worker causes death

1. 35-year old Munni of village Ghatukheda, Block Bidhnu, district Kanpur went for a check-up suspecting a seventh pregnancy. The government nurse performed an illegal abortion that led to uncontrollable bleeding, and refused to refer her to a hospital. As the bills at the private hospital became unaffordable Munni finally died at home after almost a month of bleeding, infection and pain.

Munni, a 35 year-old mother of six children, was an inhabitant of village Ghatukheda, Block Bidhnu, district Kanpur. In the summer of 2000, she went to the PHC at Bidhnu after missing her periods, and was checked up by the Auxiliary Nurse Midwife (ANM)- a government health worker who is not qualified to perform abortions but should provide prophylactic services to pregnant women and refer them to the hospital if necessary. The ANM advised her to come to the ANM Sub-centre for an abortion. The next day Munni went to the Sub-centre with her husband. They paid the nurse Rs.500, and he was asked to wait outside.

After a couple of hours, the ANM returned the money and said he should take his wife away since her bleeding would not stop. She refused to accompany them. The husband took the help of a son of the village Pradhan who happened to be working at a private hospital called "Ramshiv". The doctor there operated upon Munni, but she kept bleeding and the stitches also got infected. Munni remained in the hospital for over three weeks, but finally the doctor advised them to stop spending money since she would not get better anyway. She was taken home where she died around 24 days after her abortion.

Unregulated private practitioners kill mother and child

2. 35-year old Ramdevi was delivering her seventh child on 5th June 2003 at Mohalla Kheda Bibi Jai in Hardoi district when a quack doctor Asma and colleague Pervez hacked off the baby's body leaving the head inside. She bled to death within a short while. The local police initially refused to register the case, then personally removed crucial evidence before taking the body for post-mortem.

Ramdevi, a 35 year old mother of six children lived in New Delhi where her husband earned a meagre living. Unable to afford costs of delivery in Delhi, she had returned to her marital home at Mohalla Kheda Bibi Jai in Hardoi district, Uttar Pradesh for her

seventh childbirth. She had never received services from any provider for ante-natal care for any of her six previous deliveries.

On 5th June, 2003, she went into labour and the village *dai* was called. The *dai* diagnosed that the baby was in the wrong position and expressed inability to assist in the birth. In the meantime a local quack doctor Asma Khatun arrived on the scene and urged the family to let her handle the case. The family members report that she charged[1] Rs. 3000 for her fees and the medicines she would be using.

From seven in the morning to midday, Asma and later her colleague Pervez tried to deliver the baby and would not let any family members inside the 'clinic'. Finally the family were allowed to send in a neighbour Tahira Begum, who saw the mother writhing in pain near a pail of blood, while the headless body of the baby lay in a basin. At one pm, Asma told the family that she would write out a referral slip and they should take Ramdevi elsewhere. Initially she refused to accompany them, but later she took them to a private doctor whom she already knew. The doctor declared Ramdevi dead on arrival and asked them to take away the body at once.

The family took the body back home, but some of the relatives and neighbours went to lodge a report at the nearest police station at Shahbad. The police refused to record what they were saying. Later that evening, Ramdevi's husband and father-in-law went to the police station and found the colleague of Asma, Pervez, sitting with the policemen. Later, policemen came to the house and verbally abused the grieving family. They forced one of the women relatives to remove from Ramdevi's vagina the scissors entangled in the umbilical cord, for which they provided light using a torch.

After this the police took the body away for the post-mortem, but no report was provided to the family. At present, Asma and Pervez are in prison and have been refused bail.

Taking advantage of need for secrecy, government nurse causes student's death

3. Radha (name changed) of village Vijnapur, block Mishrik, district Sitapur was an eighteen year-old student who was four months pregnant. Her mother compelled her to go to the local PHC for an abortion where the government nurse illegally performed a procedure causing Radha to bleed to death in two days.

Radha (name changed) of village Vijnapur, block Mishrik, district Sitapur was an eighteen year-old student who had a relationship with a boy at college, Govind (name changed) and was four months pregnant. Her mother compelled her to go in for an abortion and on 9th August 2003, they went to the Mishrik PHC where a nurse inserted some medicine into her through a tube.

[1] Without any receipt

After an hour, Radha started bleeding heavily. She stayed on at the hospital, where the nurse performed the procedure again saying 'a piece is still left inside'. The nurse summoned the mother the next day and asked her to take Radha away. Telling acquaintances that Radha was suffering from cholera, her mother and Govind arranged for transport to take Radha to Sitapur. Radha died on the way, and Govind fled from the scene. The villagers are unwilling to speak openly about what happened.

No attention by ANM to complications during pregnancy leads to woman's death.

4. 25 year old Nirmala, an extremely poor Dalit woman of village Sukhrampur, PO Manikpur had a spontaneous abortion four months into her fourth pregnancy. She received no medical attention and a month later developed complications. A private doctor treated her over six visits without referring her elsewhere. Her symptoms worsened and she consulted a new doctor. He gave her a 'strengthening' injection, immediately after which she died in the clinic.

25 year old Nirmala, an extremely poor Dalit woman of village Sukhrampur, PO Manikpur, had three children aged between 2 and 6 years. The government ANM's Subcentre at Unchadih is 4 km from her village. Nirmala was four months into her fourth pregnancy when she started getting pains. She did not get to see a doctor, and two days later, Nirmala had a spontaneous abortion on 2nd August 2003. Her mother-in-law managed it at home.

After a month of rest, the bleeding and discharge had stopped, when suddenly Nirmala developed fever. Her husband put her in a bullock-cart and took her to a private doctor at Manikpur. "Doctor Lallan" gave her medicines for a fortnight, and this was repeated over two visits. After the third visit, Nirmala developed pain and swelling in her thighs, to the extent that she was unable to walk. The doctor said it must be due to a boil.

When even the sixth visit to "Doctor Lallan" failed to cure her, Nirmala was taken to another doctor, Doctor B.K. Tiwari. He examined her and gave her an injection. Immediately after the injection, Nirmala died in his clinic itself. The husband did not even have Rs. 500 to hire a jeep to take the body home, so the doctor donated Rs. 200. The doctor said he had given her a 'strengthening' injection and she died because she was extremely anemic.

Neglect of post-delivery complication by government doctor leads to woman's death.

5. Somari, a 26 year-old mother of two children of Nikrika, Post Rampur 38, Tehsil Madihan, district Mirzapur developed post-delivery complication seven days after her birth at home with pain in her legs and body. She reached the nearest government PHC in a state of collapse in a jeep that was hardly working, but the doctor turned her away without even finding out why she had been brought there. A series of four private doctors tried to treat her through intravenous drip as her

Somari, a 26 year-old mother of two children aged 8 and 4, was the wife of a poor Dalit labourer, of Nikrika, Post Rampur 38, Tehsil Madihan, district Mirzapur. During her third pregnancy, the local ANM Kusum Singh Dhansiriya had given her both TT injections and an examination. Sumari went into labour on 26th July 2003 and was attended by the community women during the normal birth.

Seven days later, on 2nd August, 2003, she developed pain in her legs which spread all over her body. The private doctor from Nikrika, Doctor Jawahir was summoned who made a cursory check-up and started an intravenous drip. The first bottle was finished in the short span of half an hour, by which time Somari stopped speaking and moving. The doctor fled from the scene. By evening the family was alarmed at her condition and began preparations to get her to a hospital. The only vehicle in the village was a run-down jeep which needed to be pushed to start and had no lights.

They drove to the PHC at Rajgarh by eight at night. They called for the doctor for a long time. Finally the doctor came out on his roof and flashed a torch at Sumari. He did not ask what the matter was with her. He declared that she was in a very critical condition and they should immediately go to Robertsganj. The villagers suspect it was because they looked too poor to pay too much for services.

There were only two of them and they could not get the jeep to start. There were no lights either. They pushed the jeep to the Shahganj road where they arrived at the clinic of a private doctor. The doctor started a drip and started examining her abdomen at which she screamed in pain. At 3 am the doctor declared he could do nothing else seeing that she was getting worse with the drip.

At 4 am Sumari was taken to the private hospital of Dr. Ayron at Mirzapur. He too started a drip, and gave her some medicines, but soon he too asked the family to take her away to Mirzapur.

They took her to Dr. Meena Jain at a private hospital in Mirzapur. She examined Sumari and asked them to take her away. They took Sumari back to Dr. Ayron, feeling that private providers would provide better care than a government hospital. He asked them to take her to Allahabad. By that time Sumari was barely breathing. Deciding against moving her anywhere else, they took her to a relative's house at Mirzapur where on the night of 3rd August, Sumari breathed her last.

Maternal Deaths and Near–deaths in Uttar Pradesh

State Obligations

Uttar Pradesh has the highest number of women dying every year due to maternal – related causes in all of South Asia. This violation of women's right to life is all the more serious since the deaths are all due to preventable or manageable causes. The documented case studies from all over Uttar Pradesh clearly indicate that the state itself is violating the rights of women to enjoy complete health and life through

- Lack of services
- Lack of intervention to regulate high-risk services of private providers and
- Collusion with the family in preventing women's access to emergency care during complications

At the same time, it must be remembered that the state is obliged under the following Constitutional and policy declarations as well as international conventions and agreements to protect, promote and fulfill women's right to health and life.

1. The Constitution of India

Article 14 Equality before law: The State shall not deny to any person equality before the law or the equal protection of the laws within the territory of India.

Article 15 Prohibition of Discrimination on grounds of religion, race, caste, sex or place of birth : (3) Nothing in this article shall prevent the State from making any special provisions for women ...

Article 21 Protection of life and personal liberty: No person shall be deprived of his life or personal liberty except according to procedure established by law.

Article 38 State to secure a social order for the promotion of welfare of the people (1) The State shall strive to promote the welfare of the people by securing and protecting, as effectively as it may, a social order in which justice, social, economic and political, shall inform all the institutions of the national life.

Article 47 Duty of the State to raise the level of nutrition and the standard of living and to improve public health: The State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties ...

2. National Population Policy 2000

16. Impaired health and nutrition is compounded by early childbearing, and consequent risk of serious pregnancy related complications. Women's risk of premature death and disability is highest during their reproductive years. Malnutrition, frequent pregnancies, unsafe abortions, RTI and STI, all combine to keep the maternal mortality ratio in India among the highest globally.

17. Maternal mortality is not merely a health disadvantage, it is a matter of social injustice. Low social and economic status of girls and women limits their access to education, good nutrition, as well as money to pay for health care and family planning services. The extent of maternal mortality is an indicator of disparity and inequity in access to appropriate health care and nutrition services throughout a lifetime, and particularly during pregnancy and child-birth, and is a crucial factor contributing to high maternal mortality.

2. Convention on the Elimination of all forms of Discrimination Against Women

India has been an active party in the formulation of and a signatory to this UN Treaty in 1979. It has also ratified this treaty in the Parliament in 1993, thus taking upon itself the voluntary responsibility to ensure the following:

CEDAW Article 12 (2):
State parties shall ensure to women appropriate services in connection with pregnancy, confinement and the post-natal period, granting free services where necessary, as well as adequate nutrition during pregnancy and lactation

General Recommendation 24 [Article 12 (2)]
26. Reports should also include what measures state parties have taken to ensure women appropriate services in connection with pregnancy, confinement and the post-natal period. Information on the rates at which these measures have reduced maternal mortality and morbidity in their countries, in general, and in vulnerable groups, regions and communities, in particular, should also be included.
27. State parties should include in their reports how they supply free services where necessary to ensure safe pregnancies, childbirth and post-partum periods for women. Many women are at risk of death or disability from pregnancy related causes because they lack funds to obtain or access the necessary services, which include antenatal, maternity and postnatal services. The Committee notes that it is the duty if the State parties to ensure women's right to safe motherhood and emergency obstetric services and they should allocate to these services the maximum extent of available resources.
General Recommendation 24
31. State parties should also in particular
(e) Require all health services to be consistent with the human rights of women, including the rights to autonomy, privacy, confidentiality, informed consent and choice

3. Concluding Comments of CEDAW Committee to Government of India Baseline Report of 2000

The Committee notes with concern that maternal mortality rates ... are among the highest in the world. (Para 49.)
The Committee urges the Government to allocate resources from a "women's right to health" perspective ... (Para 50)

Understanding Female Feticide
Issues and Concerns

Backdrop:

In India, right from her birth, a girl child is treated by the society, including her parents as a burden because of various traditional belief and misconceptions of the society. The reaction of the family members is different towards the girl's rights right from the birth. Often, the girl is born and brought up in an atmosphere where the family would have rather preferred a boy in her place. This attitude of acceptance to large extent affects her existence. Those who survive are also discriminated against and neglected in numerous ways.

The bias is rooted in a complex set of religious, economical, social and cultural factors. The degree of bias may vary but it definitely exists at various levels at different stages in girl's life affecting the fundamental rights of the girl child to survival, development, protection and participation. The mortality rate of young girls of different age groups is much higher than young boys because of the preference for male children, resulting in the neglect of girl children. The hatredness towards a girl child has grown up so much and brought into the system of eliminating the girl child - the vulnerable and unwanted gender, in the womb, before she sees the world. The sex ratio is already precarious owing to the discrimination against daughters. Abortion of unborn daughters is bound to accelerate the downward slide of female along the demographic ladder.

Thus, in our society where systematic neglect and discrimination against daughters and 'son preference' attitude are so deep-rooted, the very birth of the girl children and their survival are at stake leading to declining sex ratio. The pathetic situation is that women are forced to endanger their own species either in the womb by practicing female feticide or at birth by practicing female infanticide or after birth by way of neglect. This also indicates the denial of women's reproductive rights as human rights, which recognises that personal freedom and social entitlements are essential to the advancement of human welfare. It is a very denial of women's right to control their own fertility, their own lives, their reproductive freedom to have children when they want, to be confident that they will survive and to avoid unwanted child being.

Though the practice of killing female child soon after birth has existed in certain pockets of our country and more in particular communities, female feticide - the practice of silent killing of female fetuses in womb is wide across regional boundaries and castes.

Technologies and declining child sex ratio:

Amniocentesis, Sex Determination Techniques arrived in India in 1975 primarily for the determination of genetic abnormalities. Soon it came to be used more commonly for sex determination, leading to sex selective abortions. In Bombay alone, 258 private centres for amniocentesis have sprung up in short period, and 16 government-supported clinics provide the service as well, where the abortion of female fetuses is on high as 99 per cent. Portable ultrasound units are more available in some areas. Out of 8000 abortions preceded by amniocentesis in six hospitals in Bombay, as many as 7999 were female fetuses. It is estimated that between 1978 and 1982, there were over 78000 cases of amniocentesis followed by abortion of females in India as a whole. However, these techniques came to be widely used to determine the sex of the fetus and subsequent abortions if the fetus was female. In view of the widespread misuse of this technique, an official directive was issued to the government hospitals to prevent such misuse for sex determination. This led to the commercialisation of the medical technique as private clinics mushroomed across the country. Sex determination became a booming business in north and west India. There were a wide publicity that read "Spend Rs.500 now and save Rs.50000 later".

In Tamil Nadu, ultrasonogram became a booming business. This technology is blatantly misused as sex determination test. Many medical practitioners, in breach of professional ethics are unduly tempted by the prospect of a lucrative business, have indulged in indiscriminate termination of pregnancies. The invention and invasion of medical technologies even at the rural level has lead to adverse sex ratio against females. This is a serious threat as there is a deliberate neglect / negation on the part of the State as it silently permits this genocide by some medical practitioners using pre-natal diagnostic techniques such as ultrasonogram for profit motives. For a long time, the State thought that it had no role or responsibility to stop this practice.

People's Campaign for regulating the misuse of the Medical Technologies that were used as sex determination test:

In 1982, an error in sex determination diagnosis at the New Bhandari Hospital of Amritsar resulted in the abortion of a much-wanted son of an influential family. A controversy erupted which snowballed into a major national issue.

Genesis of the Campaign at the National-level:

In 1986, Forum Against Sex Determination and Sex Pre-selection (FASDSP), a social action group based in Mumbai, made a systematic attempt to initiate a campaign on the issue, thus pressurising the Maharashtra government to enact the first ever law on the issue in India. The government responded to the public pressure by enacting the Maharashtra Regulation of Pre-natal Diagnostic Techniques Act, 1988. Then the Haryana Government passed similar legislation for its state.

As these test were very popular in Gujarat, Madya Pradesh, Uttar Pradesh and other States, a nationwide campaign was launched by FASDSP against the abuse of sex determination and sex pre-selection test. The nationwide support had resulted in the appointment of an expert committee by the union government. The committee had after detailed dialogue and debate drafted a central bill (The Pre-natal Diagnostic Techniques ((Regulation and Prevention of Misuse)) Bill, 1991) and submitted it to the union government along with the detailed report and it became an Act in 1994.

The Central legislation titled "The Pre-natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act 1994" came into force since 1st January 1996.

Sex Determination Test:

The three major pre-natal diagnostic test that are being used as sex determination test are as follows:

1. Amniocentesis
2. Chorionic villi biopsy
3. Ultrasonography

1. Amniocentesis:

Amniocentesis is an embryo pre-natal test by which certain genetic defects and the sex of the unborn baby can be determined. It is a procedure in which 15-20 ml of amniotic fluid is taken out. The genetic disease or defect can be ascertained or analysed by chromosomal studies. The process can be performed between 14 to 16 weeks of pregnancy and has nearly 1-2 per cent risk of abortion. For accurate determination of the sex, the cells have to be cultured for 3 weeks, else inaccuracy rate is 10-20 per cent. It is a useful tool to detect fetal abnormalities such as mongolism, haemophillia, retarded muscular growth, Rh incompatibility and other gender related disorders. This test is normally used for women after 35 years of age when the incidence of Down's Syndrome babies and deformed children increases.

2. Chorionic villus biopsy:

This test can be performed in the first 7-11 weeks of pregnancy. A plastic canula is passed through cervix upto amniotic sac and a few chorionic cells, which occur at the site of future placenta, surrounding the sac, are aspirated under ultrasound vision. These cells are cultured in a specific solution. This technique is used to diagnose some inherited diseases such as thalassaemia, cystic fibrosis and muscular dystrophy etc. These diseases affect tissues and organs, which develop after the first few weeks. It is also possible to diagnose the congenital defects in an unborn fetus.

3. Ultrasonography:

Ultrasonogram is the most commonly used test under ultrasonography. It is an imaging technology. It is a non-invasive technology. This technology uses the 'echo' of sound waves to 'visualise' the form of the fetus in the womb as early as from 11 to 14 weeks after conception. Through ultrasonography, it is possible to diagnose 50 per cent of the abnormalities related to the central nervous system. This technology has gained immense popularity in Tamil Nadu, to determine the sex of the fetus. If the fetus is female, a second trimester and even third trimester abortion is carried out either by a doctor or by a quack. The chance of correct prediction is 95 to 96 per cent depending upon the expertise of the ultrasonologist. As pregnancy advances, the chance of accuracy also increases.

After effects of these test

Amniocentesis:

- The test procedure may damage the fetus and placenta resulting in spontaneous abortion and premature labour.
- The test procedure may also lead to hip dislocation and respiratory complications.
- Infection which may lead to acute or chronic pelvic inflammation
- Bleeding during and after abortion, leading to anaemia
- Pulmonary embolism which may lead to death
- Needle puncture mark on baby
- Hip dislocation

Chorion Villous Biopsy:

- Spontaneous abortion (4 to 12 per cent)
- Wrong diagnosis (4 to 6 per cent)
- Infection
- Limb defects
- Growth retardation of the fetus due to bleeding at the site of biopsy

Ultrasonogram:

The margin of error in the case of sex determination though small leads to sex selective abortion regardless of the accuracy of sex determination.

Sex Selection Techniques:

X-Y Separation:

The various methods currently in use for X-Y separation are:

1. Ericsson Method
2. Albumen Column

3. Percoll Gradient
4. Sephadex Column
5. Modified Swim Up
6. Flow Cytometric Separation

After separating X and Y chromosome carrying sperms, the Y chromosome sperms are injected back into the uterus to ensure that a boy is conceived. The success rate of this method is 65-70 per cent.

The Pre-implantation Genetic Diagnosis (PGD):

As early as three days after fertilisation, one or two cells are removed from an 8-10 celled embryo and tested. The selected embryo is then re-implanted into the uterus. The success rate is about 90 per cent for couples wanting girls and 70 per cent for those wanting boys.

Risk Factors Associated with Abortion:

Sex Selective Abortions are generally second trimester abortions as the sex of the unborn is known late. In India, inspite the fact that abortions are legal, it is said that 20,000 deaths per year take place as result of abortions alone in India and 100 fold have long term morbidity. According to Indian Council of Medical Research, risk of maternal mortality is more than 10 fold, even if they are done by experts in government approved institutions i.e. 26/100000 first trimester abortions, 322/100000 second trimester abortions.

Psychological problem, perforation of uterus, cervical tears, septicaemia, haemorrhage due to incomplete abortion or injury, chronic pelvic inflammation, shock due to haemorrhage, trauma or septicaemia, infection, infertility and even death are some of the abortion risks.

Situation in other countries:

As a result of selective elimination of female fetuses, the demography is massively effected. As opposed to the normal birth ratio, South Korea has a ratio where male births exceed female births by 14 per cent because of the differentially meted out abortions. China has a sex ratio of 944.

Because of 'One Child Policy' imposed by the Chinese Government, there is a skewed sex ratio at birth. The sex ratio at birth was 885 females for every 1000 males. The practice of prenatal sex identification, primarily through the use of ultrasound but also through amniocentesis and chorionic biopsy, has resulted in the abortion of many female fetuses. 97.5 per cent of all aborted fetuses in the country are female.

Legislative provisions that can be used to curtail Sex Selective Abortion:

The Medical Termination of Pregnancy Act, 1971:

If the very purpose of the PNDT Act is to regulate all the pre-natal diagnostic techniques and for the prevention of the misuse of such techniques for the purpose of pre-natal sex determination leading to female feticide, then PNDT Act should be read with Medical Termination of Pregnancy Act 1971.

The MTP Act Specifies:

1. The conditions under which a pregnancy can be terminated
2. The person or persons who can perform such termination
3. The place where such termination can be performed

The conditions under which a pregnancy can be terminated:

- Medical: Where continuation of the pregnancy might endanger the mother's life and cause grave injury to her physical or mental health
- Eugenic: Where there is substantial risk of the child being born with serious handicaps due to physical or mental abnormalities
- Humanitarian: Where pregnancy is the result of rape
- Failure of contraception

The person or persons who can perform such terminations:

- The Act provides safeguards to the mother by authorising only MBBS doctors having experience in gynaecology and obstetrics to perform abortion where the length of pregnancy does not exceed 12 weeks.
- Where the pregnancy exceeds 12 weeks but is less than 20 weeks, the opinion of two Registered Medical Practitioners is necessary to terminate the pregnancy
- Where the pregnancy exceeds 20 weeks, it cannot be terminated except in cases where it is immediately necessary to save the life of the pregnant woman

All MBBS doctors have to obtain a certificate from the Chief Medical Officer of the district before performing MTP, otherwise it is considered illegal.

The place where such termination can be performed:

The Act stipulates that pregnancy shall not be terminated at any place other than a hospital established or maintained by the Government or a private place approved for this purpose (MTP) by the Government.

Penalties:

Conducting an abortion is punishable with

- 7 years imprisonment unless done in good faith to save the life of the mother
- 10 years imprisonment if
  1. done without consent of the woman
  2. the woman dies while inducing abortion

Also, the Act provides for 10 years imprisonment for

1. doing an act intended to prevent a child being born alive
2. causing the death of 4 –5 months unborn child

Pre-natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act 1994:

The main purpose of this Act is to regulate the use of pre-natal diagnostic techniques and to prevent the misuse of such techniques for the purpose of pre-natal sex determination leading to female feticide.

The salient features of the Act:

- The Act compels the registration of all pre-natal diagnostic centres.
- The Act bans the use of medical techniques for the determination of sex of the fetus.
- The test can be conducted only in the registered pre-natal diagnostic centres.
- The test can be administered only by the trained professionals having prescribed qualifications.
- The Act bans the advertising of the availability of facilities for pre-natal sex determination.
- The Act lays down that the pre-natal diagnostic test can be used only for detecting specific conditions, under any one of certain given circumstances, like:
  - The age of the pregnant women should be above 35 years.
  - She must have had a history of two or more abortions or fetal losses
  - She must have been exposed to potentially teratogenic drugs, radiation,]infection or chemicals.
  - There must be a family history of mental retardation or physical deformities such as spasticity or any other genetic disease
- The pre-natal diagnostic test should be administered only to detect the following abnormalities:
  - chromosomal abnormalities
  - genetic metabolic diseases
  - haemoglobinopathies
  - sex-linked genetic diseases
  - congenital abnormalities

- The side and after-effect of such pre-natal diagnostic procedures should be explained to the pregnant woman concerned.
- The test cannot be performed without the written and informed consent of the mother.
- A copy of her written consent obtained should be given to her.
- The sex of the fetus should not be disclosed to the pregnant woman concerned or her relatives by words, signs or any other manner.

Penalties:

Medical professionals who conduct pre-natal diagnostic techniques are subjected to supervision and defaulters of the provision of the Act are liable for imprisonment from 3 months to 3 years and fine of Rs.1000/-, Rs.10,000/-, Rs.50,000/- for various categories of offences mentioned below:

- Disclosing the sex of the fetus
- Compelling the pregnant woman to undergo these techniques to find out the sex of the fetus.
- Advertisement regarding facilities of pre-natal determination of sex of the fetus.
- Misusing the pre-natal diagnostic techniques contravening sex

Different Monitoring Mechanisms of the Act:

Central Supervisory Board – It is a 23 members forum, the functions of which are to advise the Government on policy matters relating to use of pre-natal diagnostic techniques; to review implementation of the Act and the rules made thereunder and recommend changes in the said Act and Rules to the Central Government; to create public awareness against the practice of pre-natal determination of sex and female feticide; to lay down code of conduct to be observed by persons working at Genetic Counselling Centres, Genetic Laboratories and Genetic Clinics.

Appropriate Authority at the State-level - Director of Medical and Rural Health Services. The functions of the Appropriate Authority are: to grant, suspend or cancel registration of a Genetic Counselling Centres, Genetic Laboratories and Genetic Clinics; to enforce standards prescribed for the Genetic Counselling Centres, Genetic Laboratories and Genetic Clinics; to investigate complaints of breach of the provisions of this Act or the rules made thereunder and take immediate action; and to seek and consider the advice of the Advisory committee on application for registration and on complaints for suspension or cancellation of registration.

Advisory Committee at the State-level – It is a eight member body

Appropriate Authority at the District Level – Joint Director of Health Services in each District.

Key issues for discussion

Implications of decliming sex ratio:

1. If the population of women decreases, it will have for reaching consequences. The society that treats women as mere sex objects will not treat women in a more humane way, if they are scarce in supply. On the contrary there will be increased incidences of rape, abduction and forced polyandry.

2. Lack of food economic security clean drinking water and safe clinical facilities have led to a situation where a woman has to have 6.2 children to have atleast one surviving male child. Howmany abortions during 16-18 weeks can a woman bear without jeopordizing her health.

3. Under the guise of sex choice woman are exacerbating their own oppression. Moreover this sex choice is envisaged within the matrix of patriarchal society & it can be another way of oppressing woman.

4. Through social consequences of sex selection as well as sex determination tests, ther reality shatters the myth of neutrality of science and technology.

5. Class, race sexbiases of ruling elites have crossed all boundaries. After 53 years of socialist reconstructions sex determination for female extermination have gained ground after governments adoption of one child policy. This shows how adaptive the system of patriarchy & male supremacy is.

6. Women's political participation & her participation in all decision making bodies will be further marginalised in a patriarchally construct state.

7. Women are the primary source of social and biological reproduction. When this very resource is exploited and destroyed (femicide) her under valued / unrecognised contribution to be national economy will be more.

8. Advocates of population control will continue cashing as socio cultural values that treat the birth of a daughter as a great calamity and perpectuate modern methods (including sex preselection techniques) of massacure of features as a massive scale.

9. It only shows the failure as the party of state that would reorganize and nurture the fundamental equality between men and women through its policy imbalances and programmes and which was guaranteed under the constitution of India.

10. Media : Both Print & Electronic media uses the sexist language. Sexist language is a symbolic device that limits the activities of one sex but not those same activities of the other. Sexism in language allows an ideology to legitimize the prescriptions and appraisals of every human endeavour solely on the basis of gender.

11. The powerlessness women experience in the present era can be partially attributed to the stereotyping of role, portraying women as sex objects as commodities by the media esepecially the global media for the global consumer and the industry the women become categories classifiable by their face and colouring concepts of female passivity and male sexual activity continue to pervade much social life and the tendency to categorize women in terms of their sexual availability to men is not yet altered.

    In conventional parlance, the current era in history is generally characterized as one of globalization technologies revolution and democratization. In all these three areas, media and communication play a central perhaps even a defining role. Economic and cultural globalization arguagally would be impossible without a global commercial media system to promote global markets and to encourage consumer values.

Issues of Concern :

The advertisements, the serials & coverage about any women's issue usually present women's situation as static and inevetable. The women are shown as passive child like victims completely crushed by the weight of the circumstances and unable to understand what is happening. They themselves seem to be the problem, as though it is the women's own inadequacy which makes her axious and depressed. rather than the fault of existing gender division of labour and gender based values and the patriarchal construction of family and state and community.

According to the present image portrayed by the media, it is something to do with her personal and no political action to change things.

The publication of ad's such as do you want a boy, spent Rs. 150, you can save Rs. 1, 50, 000 later are quite insulting demeaning and embarassing women.

The sex preselection tests has been advocated as media achievements of science. But the same microsoft techniques is converted in India to eliminate feminive gender.

Media hardly tries to link science and technology and cultural meeting. They never give the other view that now these technologies are used to appress women. More importantly how these technologies are used to eliminate the weaker races. The racist & sexist ideology try every scientific innovation or technology should be clearly articulated and put to public debate. Most important the last but the concern from the media is the absence of political position regarding women's issues. Especially her very right to life and survival. No paper has issued any editorial for the decliming child sex ratio, disincentive policies of every welfare scheme for woman, National population policy etc.

When India is a party to CRC convention the very local question before us is to do we need prenatal diagonostic techniques at all? Why don't we advocate the state & society to accept children with deformities. Are we not promoting the racist and sexist technologies by the imperialist nations?

What is the position of media in all these issues.

Mostly media has confined women's problems to seperate programs or separate papers of the news paper. By doing so, it has isolated them from mainstream problems and their assigned them a low social value. Portraying women as equals is a subject that has been given low priority.

Conclusion : While we have raised several areas of concern to before the media group we also acknowledge the fact the media is the one which has brought the attention of state and public about the incidence and intensity of these violences against women namely sex selective abortions. Our only appeal before the media is to ethically take a political position to protect the right of a girl child, very right to survival and life and promote women's rights as human rights.

A Perspective Paper on

Understanding Female Infanticide and Feticide

Backdrop:

Gender violence is a phenomenon that exists in all cultures. The direct pattern of violence on women within the family and work place are in the forms of physical attack, brutality inflicted on women by marital partner and family members, suspecting the wife's fidelity, squandering the meager earnings on alcohol, dowry harassment, rape, molestation, eve-teasing kidnapping etc. According to the figures released by the National Crime Records Bureau, a rape is committed every 54 minute, a kidnapping every 43 minute, a dowry death every 102 minute, eve-teasing every 51 minute, and an act of domestic violence every 7 minute. The magnitude of the problem can be gauged from the fact that for every case reported, hundreds go unreported.

There is yet another pattern of violence, the violence constituted by violation of rights or denial of rights that often operates not only on personal but societal and cultural levels. The present system is so oppressive to women. Men, women and society as a whole act to perpetuate the system that results in various forms of abuse. Thus women are victimized from different dimensions. All these victimisation are manifested in different forms like subordination and extreme forms like suicide, female infanticide and feticide.

Globalisation and the modernisation fo economy are not serving as an emancipating force but as a further means of patriarchal control. The globalisation injected materialistic and selfish values. The unsustainable development as a result of globalisation, policies of structural adjustment and liberalisation victimised women leading to feminisation of labour and feminisation of poverty.

If we analyse the complex aspect of the role of women in female infanticide, it is quiet apparent that they actually inflict violence upon themselves as forced by the patriarchal values. They internalise the gender bias in favour of male children as imposed by societal, cultural and political forces. Eventually they resort to the heinous practice of female infanticide and feticide in secret at the cost of endangering their physical and psychological health. The following analysis on the profile of the victims of female infanticide will enable us to draw insights in understanding the issue and the possible strategies to address the same.

Analysis of the Profile of Victims of Female Infanticide and Feticide

Analysis of 28 cases who depose before the jury team:

1. **Nature of the Violence vs No. of families**

Nature of Violence	No. of families
Female Infanticide: 1. Case filed 2, Case not filed.	 14 5
Female Feticide	4
Surrendering in cradle baby scheme	5

In reality feticide is more practiced than infanticide. As there is no evidence in the case of feticide, it appears that the cases of infanticide is more.

2. **Caste vs No. of families victimised**

Caste	Families
BC / MBC	19
SC	9

Caste:

According to Athreya and Chunkath (1999) the female is treated as an endangered sex in all agrarian, castes-landlord, peasant or labourer-practise. The analysis of the 28 cases reveals that the incidence is more in the most backward communities (19) than the dalit communities. Though the practice of female infanticide may have been initiated in caste which have numerical and social dominance, it now appears to cut across caste.

It is very likely that the practice of female infanticide by thedominant/landlord caste of the local community serve to legitimise and provide social sanction to the practice and contributes substantially to its spread amongst all castes. (Athreya 1998)

3. **Occupation vs No. families victimised**

Occupation	Families
Agriculture Work	10
Agricultural Coolie	9
Petty business	2
Quarry Worker	3
Kiln Chamber	1
Domestic Work	2
Worker in unorganised sectors	1

The practice is high in agrarian families (19). The incidence of female infanticide has now probably spread to more other occupational groups from agrarian families which are the core-area.

4. Birth order of the child killed vs No. of families victimised

Birth order of the child	Families
Second child	6
Third child	8
Fourth child	4
Fifth and higher	10

Studies show that the birth order of the girl child seems to have a considerable bearing on female infanticide. The study conducted in K.V.Kuppam block in Thiruvannamalai district of Tamil Nadu showed that out of the total cases of female infanticide discovered, only one involved a first born daughter. The pattern seems to correspond to 'the parity-specific female child neglect' common in North India. Thus most of the victims are daughters who have a birth order greater than one and a surviving older sister. According to the Birth Order in selected Health Unit Districts like Dharmapuri, Madurai and Dindigul in Tamil Nadu (1995), out of the total cases of female infanticide discovered, the elimination is more as the birth order increases. The third child in most cases is eliminated. Of the 28 cases documented, the child is eliminated when the birth order is more than one.

5. No. of children vs No. of families victimised

Children	Families
1 Girl	5
1 Boy	1
2 Girls	6
3 Girls	4
1 Girl + 1 Boy	4
2 Girls + 1 Boy	1
3 Girls + 1 Boy	3
3 Girls + 2 Boys	3
4 Girls + 1 Boy	1

Our study revealed that one of the precipitating factors for female infanticide was the number of girl children in the family. Since, the status of daughters is viewed as a financial burden in the context of deteriorating economic condition, the women are forced not to have daughters so that their daughters don't have to share their fate, which is an act of self-negation.

6. No. of Women underwent permanent sterilisation vs No. of families victimised

No. of Women underwent permanent sterilisation	Families
Soon after killing of the female infant	6
After judicial intervention	2
After giving birth to another child	5
Women do not underwent sterilisation	15

In the eventuality of giving birth to female babies and eliminating them 13 victims had gone for sterilisation. There are 15 women still in the desire of getting a male child. This data only attempts to prove the denial of rights to women's body and sexuality.

7. Complainants vs No. of families victimised

Complainants	Families
Public who witnessed the killing	1
VAO	9
Relatives	1
NGOs	2
Health workers	1

VAOs and NGOs seems to be the watch dog for the incidents.

8. Details of accused vs No. of families victimised

Accused	Families
Mother	2
Father	2
Mother and Father	5
Mother, Father and Mother's side members	5

9.Details of charges vs No. of families

Sections	Families
302 IPC	9
302, 201, 202, 34 IPC	3
315, 201 IPC	2

10. Details of position of the case vs No. of families victimised.

Present position of the case	Families
Bailed out	12
Conditional bail	2
Imprisoned and bailed out on condition and filed appeal petition	2
Case under trial	3

11. Effect of legal action vs No. of families victimised.

Effect	No. of families			
	Female Infanticide		Female Feticide	Surrend-ering in Cradle
	Cases filed	Cases not filed		
Disturbed at the psychological level	14	5	4	5
Suicidal thoughts	10	-	-	-
Suicide attempts	1	-	-	-
Conflict between spouses	10	4	2	2
Conflict between spouses and in-laws	11	-	1	-
Separation between spouses	1	-	-	-
Indebtedness	13	-	-	-
Criticism in the community	13	2	2	1
Physical ailment	11	2	2	2
Children left uncared	10	-	-	-
School dropouts	3	-	-	-
Disability in academic activities	9	-	-	-

Status of the cases:

- In 12 cases, mothers are both exclusively and jointly victimised. In 12 cases, the father is both exclusively and jointly victimised. Five of the cases are filed in the name of members of the natal family of the mothers.
- In 12 cases the victims were released under bailIn two case, the victim was convicted and released under conditional bail after 8 months imprisonment. In one case, the victim is under imprisonment. In three cases the case is pending before the Sessions Court.

Impact of judicial action against the victimised families:

- One family has been displaced
- Conflict between spouses is seen in18 cases, conflict between spouses and in-laws are observed in 12 cases. Out of 12 families, in three families, the children had become drop-outs. In 9 families there is a disability inacademic activities of the children.

- Suicidal tendency is seen in all the 10 cases of female infanticide and 1 women has attempted suicide.
- All the 28 families are in chronic depression and anxiety.
- In 10 families the children remained as orphans when their parents were in judicial custody.
- 13 families are indebted.

Denial of human rights to the girl children of the victimised families:

- The girls of the victimised families pay the heavy penalty and labelled for being a member of penalised families. They are forced to face very difficult circumstances especially when the parents are under judicial custody. The universally acknowledged repository of caring and security, the family has proved to be a physically, psychologically and sexually threatening environment for the growing girls.
- Education has become an expendable option and they are forced to have lesser entitlement to care and attention. Their childhood is crowded with domestic chores and the self-image the society creates for her is one of the worthlessness, servitude and dependence.
- The young girls' prospect for all round development is severely constrained.
- Societal discrimination and neglect override on the vulnerability of the children can initiate a life-long downward spiral of deprivation and exclusion from the social mainstream.
- The labelling has negative implications for her marriage, physical mobility. The psychological scars left in the minds of these girls adds to their self-negation. They are victims of extortion and additionally they are tormented and terrorised by the anti-social elements and their own relatives. The odds staked against them are too many to oppose single handedly. They also experience some type of psychological distress in the aftermath of crime. Immediate reactions are fear, anger, shame, self-blame, helplessness and depression. Long term reaction can include sleeplessness, loss of concentration and fear of being alone. Though they resent their situation, they are forced to sell their labour to meet the basic needs of the family. So even after the release of the victims from the judicial custody, they continue to work as labourers.
- In this context, how are going to rectify the situation. The real pathology lies with the criminal justice systems which bent upon punishing the already victimised victim (mother of infant girl). So, whole criminal justice system needs through review in favour of mothers. It should uphold the rights of victim to represent herself throughout the case starting from FIR to trial. And also, Judges should be sensitised about the victims' perspective.

Statistical Highlights:

Dharmapuri, Salem, Namakkal, Theni and Madurai Districts are the black-listed districts for the practice of female infanticide. Mushrooming of scan centres in all these districts have replaced the intensity of practice of female infanticide to female feticide. According to the Census for the year 2001, Dharmapuri, Salem, Namakkal and Theni have juvenile sex ratio below 900. Thus, to understand the trend of such practice in these districts, the data of Sex Ratio at Birth and IMR Gender Differentials are analysed. The datum is presented in graphical forms.

Inferences:

In all the six districts, the sex ratio at birth continuously decreases each year from 1996 to 2001. Though the practice of female infanticide still continue in all these districts as the IMR is still considerably high for girl children, There is neither a steady increase or decline in IMR Gender Differentials.

Inferences – Theni District:

- It is evident from the above table that the sex ratio at birth for the year 2001 – 2002 as compared to the period 2000 – 2001 shows an alarming decline.
- There is a declining trend in sex ratio at birth in 16 PHCs.
- The difference fall off by more than 100 in 9 PHCs.
- The decrease is higher in Odaipatti PHC (343). ie. the ratio fall off from 1073 in 2000 to 729 in 2001.
- The sex ratio at birth is lowest in Erassakkanaickanur, that is 679, for the year 2001.
- Only in 5 PHCs the sex ratio at birth is higher than the biological sex ratio at birth of 971 female infants for every 1000 male infants, during the period 2000 and 2001.
- In Rajathani and Theni Primary Health Centres, the sex ratio at birth increases and the data shows that the practice of female feticide is wiped out in these areas.
- 7 PHCs such as Devaram, Chinthalaichery, Odaipatty, Mottur, Dombuchery, Devathanapatti and Genguvarpatti could be noted as high risk prone areas as both the practice of female infanticide and female feticide is getting intense.

Similar trend is observed in other black-listed districts such as Madurai, Salem, Namakkal and Dharmapuri.(Refer the enclosed data)

Inferences for other districts:

Thiruvannamalai and Trichy:

In the case of both Trichy and Thiruvannamalai both Sex ratio at Birth and IMR Gender Differential show a negative trend only in few selective blocks. The reasons need field-level investigations. But depending upon the incidence and intensity of these few blocks, the overall ratio of the districts varies. The difference between these districts and black-listed districts is that the phenomenon is more or less seen in most of the blocks with regard to black-listed districts where as it is restricted to few blocks in the former districts.

Issues:

1. With regard to female infanticide, the government is concerned with Salem, Dharmapuri, Madurai, Namakkal and Theni. But we have strong evidence to prove that the prevalence is not restricted to these districts alone. Keeping IMR Gender Differential as indicator, the prevalence is observed in districts like Trichy, Perambalur, Thiruvannamali, Karur, Viluppuram, Vellore, Erode and Dindigul. In all these districts, IMR Gender Differentials show a negative trend. So from the core-area, it is now spreading to the peripherals. How the State is going to view the incidence in other districts.
2. It is a myth that the prevalence of infanticide is restricted to certain selective communities like Vanniyar, Piramalai Kallar and Gounder. From the field level data, it is proved that it cut across caste. To add to that the practice is seen in dalit communities too.
3. It has been argued that the prevalence is restricted to agrarian communities. The field level data shows that the practice is now spread to other non-agrarian occupational groups.
4. With regard to female feticide, at birth sex ratio is the direct indicator. From the enclosed data, it is very evident that there is a declining trend in at birth sex ratio ratio, in districts where there is an easy accessibility to sex determination. What is threatening us is that the sex at birth shows a consistent declining trend for a period of 1996 to 2001 in all the black-listed districts. The unwarranted invasion of medical technologies and unregulation of private practice and non-enforcement of PNDT Act have ended up in good number of scan centres. The medical community is a benefactor to all those who wanted to eliminate their girl children, by doing the sex determination and sex selective abortion.
5. As the abortion law is liberal and there is no mechanism to monitor the enforcement of MTP Act, and State's indirect sanction to use MTP as a tool to reduce the population size, the sex selective abortion has a legitimate sanction, indirectly from the State.

6. The State is focussing its attention to the visible form of elimination – female infanticide. In reality, the real culprit to natal inequality is sex selective abortion. That does not mean that infanticide is also not a cause. State allocates budget and advocates programmes only to address the issue of female infanticide which is evident from the non-inclusion of at Birth Sex Ratio as a health indicator.

7. With regard to victims, the early marriage, the prevailing economic condition, increasing newer forms of violence and the consumer cult adds to their vulnerability. Govind Kelkar argues that violence is an act of aggression usually in interpersonal interaction or relation. It may also be aggression of an individual woman against herself such as suicide, sex determination and female infanticide. It implies that when the body – and indeed the self – is vulnerable to violation, individual has a very different notion of what is one's body and what is done to one's body. Given that violence is not limited to one group, it can be perpetuated by those in power against the powerless or by the powerless in retaliation against coercion by other to deny their powerlessness. This is a good analysis to understand the participation of women in eliminating their own gender.

8. All the victims have experienced inhuman treatment in the sense many of them have been arrested within few days of their deliveries. No post-natal care was extended to them.

9. The Court has not taken the cognizance of the mental health of the victims. To quote, Chinnapappa, Neelavathy and Chinnasamy were arbitrarily arrested. From our field study, it is proved beyond doubt that all these persons showed clinical symptoms of depression and with regard to Neelavathy, she was suffering from postpartum psychosis.

10. Most of them have been charged with IPC 302 which we feel is a greater punishment for a social offence. They should not be viewed as criminals and by punishing them, the State is doubly victimising the already victimised families. The deterrence has ended up in the emergence of new form of violence namely feticide and it cut across class, caste and other hierarchies.

Paper presented by M.Jeeva, Director of SIRD, during the Public Hearing organised by Tamil Nadu State Commission for Women in Chennai on 10th July 2002.

Demography – Census Statistics and Analysis

Survival of the Girl Child

Tunnelling Out of the Chakravyuha

Results of the first population census of the millennium reveal a number of significant changes in the sex ratio patterns in the country. Firstly, the sex ratio decline among children in the 0-6 age group turns out to be sharper in the urban areas (32 points) than in the rural. Second, the traditional north-south divide stands significantly modified and the 'northernisation' of sex ratios is rapidly taking the urban route. The sharp decline in the urban female/male (f/m) ratios among children cannot be explained away by any of the three popular escape hatches of yesteryears, i e, migration, undercount or biologically ordained high sex ratios at birth. This decline clearly points to one factor, sex selective abortion or female foeticide that has gained currency during the 1980s and more sharply in the 1990s.

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I

Abhimanyu, the legendary prince of Mahabharata, died during the epic war, trapped inside chakravyuha; the wheel shaped formation of the enemy columns. His death was destined while he was in his mother's womb. Many an Indian girl children seem destined to die likewise today and in their case the chakravyuha has invaded the womb itself resulting in their death even before they are born! Provisional results of 2001 Census give rise to both alarm and despair on this score.

How can we begin to rescue the girl children out of the chakravyuha of sex selective abortions? Do we wait for a 'revolution', or for that illusive entity called 'political will' to be forged or for the miracle of total enforcement of the PNDT act to happen or expect a change of heart among the foeticide service providers who worship profit at all costs?

We first need to map the contours of the problem by locating the 'epicentres' of female child deficit. We need next to move to a mix of possible, even if partial solutions, to mitigate the situation rather than seeking a blue-print for a perfect solution. That will be like 'Waiting for Godot'.

In short term, we need to support and strive for universal coverage in survival inputs like immunisation, supplementary nutrition or even birth registration to minimise the gender gap. As girl children usually face discrimination in accessing these inputs, universalisation benefits them more. But in the longer term, we need to create objective conditions so as to minimise the 'unwantedness' of a girl child. This necessitates a modicum of economic and physical security being guaranteed to women.

At the same time, the civil society must also debate the ethical dimension of sex-based elimination of a segment of the population. This could well be the thin end of the wedge that provides in its wake currency to eliminate other segments of population based on other criterion. We must also question the current model of development, where discrimination necessarily appears to accompany development. Success stories of alternative 'development' must be provided visibility and highlighted as role-models for the society to follow.

Sex ratios in the Indian population are becoming rapidly masculine. A marginal increase of 6 points in the female to male ratios of the overall population; 933 in 2001 from 927 in 1991, has not given rise to much euphoria as it did in 1981 [Chhabra 1981, Padmanabha 1981] and rightly so. This is because there has been a sharp decline of 18 points in the f/m ratios among children (0-6 years) during the same period. This pattern; the RGI warns us, will continue to haunt the society for decades to come (Paper 1 of 2001), unless of course, corrective measures are taken.

Results of the first population census of the millennium reveal a number of significant changes in the sex ratio patterns in the country. Firstly, the sex ratio decline among children in the 0-6 age group turns out to be sharper in the urban areas (32 points) than in the rural. Table 1 provides state level data on the changes in sex ratio between 1991 and 2001 in the rural and the urban population. It can also be noticed that the decline in urban f/m ratios among children in most of the states is significantly larger compared to that in the rural areas.

Above pattern is seen more sharply in the distribution of the decadal decrease in sex ratios in the rural and the urban areas in different districts of the country. Figure 1 gives these distributions. While the mean decline in rural areas of the districts is 16, it is as high as 28 in the urban segment. Further, the number of districts where the f/m ratios have declined by 60 to 100 points, is much higher in the urban areas.

The second important change is of the breach in the much written about north-south divide in the sex ratio patterns[1] across the Narmada-Sone or the Bharuch-Chhotanagpur axis. This can be seen from Figure 2 which maps the urban f/m ratios among children in 0-6 years age group. Four broad categories of districts can be identified by f/m ratio; below 865, between 856 and 910, between 910 and 960 and above 960. Districts in the first two categories are the ones where the female deficit is strong. These are no longer confined to the north of Narmada but have moved considerably southward, making ingress into nearly entire Gujarat, a number of districts of Maharashtra, and surprisingly, certain pockets of Orissa. The traditional north-south divide stands significantly modified and the 'northernisation' of sex ratios [a term used by the Caldwells 1990] is rapidly taking the urban route. Even the north-east is not unaffected from this malaise, urban Kamrup that is essentially Guawahati shows a f/m ratio of 888 for children in the 0-6 years age group.

Sharp decline in the f/m ratios among children in urban areas cannot be explained away by any of the three popular escape hatches of yesteryears, i e, migration, undercount or biologically ordained high sex ratios at birth. Unlike adults, children below

Figure 1: Urban and Rural Decline in the FMR06 between 1991 and 2001, Districtwise

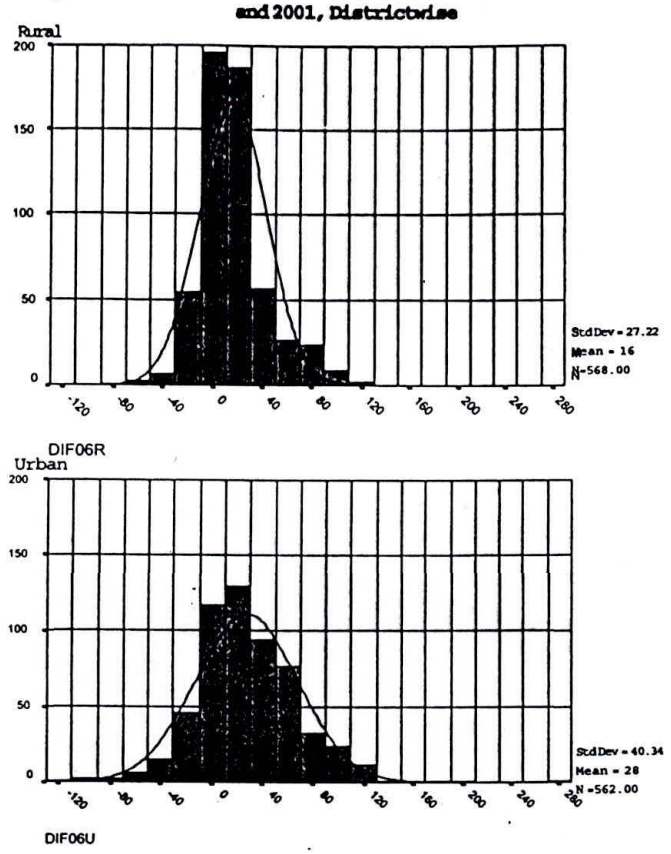
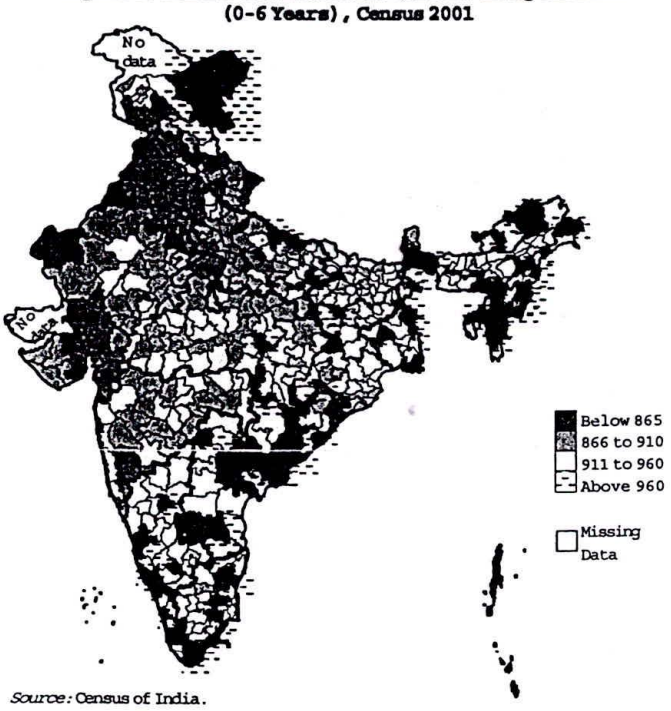


Figure 2: Female to Male Ratios (Urban) among Children (0-6 Years), Census 2001



Source: Census of India.

6 years do not migrate sex selectively; urban areas should suffer much less from undercount than adjoining rural areas and biologically, sex ratios at birth cannot become masculine so rapidly.

The rapid decline in the urban f/m ratios among children clearly points out to one factor; sex selective abortion or female foeticide that has gained currency during the 1980s and more sharply in the 1990s. The sex of the foetus is identified through techniques of amneocentesis or use of ultrasonography. Abortions are carried out either as an 'attached' service' or independently. Compared to female infanticide, this became a more acceptable mode of disposing of the 'unwanted' girl child. Infanticide is an overtly 'barbaric' practice, carried by non-professional and less powerful persons, e g, traditional 'dai's or an old lady in the household. It does not allow parents to distance themselves from the event, i e, killing of the child, and be free of any guilt [McKee 1984]. Sex selective abortion, on the other hand, is carried out by 'professionals', superior in the power hierarchy. They use scientific techniques, hardware and skills; sanitise the process of eliminating the foetus and reduce the burden of guilt on parents.

Concentration of medical facilities and professionals in urban areas, and, more important, their absence from the rural areas is well known in our society. Naturally, the facilities for sex selective abortions and other sex selection techniques will be available in the urban areas first and that is precisely what we are seeing in the results of 2001 Census.

It is important to highlight here the importance of state specific analyses of the problem. Many a nuance of the state level decline are not revealed in the national perspective. This can be elaborated with the example of Orissa, a state where it was hard to imagine such widespread decline in sex ratios even if the decline is confined to urban areas. The spatial pattern of the decline is shown in Figures 3a and 3b. In 1991, only two districts, Kendrapada and Jagatsingpur had low f/m ratios, 942 and 941 respectively. But in 2001 as many as 12 districts had f/m ratios below this level, lowest being in Nayagarh (901). The contiguity of these 12 districts is striking; low f/m ratios show a remarkable cluster and not a scatter.

But the contiguity of districts with very low f/m ratios in urban population is more disturbing (Figure 4). Three adjoining districts, Ganjam, Nayagarh and Boudh have f/m ratios (urban) below 860; a figure comparable to some of the districts of Haryana and western UP. These are flanked by Kandhamal (896), Angul (898) and Dhenkanal (902), Khordha (908) and Gajpati (920). Two districts, Kendrapada (916) and Jagatsingpur (889) are not contiguous but separated by a strip of Jajpur (926), Cuttack (948) and Puri (930); even these ratios are not quite high. The belt of low f/m ratio also stretches along the Bolangir (921), Bargarh (938) and Jharsuguda (931).

It is plausible to argue that the low urban f/m ratios for the 0-6 age group could also be attributed to statistical fluctuations due to the small population size. This is especially so for urban child population of Nayagarh, Boudh and Kondhmal. It is intriguing however, as to why the 'fluctuations' should point in the same direction. Further, even if we add the urban population of these contiguous districts, f/m ratios in the 0-6 age group will remain low. The 'fluctuation' argument does not therefore help.

It is possible to take this kind of analysis to sub-district level and quite fruitfully. This part of the research is currently underway and is progressing as per the availability of the Census 2001 sub-district data.

I

How does the lowering of f/m ratios in urban areas affect the rural segment of the population? It is necessary to study this pattern and anticipate the changes that are likely to occur. We have talked of the 'foeticide service providers' operating from the urban centres in the previous section. As their practice and the profit[2] 'roars' in the urban area, the doctor-entrepreneur starts

Figure 3a: FMR among Children 0-6 Years (Girls per 1000 Boys) : Orissa 1991

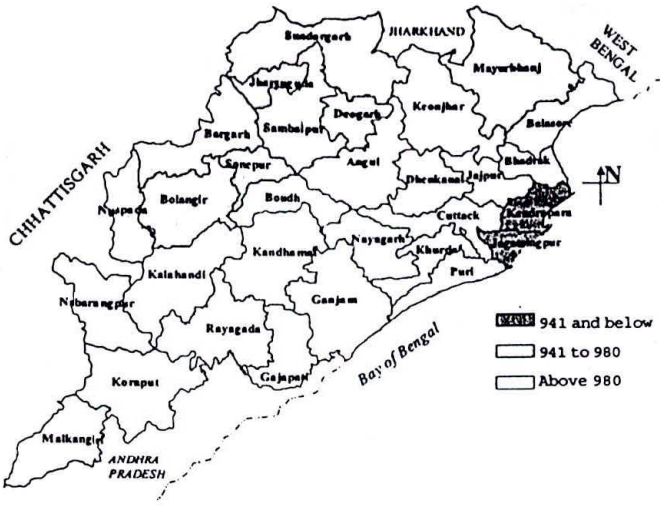


Figure 3b: FMR among Children 0-6 Years (Girls per 1000 Boys) : Orissa 2001

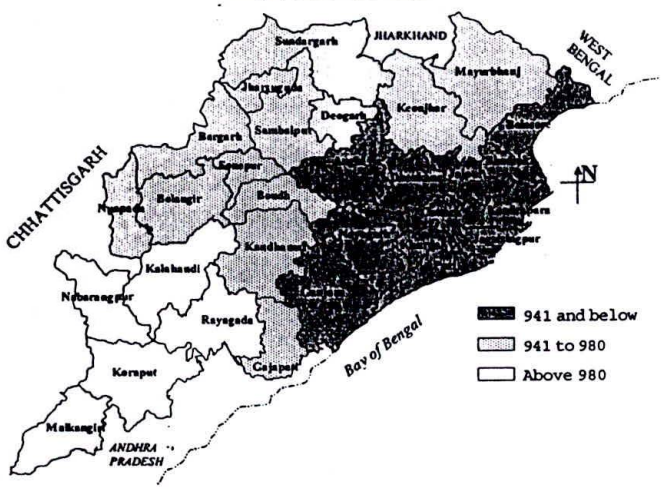
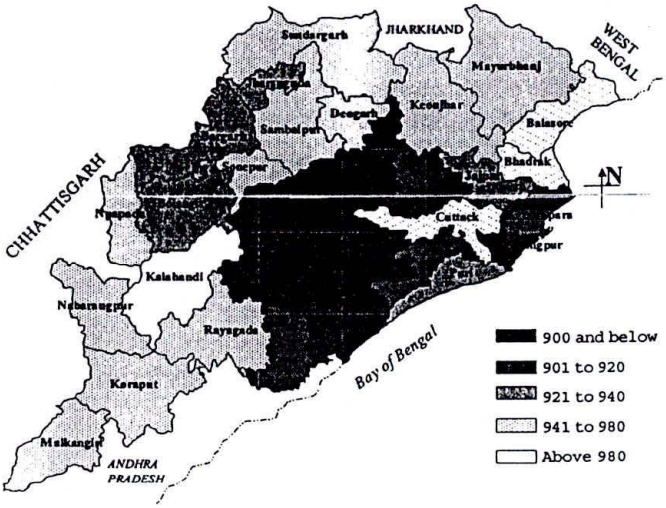


Figure 4: Urban FMR among Children 0-6 years (Girls per 1000 Boys) : Orissa 2001



Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

attracting clients from the rural catchment. At the same time, the number of such 'service providers' increases and in many instances, they start providing mobile service. Gradually a larger segment of the rural population starts availing of these 'services'. As the use becomes widespread the sex ratios in the child population become more and more masculine in the concerned area and tell tale signs appear through the sex ratio figures.

High school physics text books describe a phenomenon called 'sympathetic resonance'. Imagine two cloth-strings on which clothes are kept for drying. If one string is shaken, up and down vertically, the other string does not respond initially. If the oscillations persist, the second string slowly begins to respond. Gradually its oscillations become comparable to those of the first string. In the extreme case of 'coupled oscillations', it is possible for a bridge to collapse as soldiers march in unison and the rhythm of their march coincides with the 'natural' frequency of the bridge.

The response of the rural sex ratios to growing masculinity of the urban sex ratios follows a similar pattern [for details see Agnihotri 2002]. Initially these remain indifferent to the changes taking place in the urban f/m ratios. If we draw a graph showing the urban f/m ratios on x-axis and the rural sex ratios on the y-axis, we can expect a horizontal line. This is indeed the case in most of the eastern and the southern states (with exception of Tamil Nadu and Orissa), Chhattisgarh and Jharkhand as shown in Figures 5a to 5i. This pattern has remained the same in these states for both 1991 and 2001.

In the states where the rural sex ratios have 'begun responding slowly', the line starts sloping downwards. As the urban f/m ratios decline, rural ratios decline but not very strongly. Bihar, Orissa and Uttaranchal are examples of such states (Figures 5k To 5m).

In the list of 'strongly responding' states, the line slopes further downwards. Here the rural f/m ratios decline quite strongly, say by 50 to 90 points for a decline by 100 points in urban f/m ratios. These states are Punjab, Haryana, UP, Himachal Pradesh, Gujarat and Maharashtra (Figures 5n to 5t). In Himachal and Maharashtra, the deterioration between 1991 and 2001 is sharp, while in Gujarat it has been bad in 1991 itself. Rajasthan presents an interesting case where the situation appears to have improved. But this needs further and a more detailed look.

Among southern states, Tamil Nadu presents alarming trends for both 1991 and 2001. Unlike most other states, the rural f/m ratios among children in a number of districts have been lower than the urban ratios and have declined faster than the urban ones too.

This analysis will remain incomplete without mentioning the 'terminal cases' or districts where rural f/m ratios 06 are significantly more masculine compared to the urban f/m ratios among children. Table 2 gives a list of districts where the rural f/m ratios 06 are a) below 920 and b) less than 10 points or more compared to urban f/m ratios 06. First of the three discernible clusters comprises of districts from Punjab, Haryana and Delhi along with Kangra (836) in Himachal and Haridwar (850) in Uttaranchal. The second cluster is in Bihar comprising of Darbhanga (884), Sitamarhi (896), Saharsa (897) and Munger (905). The third cluster is in Tamil Nadu with Salem (763), Theni (873), Namakkal (882), Dharmapuri (869) and Madurai (903). These districts may have an earlier history and prevailing pattern of infanticide co-existing with or replaced by provision of foeticide.

I

The patterns above are linked to a question agitated for some time now in the received literature. Bardhan (1974) had pointed out how the relatively poorer regions in the country, e g, Kerala,

Figure 5a

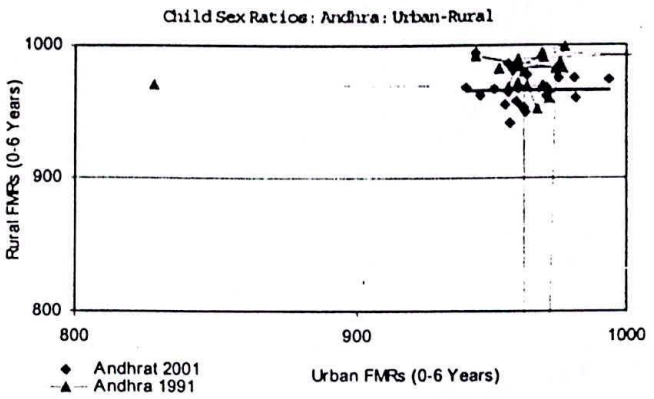


Figure 5b

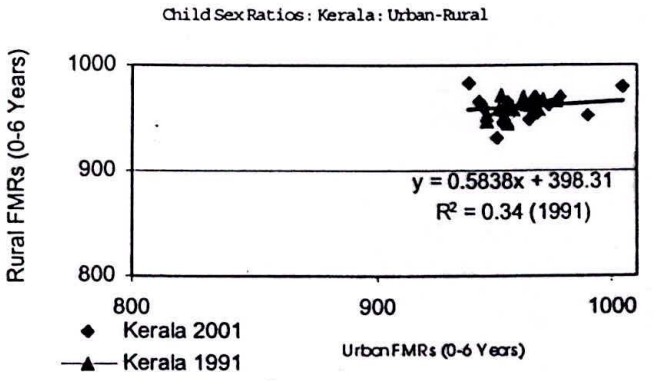


Figure 5c

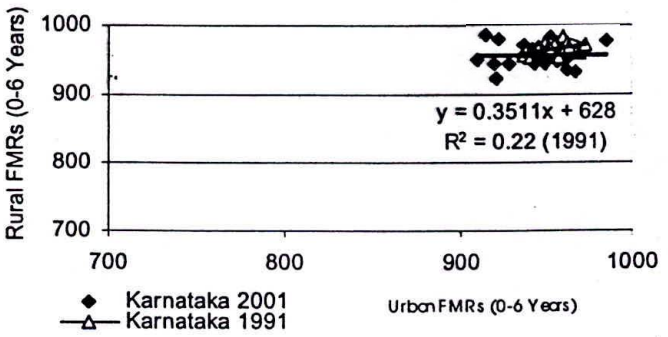


Figure 5d

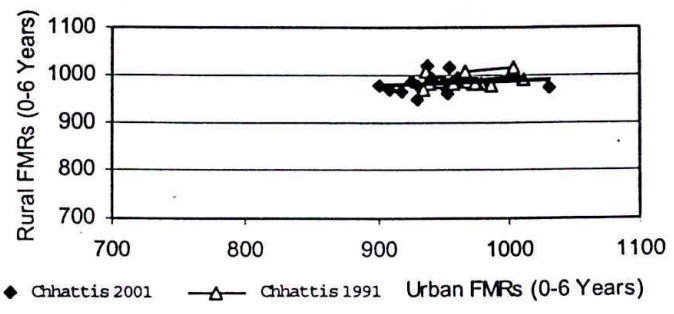


Figure 5e

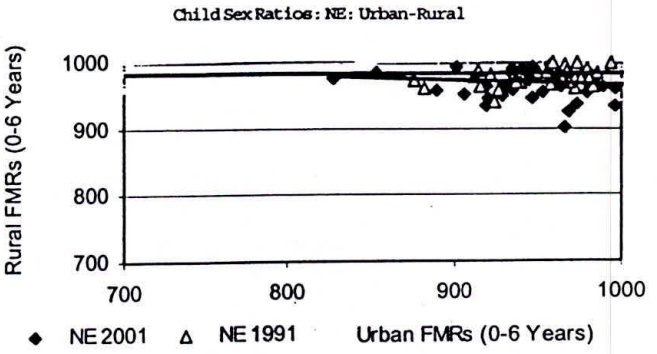


Figure 5f

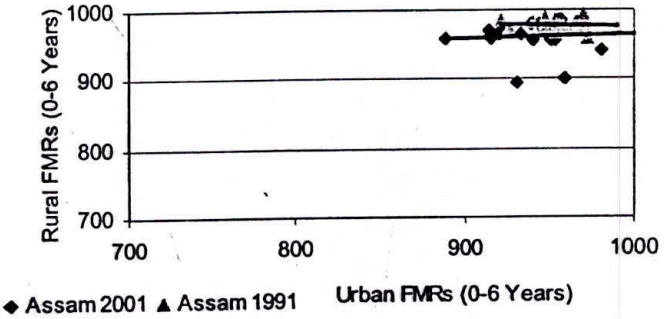


Figure 5g

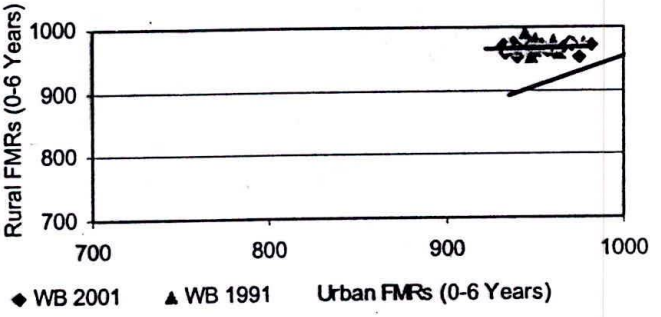


Figure 5h

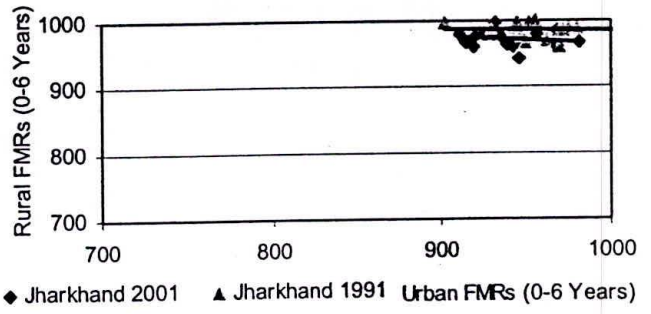
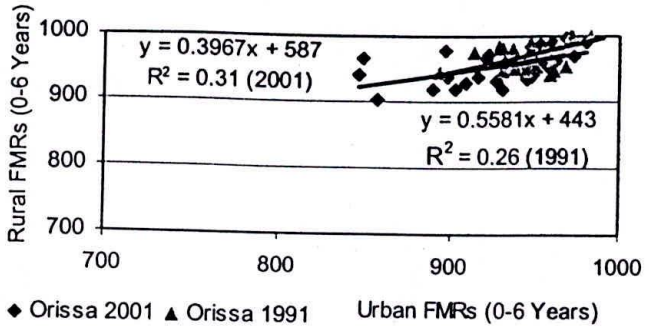


Figure 5i

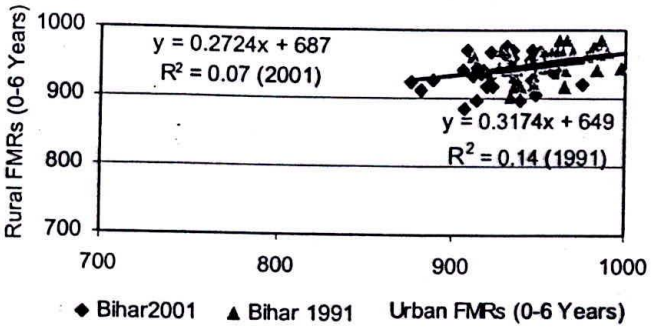
Child Sex Ratios: Orissa: Urban-Rural



◆ Orissa 2001 ▲ Orissa 1991 Urban FMRs (0-6 Years)

Figure 5j

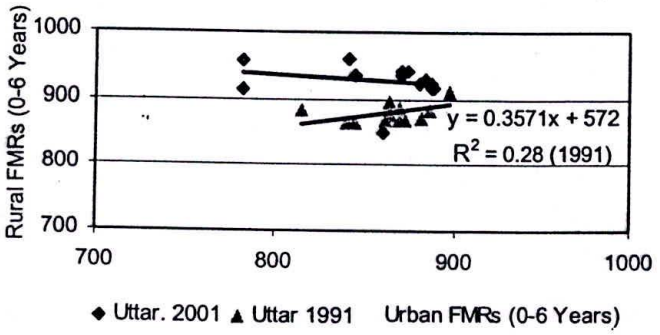
Child Sex Ratios: Bihar: Urban-Rural



◆ Bihar2001 ▲ Bihar 1991 Urban FMRs (0-6 Years)

Figure 5k

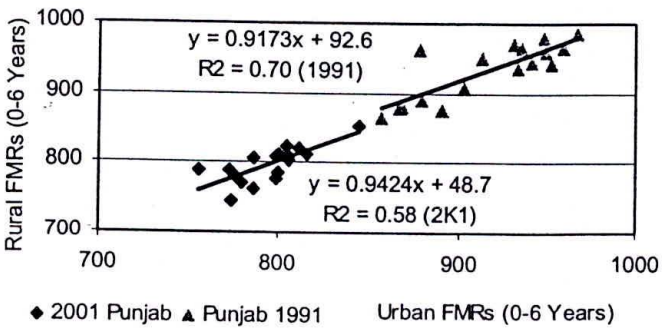
Child Sex Ratios: Uttaranchal: Urban-Rural



◆ Uttar. 2001 ▲ Uttar 1991 Urban FMRs (0-6 Years)

Figure 5l

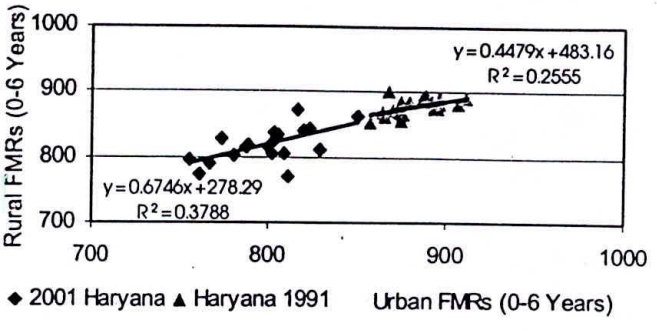
Child Sex Ratios: Punjab: Urban-Rural



◆ 2001 Punjab ▲ Punjab 1991 Urban FMRs (0-6 Years)

Figure 5m

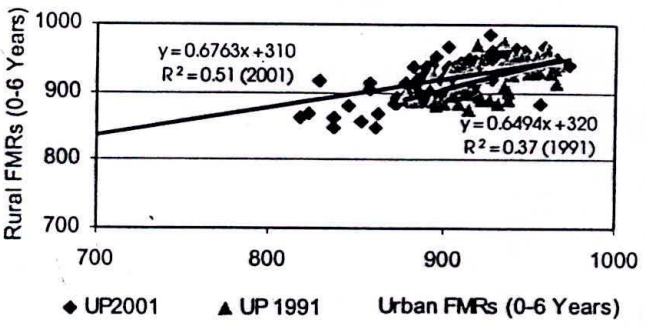
Child Sex Ratios: Haryana: Urban-Rural



◆ 2001 Haryana ▲ Haryana 1991 Urban FMRs (0-6 Years)

Figure 5n

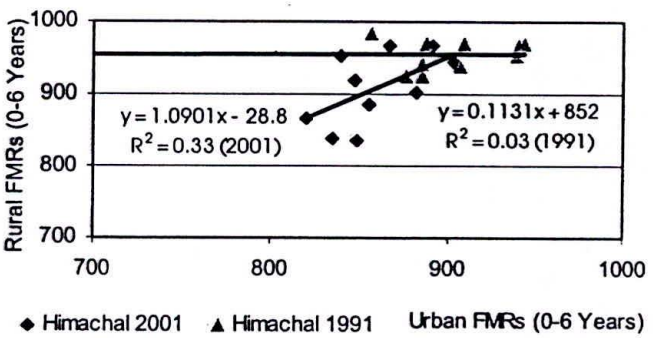
Child Sex Ratios: UP: Urban-Rural



◆ UP2001 ▲ UP 1991 Urban FMRs (0-6 Years)

Figure 5o

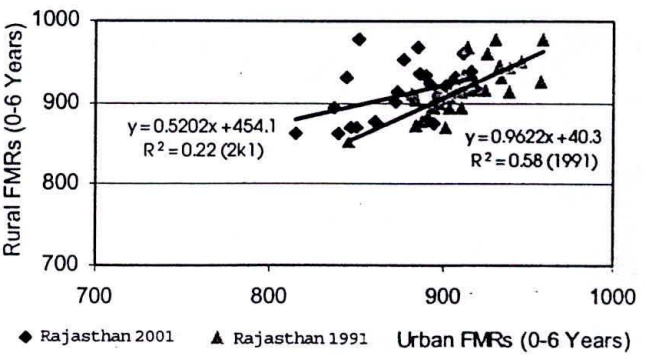
Child Sex Ratios: Himachal: Urban-Rural



◆ Himachal 2001 ▲ Himachal 1991 Urban FMRs (0-6 Years)

Figure 5p

Child Sex Ratios: Rajasthan: Urban-Rural



◆ Rajasthan 2001 ▲ Rajasthan 1991 Urban FMRs (0-6 Years)

Figure 5q

Child Sex Ratios: MP: Urban-Rural

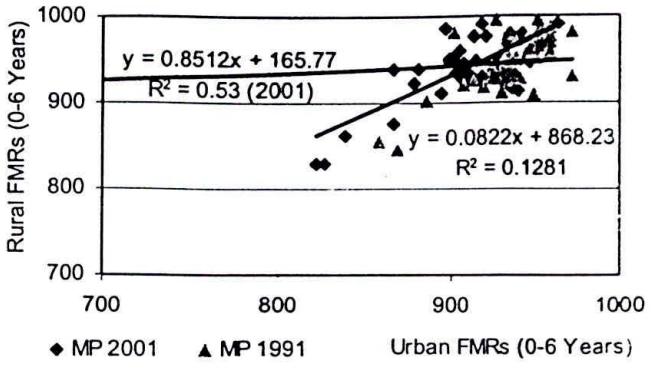


Figure 5r

Child Sex Ratios: Maharashtra: Urban-Rural

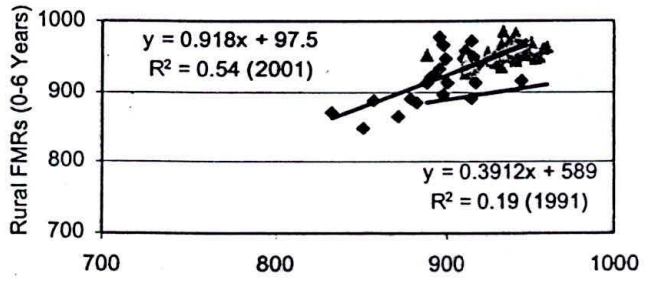


Figure 5s

Child Sex Ratios: Gujarat: Urban-Rural

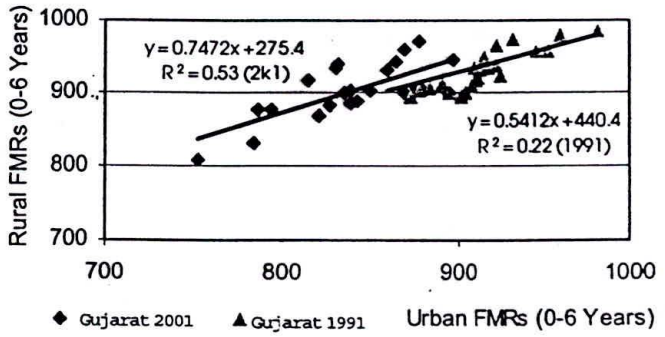
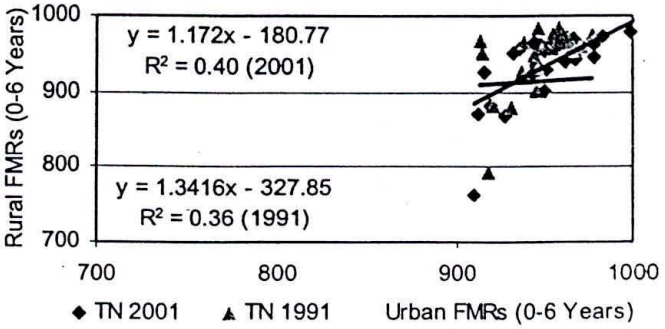


Figure 5t

Child Sex Ratios: TN: Urban-Rural



appear to treat their daughters better that the more prosperous states in the north-western India. Within a given region too, Miller (1981) has discussed the differences in sex ratios among the 'propertied classes' and others. Most recently, Premi (2001) has stressed the need to examine as to why the largest decline in the child sex ratio (0-6 years age group) has occurred in the well-developed districts.

At a different level, sociological and anthropological literature provides many instances of increased female subordination among the more prosperous groups [e g, Goody 1990; Papaneck 1990; Berreman 1993]. This leads to unequal access to life sustaining resources e g, food, nutrition, health care, for the female members [Dasgupta 1987; Miller 1981]. In a harsher manifestation of this inequality, direct denial of life chances through infanticide or sex selective foeticide can take place among these groups.

Concerns over the masculinity of sex ratios in the wake of prosperity at district level is one matter; corroborating this with quantitative data is another. As the mainstream population census data did not provide sex ratio data by prosperity level, this important issue has remained unaddressed in the demographic literature.

One exception to this trend was Krishnaji (1987) who analysed the National Sample Survey Organisation (NSSO) data on family composition and the prosperity level represented by the Monthly Per Capita Expenditure (MPCE) class. The household consumer expenditure surveys of NSSO provide data on the composition of the household in terms of the adult and the child (0-14 years) population by 12 different Average Monthly Per Capita Expenditure (AMPCE) classes. As the AMPCE reflects per capita

Table 1: Decline in FMRs (Females per 1,000 males) in the 0-6 Year Population, 1991-2001

State	FMR-06U01	FMR-06R01	FMR-06U91	FMR-06R91	Decline U	Decline R
India	903	934	935	948	32	14
Punjab	789	795	936	952	147	157
Dadra and Nagar Haveli*	885	995	977	1015	92	20
Gujarat	827	905	909	937	81	32
Haryana	809	824	884	877	76	53
Daman and Diu*	935	920	996	933	62	13
Delhi*	866	853	917	900	51	48
Uttar Pradesh	880	922	928	927	48	4
Himachal Pradesh	858	900	904	955	46	55
Uttaranchal	874	914	913	898	39	-16
Chandigarh*	844	852	879	891	35	39
Goa	919	948	953	972	35	24
Andaman and Nicobar Islands*	940	976	970	973	31	-3
Maharashtra	908	923	934	953	27	30
Bihar	924	940	950	953	26	14
Madhya Pradesh	906	941	931	944	25	4
Nagaland	935	983	959	1001	24	17
Assam	931	967	955	977	24	10
Orissa	927	954	949	969	23	15
Rajasthan	886	914	909	919	22	4
Chhattisgarh	941	982	960	988	19	6
Jharkhand	931	973	950	985	19	13
Sikkim	925	991	936	967	12	-24
Karnataka	939	954	951	963	12	9
Lakshadweep*	920	1010	932	951	11	-59
Pondicherry*	951	971	962	963	11	-7
Tripura	948	978	959	968	11	-10
West Bengal	948	967	955	969	7	3
Tamil Nadu	951	931	955	945	4	14
Meghalaya	964	977	968	989	4	12
Mizoram	961	978	965	973	4	-6
Andhra Pradesh	958	965	962	979	3	14
Kerala	958	964	958	958	-1	-6
Manipur	980	956	972	975	-8	19
Arunachal Pradesh	981	957	946	986	-35	29

expenditure, the family size does not affect the measure and it can be taken as a good surrogate for prosperity.[3]

Very recently, while all eyes had been fixed on the results of the 2001 population census for data on sex ratios, NSSO report on the 55th round reported an important and disturbing observation. The report (No 457: 17), blandly provides the following information (Table A) based on a survey of over 1.20 lakh households in the country (rural 75 per cent and urban 25 per cent);

Table A: Demographic Differences between Lowest and Highest MPCE Classes

Population Characteristic	Rural			Urban		
	Bottom 5 Per Cent	Top 5 Per Cent	All	Bottom 5 Per Cent	Top 5 Per Cent	All
Sex ratio	1005	858	941	949	837	900
Sex ratio (adults)	1067	873	966	993	840	908
Sex ratio (children)	946	804	900	903	819	883

Source: Report of the National Sample Survey Organisation, NSSO No 457 *Level and Pattern of Consumer Expenditure in India: 1999-2000.*

This information is significant. It shows how masculine the sex ratios are among the prosperous groups both in rural and in urban areas. It also points towards a trend of more masculine sex ratios in urban households compared to the rural households.

Before invoking the escape hatch of migration to explain away these findings, it will be useful to remember that the sex ratio among children does not suffer from sex selective migration. Further, the difference of 142 points in rural and 84 points in urban households between the bottom 5 per cent and the top 5 per cent of the households is too large to be explained away by migration. The observed distortion in the sex ratios is clearly man-made.

Before proceeding further, it is pertinent to look at the sex ratio figures by the 12 different AMPCE classes. Table 3a gives the details of the AMPCE classes, number of households surveyed, mean AMPCE in each class and the sex ratios among these for the total as well as the child (0-14 years) population in rural areas. Table 3b gives corresponding information among the urban households.

A consistent decline in the f/m ratioss (females per 1000 male population) as one moves up the AMPCE range is clearly discernible. This is so for both rural and the urban households and for the 0-14 years as well as total population.

Figure 6a and 6b show the relationship between prosperity as measured by the variable logAMPCE and the sex ratios for total as well as the 0-14 year age-group population. The two have strong negative correlation and the relationship between the two can be expressed as;

f/m ratios(All-age) = 1405 – 175.3 x LogAMPCE (Rural)
Adj R Sq = 0.76
f/m ratios(0-14 yrs) = 1432 – 204.2 x LogAMPCE (Rural)
Adj R Sq = 0.92

The constant term and the slopes are significant at 1 per cent level and so is the f – value in both the equations.

For urban areas the relationship can be linearly described as,

f/m ratios(All-age) = 1368 – 163.1 x LogAMPCE (Urban)
Adj R Sq = 0.76
f/m ratios(0-14 yrs) = 2188 – 728.5 x LogAMPCE (Urban)
Adj R Sq = 0.65

Once again, the constant term and the slopes are significant at 1 per cent level and so is the f-value in both the equations. However, as Figure 6b indicates, the relation can more correctly

Table 2: India/State/Union Territory/District

2	F/M Ratios in the 0-6 Population				
	FMR06R 0-6 Rural	FMR06U 0-6 Urban	FMR06T 0-6 (R+U)	Urban06 Per Cent	Diff06R-U
India	934	903	927	22	31
Leh (Ladakh)	911	966	929	34	-55
Kangra	836	849	836	4	-14
Fatehgarh Sahib	747	774	754	28	-27
Patiala	764	786	770	31	-22
Sangrur	779	798	784	29	-20
Rupnagar	787	800	791	30	-13
Ambala	772	812	784	31	-41
Rewari	811	830	814	16	-19
South West	798	852	845	86	-54
Delhi*	853	866	865	92	-14
South	870	888	886	90	-18
Sikar	880	891	882	19	-11
Karauli	873	894	876	13	-20
Meerut	849	861	854	43	-12
Bijnor	898	917	902	22	-19
Mau	883	956	897	19	-73
Darbhanga	884	906	885	6	-22
Sitamarhi	896	913	896	5	-17
Saharsa	897	939	900	7	-42
Munger	905	948	915	24	-43
Bishnupur	903	966	925	35	-62
Jorhat	895	932	901	15	-36
Bailakandi	900	959	903	5	-60
Puri	920	930	921	12	-10
Bhopal	916	936	931	75	-20
Tikamgarh	915	939	919	15	-25
Solapur	890	914	897	29	-24
Washim	917	945	921	17	-28
Salem	763	910	826	45	-147
Theni	873	911	893	54	-39
Namakkal	882	919	896	38	-37
Dharmapuri	869	928	878	15	-59
Madurai	903	950	927	53	-47

Table 3a: Sex Ratio by MPCE Class, India (Rural) NSSO Survey Round 55, July 1999-June 2000

PCE CLASS	AMPCE	No of Hhs	Log AMPCE	f/mRatio (0-14)	f/mRatios (All)
0-225	191	2547	2.28	946	1004
225-255	242	2451	2.38	951	990
255-300	279	5147	2.45	950	988
300-340	321	5588	2.51	925	971
340-380	361	5892	2.56	914	946
380-420	400	5895	2.60	948	955
420-470	445	6783	2.65	895	940
470-525	497	6635	2.70	832	904
525-615	567	8253	2.75	853	921
615-775	686	9383	2.84	820	904
775-950	853	5337	2.93	854	908
> 950	1345	7474	3.13	804	858

Table 3b: Sex Ratio by MPCE Class, India (Urban) NSSO Survey Round 55 July 1999 – June 2000

PCE Class	AMPCE	No of Hhs	Log AMPCE	f/mRatio (0-14)	f/mRatios (All)
00 - 300	256	1585	2.41	903	949
300 - 350	326	1586	2.51	977	988
350 - 425	389	3290	2.59	948	961
425 - 500	464	3886	2.67	894	941
500 - 575	537	3926	2.73	915	958
575 - 665	619	4374	2.79	885	913
665 - 775	719	4785	2.86	875	896
775 - 915	841	5150	2.92	840	871
915 - 1120	1010	5677	3.00	795	848
1120 - 1500	1286	6651	3.11	798	815
1500 - 1925	1692	3901	3.23	810	847
> 1925	3074	4113	3.49	819	836

Figure 6a: Sex Ratios by Prosperity: Rural India 1999-2000: NSSO 55th Round

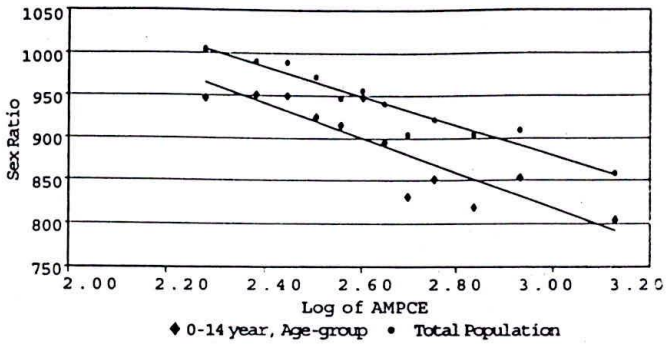
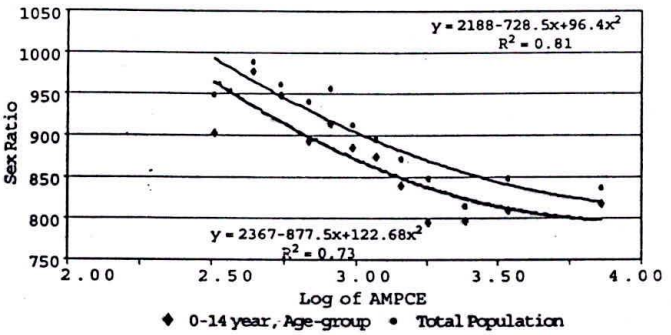


Figure 6b: Sex Ratios by Prosperity: Urban India 1999-2000: NSSO 55th Round



be described as a quadratic one (the adj R Sq values marginally improve);

f/m ratios(All-age) = 1368 – 728.5 x LogAMPCE + 96.4 x (LogAMPCE)^2

f/m ratios(0-14 yrs) = 2367 – 877.5 x LogAMPCE + 122.7 x (LogAMPCE)^2

Above pattern is not 'one off'. A similar trend is seen in the 43rd and the 50th round. It is observed not just at all-India level but in different states as well (Agnihotri et al 2003: Forthcoming). What is disturbing is that the lowering of the f/m ratios has intensified in most regions across the three rounds.

This analysis is important for another reason. As against the observed reality of increased female subordination in the wake of prosperity, certain economic literature expresses a 'prosperity optimism'. Briefly speaking, it is similar to the 'trickle down' hypothesis based on an inverse U shaped relationship (Kuznets curve) between inequality and prosperity. It tells us that inequalities initially increase as nations become prosperous. Beyond a 'turning point', however, these decline as fruits of prosperity trickle down to the lower strata as well. Similar relationship holds, some economists argue [Haddad and Kanbur 1992], in the household domain. Inequalities rise with prosperity initially reaching a maximum at the 'turning point' of prosperity level. Beyond it these reduce and everybody lives happily ever after.

I have elsewhere [Agnihotri 2002: Chapter 8] argued against this 'prosperity optimism' on three counts. First, the existence of a U-shaped relationship begs three important questions; at what level of prosperity does this turning point come, how attainable is it and most important, how severe is the inequality at this turning point. Second, at this turning point the inequality is at its peak. As such one has to prosper a lot more before it comes down to some 'acceptable' level. Third it is naïve to assume that the inequality in terms of different life sustaining inputs behaves identically. A prosperity level at which inequality in consumption of rice may have disappeared, can co-exist with strong inequality in access to protein or more crucially in the access to medical care. The net result will still be that the survival of the girl child may get more adversely affected. The NSSO data so far indicates this to be the case. Finally, it can be shown from analytical considerations that it is not the prosperity per se, but the female contribution to prosperity that is relevant in deciding her lot; a result intuitively obvious to sociologists and anthropologists, but not necessarily so in economics.

IV

Against this backdrop of despair, how do we rescue the girl child out of the chakravyuha? Her situation is, to use an analogy from physics, like that of a particle in a well. Imagine a ball in a bowl-shaped pit. The walls of the pit provide the barrier that the ball must overcome in order to get out of the pit. The higher the barrier, the more difficult it is for the ball to overcome it. The extreme example of this is the black hole where the barrier is so high that even light is unable to escape out of it.

Traditional solutions offered by classical physics essentially require enough energy to be imparted to the ball so that it overcomes the barrier. Either the kick imparted to it has to be sufficiently strong or one could just pick it up and place it outside the pit or, radically, break the barrier to allow the ball to roll out. In short, single drastic solutions are on the offer. But in reality particles do emerge out of these barriers even without such solutions. Alpha particles breaking from the stranglehold of the nucleus and even black holes emitting matter. How does it happen? Quantum physics tells that they 'tunnel' through the barrier; a non-radical solution indeed but does help them break free.

We can likewise wait for radical solutions to happen i e, for a revolution,[4] for the perfect enforcement of the PNDT act, for the emergence of that elusive entity called the political will or await a change of heart among foeticide service providers who worship profit at all costs. While each of these solutions must be explored, it is useful in the meantime, to look at some seemingly non-radical solutions as well.

One such set of solutions is to consolidate the position of the girl child in areas where barriers to her survival have not yet become formidable. Even in these areas, gender inequalities in respect of basic entitlements do operate, e g, in birth registration, in immunisation, in nutrition or in schooling. It stands to reason that any effort towards complete coverage will reduce the gender gap in the coverage. Attempt should therefore be made for complete coverage as an anti-dote to the gender gap. Three specific examples from the field will amplify this.

Data on nutritional status of children in the 0-3 age group in the ICDS do show a gender gap in the incidence of moderate and severe malnutrition.[5] I have seen this in respect of at least three different states; Orissa, West Bengal and Maharashtra. Data show that girls in this category often outnumber boys and the differences in the incidence of moderate and severe malnourished between them are statistically significant. Further, the gender gap appears to aggravate during lean seasons when malnutrition peaks; an observation supported in literature [Behrman 1988].

The implications of these patterns were brought home dramatically before me during a zonal ICDS review meeting conducted by me as the secretary to government of Orissa in the women and child development department at Sambalpur, in 1999. I did on purpose ask a couple of ICDS project officers to read out the gender break-up of moderately and severely malnourished children in different sectors in their project. As they started

reading out the statistics, it was clear that girls were invariably outnumbering boys. This explicit revelation created a sudden if uncomfortable silence in the meeting hall with many project officers murmuring that they too had seen a similar pattern. It did dawn on most of them that a campaign to eliminate severe and moderate malnutrition, benefited the girl child more. Interestingly all the anganwadi workers, sector supervisors and project officers in Orissa are women and yet, the point had to be explicitly made with supporting data.

A similar and explicit recognition came up recently during a review meeting of a UNICEF-supported intervention in certain blocks of West Bengal. This project 'positive deviance' aims at improving nutritional status of children on a sustainable basis through mobilisation of mothers and the community. Initial results indicate that the nutritional status of girl children improves more for the simple reason that they are the more deprived to begin with.

Gender gaps also mark child immunisation especially for dropout between, say, the first and the third dose of the DPT. Once again, an NGO, Shibpur Peoples' Care Organisation (SPCO) that has taken up a campaign for complete immunisation of all children in seven gram panchayats 'realised' that girls benefit more on this account. The reason again is simple; they were the more deprived to begin with.

It is necessary therefore, to remove the 'veil' of aggregation from the data, look at the critical gender gaps and press for a universal coverage in order to give the girl child her due. The reality, however, is that the genderwise break-up of data are often not provided, and when provided often not analysed by gender. In one unusual case, the gender break-up has been dropped from routine reporting in the name of efficiency in a department entrusted with responsibility of women's development.[6]

Three unintended outcomes of this 'universal' coverage can be anticipated. In less regressive regions, it consolidates the 'female friendly' milieu while in others it improves her 'entitlements perspectives', even if non-radically. Second, a ripple effect across entitlements takes place. Complete coverage in immunisation can, for example, pave the way for complete birth registration of girl children. Finally, as we move closer to complete coverage, the service delivery infrastructure and social attitude towards girls may both improve.

It is necessary therefore, to follow this strategy for basic entitlements like registration, nutrition, immunisation and more important literacy/schooling. As universalisation is the stated goal of the state for these entitlements, this strategy needs serious consideration by both civil society and the state. But the next climb is steeper still. How to stem the alarming increase in sex selective elimination of the girl children?

V

One front on which the activist groups are fighting hard is implementation of the PNDT Act 1994. I have myself provided modest methodological inputs in this regard. These help highlight the emerging 'epicentres' of female child deficit at the district and sub-district level and may perhaps help take more effective implementation. It is useful to remember, however, that f/m ratios have been low well prior to the 1990s due to excess female child mortality in the 1-4 age group, and in many a states in the post neo-natal period itself.

Roots of sex selective elimination need to be traced to the perceptions about 'unwantedness' of the girl child and tackled at that level. These perceptions are shaped primarily through viewing a daughter as a liability in economic and physical security sense. A substantial part of this perception is shaped by the prevailing status of women.

Received literature is nearly unanimous that high workforce participation by women, goes together with higher sex ratios [Murthi et al 1995]. It is not, however, a necessary condition for high sex ratios, if culture takes care of survival [Agnihotri 2000]. However, a distinction needs to be made between wage-work where women have control over their earnings and work not explicitly linked to wages e g, dairy activity, where the blessing may be mixed depending on the control women have over the earnings [Sharma and Vanjani 1993].

Among non-poor households, the dynamics of withdrawing women from workforce for purposes of 'status production' [Papanek 1989] in the wake of prosperity needs to be noted. But this creates a conflicting situation for the concerned woman; her status within the society goes up while her bargaining power within the household declines. She therefore hopes for the best but is not 'prepared for the worst'. Once withdrawn from the labour market, her ability to re-engage with it is erodes steadily, often sharply, giving rise to an increasing sense of insecurity. Basu (1992: 222) has summed this up very aptly when she observes "probably the best placed mother is one who does not work herself but knows that there are no restrictions on her finding work ... should the need arise".

Creation of employment avenues for women from the non-poor households has to take into account above observations. Our policy preoccupation today is mostly with workforce participation of women from poorer households. That is useful in the poverty context. But if we wish to create a dent in the epicentre, flexible employment avenues must be created for women from non-poor households. Once women are able to access these '... should the need arise', their status within the household will perceptibly go up. This is important since the social dynamics within this class creates role models for the upwardly mobile groups.

However, a parallel campaign has to be mounted about the deteriorating crime situation in the public sphere as it affects women more adversely than men. The tendency to withdraw women from external employment is also influenced by the safety perceptions about the workplace and the road leading to it! This is one area where activism, civil society groups, media and judiciary has to play a proactive role to merely expedite judicial processes. I am quite convinced that it is the swiftness and certainty of punishment and not the harshness of a punishment that acts as a deterrent. The proactive role should identify to begin with, the weak links in the criminal justice processes because a chain snaps not at its strongest link but at its weakest one. The devil truly lies here in these weak links.

Two specific interventions need to be mentioned here which may contribute to reduce the 'unwantedness' of daughters. The first relates to mobility in the non-metro urban towns. Girls do not enjoy the same mobility as boys do because their access to two-wheelers, especially bicycles, is limited. I seriously think this must go. It is anecdotal, but not uncommon, to find parents mentioning that daughters cannot run errands as the sons do as they lack of mobility. Riding bicycles should become part of a movement for girls.

The second issue is of married adolescent girls. Notwithstanding the legal age of marriage being 18 years, a large percentage of number of girls get married below this age (RCH 1998-99), the percentage in some districts going as high as 70 per cent. These girls find their social communication avenues sharply curtailed after marriage (Judith Bruce: personal communication).

Further, they cannot become part of any SHG as they are below 18 years of age. They thus get initiated into an unequal position, burdened with the task of social and biological reproduction at low information base. It is necessary to bring this group into the fold of SHG activity as trainees or affiliates so as to improve their social communication avenues if not economic power.

There is a view that the role of SHGs is exaggerated and these are mostly insensitive to social issues once they pursue economic goals. The solution to this, in my opinion is not to write these off, but to sensitise them to social issues. In any case the importance of gaining economic security for oneself through participation in SHG cannot get negated merely because the person does not become sensitive to an activist's level of satisfaction.

Finally, a specific intervention to highlight the supporting role of daughters to parents in old age. There is a growing realisation in metros and rural areas alike that sons do not necessarily look after parents in old age these days. In both these areas, son-drain due to long distance migration is significant and there is a considerable, anecdotal again, evidence to show that it is the daughter who comes to help in the time of need or crisis. There is a strong need to highlight this role through visual media.

VI

It is important to debate here the ethical dimension of sex-based elimination of a segment of the population. Once this is sanctified, it could well be the thin end of the wedge that provides in its wake, currency to eliminate other segments of population based on other criterion whether religion or caste or the colour of the skin or the shape of the nose!

Development, frankly, cannot be viewed in isolation; it is important to know how it combines with discrimination, gender based one in particular. If we remain underdeveloped and yet aggravate discrimination, that is the worst case scenario. If underdevelopment co-exists with lack of discrimination, life gets tolerated but not enjoyed. But highly developed society with high discrimination levels as in our 'epicentres' is not a great goal for women either. We must, therefore, strive to become a society where development goes hand in hand with absence of discrimination against its women.

We must, therefore, question the current model of development where discrimination necessarily appears to accompany development. It is not that success stories of alternative 'development' do not exist; Kerala, Goa or Manipur provide examples where social indicators have developed, but not at the cost of gender equity. This is the role model that the society has to follow and not the model of the Punjab, Haryana and western UP where discrimination appears as 'inevitable'.

But that necessitates that the fight against gender-based discrimination has to become part of the larger fight against all other discriminations. In fact gender based discrimination gets aggravated when combined with other inequalities. It becomes necessary therefore to identify the most unreached and the most unserved, within the gender domain and advocate strongly for improving their lot. Just as different inequalities multiply the misery of the affected, reducing these together also gives multiple benefits. Willy-nilly we are talking here of eliminating the chakravyuha of discrimination altogether rather than its specific manifestation we began with, so that no child dies an avoidable death, let alone a girl child. EPW

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Notes

[This is a revised version of the 2nd annual lecture on Girl Child delivered under the auspices of the Indian Alliance for Child Rights (IACR). The views presented here are author's own and not of UNICEF.]

1 More appropriately a north-west and south-east divide with more masculine sex ratios in the former and less adverse f/m ratios in the latter (See e g, Sopher 1980; Miller 1981 and 1989 and Agnihotri 2000. Miller (1989) talks in particular of the growing masculinisation of the f/m ratios between 1971 and 1981.

2 None of these foeticide service providers, who often claim to be rendering 'national service' provide the service free; even for some of their poor clients!

3 Question regarding different saving levels or disposable and non-disposable income for the same MPCE level can be raised here. But by and large, higher per capita expenditure will indicate higher prosperity.

4 While one may agree or disagree with the governance in North Korea, son preference there is next to nil in stark contrast to the strong son preference in South Korea traced to religio- cultural context of a Confucian society (Goodkind, 1999).

5 I am quite puzzled by the persistent divergence on this issue between the ICDS data and the survey data from, say NNMB and NFHS which seem to indicate a much lower or insignificant gender gap.

6 The ICDS reporting format had reportedly been 'modified' with an aim to reduce drudgery at the field level and what gets dropped is the gender-wise break up of nutritional status. I strongly hope my information is either incorrect or outdated!

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Trends in Sex Ratio

A Review in Tribute to Asok Mitra

The 1991 Census counted 927 females to every 1,000 males in the Indian population. That was an all-time low level in the recorded female-to-male ratio. It laid to rest the sanguine prospect generated by the previous census, which showed an improvement in the ratio: to 934 in 1981 from 930 in 1971. Indeed, there has been a secular decline in the sex ratio from the beginning of this century. Some probing into what lies behind the long-term trend and its re-establishment in 1991 suggests – as the studies reviewed here do – that a further decline in the ratio is quite probable when the first count is made in the next millennium.

N Krishnaji

For Asok Mitra, the steadily deteriorating sex ratio was an obsessive concern over more than six decades. Presiding over the 1961 Census, he publicised the influential work of Pravin Visaria, which was the first major effort to understand the worsening deficit of females in the Indian population [Visaria 1971]. That study put an end to earlier speculations about undercounting of females as a plausible explanation, and clearly established higher female mortality in several age groups as the prime reason for low female ratios.

Asok Mitra returned to the question of worsening female deficits, after reading the results of the 1971 Census. He wrote what perhaps is the most comprehensive review of the social malady [Mitra 1979], covering all that is relevant. He discussed at length the possibility of undercounting of females in the different censuses and went on to the nature and extent of higher female mortality under normal conditions and under famines. He analysed the underlying causes such as the neglect of girls and the risks associated with frequent child bearing. Finally, he paid attention to the economic and cultural environment that generates discrimination against females. After carefully describing and analysing data from diverse sources, he listed in detail what we ought to investigate further to understand the trends in sex ratio. This tribute to Asok Mitra reviews some recent studies on the trends in sex ratio.

The balance tilted against females during the 1980s and produced the lowest ever sex ratio of 927 in 1991. It came as something of a surprise, not only because it was a reversal of the trend during the 1970s, but also because the data from all available sources suggested a narrowing down in gender-differentials in mortality during the 1980s. Since on a countrywide basis a possible sex-selective migration could not have been a major factor, the decline in the female ratio, during a period when the gender gap in death rates was narrowing, clearly pointed to the possibility that larger female deficits were occurring at birth itself.

Initially, demographers did not see it that way. Looking at the 1991 ratio as something of an intellectual puzzle deserving attention, they attempted to resolve it in other ways. Srinivasan (1994), for example, raises once again the phantom of underenumeration of females. Let us remember that Mitra has examined this at length (in the 1979 paper cited earlier) and concluded that while the undercount of females could have been a factor in the earliest censuses, beginning in 1871-72, all evidence pointed to the progressive improvement in the accuracy in counting. Indeed, other competent demographers have come to similar conclusions. How, then, does Srinivasan square this with his suggestion of undercounts of females? He says (1994:3234):

> The extremely volatile political and social climate that prevailed in many parts of the country because of the issue of reservations (Mandal Commission recommendations supporting reservations of jobs and seats in colleges on the basis of caste) and the 'ratha yatras' or massive processions organised by the Hindu fundamentalist groups over the Ayodhya temple issue during the six-month period prior to the census, might have contributed to the under-reporting of females by households.

That women had gone into hiding under political turmoil is a curious suggestion. Srinivasan, however, puts this to test by examining sex ratios in districts through which 'ratha yatras' passed, and contrasting them with districts with no 'ratha yatra'. He finds much evidence in support of his hypothesis involving politically disturbed conditions as a factor behind female undercounts. He is, of course, not unaware of female foeticide as a possible contributing factor. Here is what he says in the context (1994:3234):

> Another factor that has been advanced by women's groups and others for the decline in the sex ratio is the increasing incidence of female foeticide in the country through the use of the modern techniques of ultrasonography and amniocentesis that help to identify the sex of the baby at very early stages of pregnancy. When these procedures determine at an early stage of pregnancy that the foetus is female, it is more likely to be aborted. However, these procedures have found favourable response in the late 80s and the early 90s only in the large metropolitan cities of Bombay, Calcutta, Madras and Delhi where the facilities for such techniques were available. Even to increase the sex ratio at birth in the Indian society by one point, for example, from 106 to 107 [here the ratio is male to female, by convention in demographic literature], about 60,000 female foetuses have to aborted [during a year or a decade?].

In the sequel, he cites with approval the work of Rajan and his colleagues, who advance the novel hypothesis of a possible double count of males leading to a fall in the female ratio [Rajan et al 1991]. These authors begin by accepting that female counts have been improving in accuracy over the different censuses; they recognise, therefore, that underenumeration of females could not have been a major factor behind the low 1991 ratio. They present data to show that gender differences in death rates have been narrowing down; and further make references to the work of other demographers, pointing in the same direction. Logically, all this should have led them to a serious consideration of the trends in sex ratio at birth. However, they express much impatience with the

suggestion that female foeticide and infanticide, promoted by son-preference, could have contributed significantly to the fall in the sex ratio; they assert that sex selection at birth through the emerging technology of sex determination is largely an urban phenomenon. Their own inference about double counts of males turns out to be a purely speculative one. The underlying argument is that migrant males were probably counted twice, at places of origin and destination of migration. The analysis they present in support is based on sex ratio trends separately in the (0-10) and 10+ age groups. They find the bigger female deficits in the 10+ group, supposed to contain the migrant males. However, in the absence of age data, they use estimates, which now, after the release of official age data, can be seen to have gone haywire. Indeed, similar exercises done later conclusively show that drastic reductions in the sex ratio have taken place in the (0-4) age group.

The two examples above suffice to show the bias, and consequent haste, in the initial responses to the 1991 fall in the sex ratio. However, as reliable data accumulated, and demographers took closer interest, it became increasingly clear that high female deficits in early childhood were primarily responsible. Indeed, this has now been identified as a manifestation of an increasing gender bias, which, moreover, is taking an altogether new shape, different from what it used to be. It is difficult to fully review the extensive literature on the subject. Instead, we refer below to a few studies that bring out this changing map of the sex ratio in India.

The point of departure of a recent study [Das Gupta and Bhat 1997] is the observation that in several east Asian countries, notably South Korea and China, there have been steep decreases in the female ratios among children as a consequence of significant declines in fertility. Most of these societies have a cultural tradition of strong preference for sons. It is suggested that the well-established preference for male progeny combined with an emerging preference for small families will result in a loss of girls either before or after birth. Easily accessible procedures for sex determination during pregnancy promote female foeticide. This has a particularly strong influence at higher parities: if the first birth is female, the next pregnancy has diminished chances of going to full term if the foetus is female. A female baby born under these conditions has reduced chances of survival. Thus the unborn female baby shares with the born female infant high risks of elimination, as technology reinforces traditional biases.

All this has been documented well in the Chinese case. The following paragraph from a study on sex ratios at birth in China [Zheng Yi et al 1993] neatly sums up what has happened in China:

> Strong male domination and discrimination against women have a long history and have not yet been fully eradicated in spite of great progress made in China, especially during the second half of this century. The current family planning policy does not allow couples to have as many children as they desire, but social and cultural traditions and daily living conditions make it very important to have a son, especially in rural areas. Meanwhile, economic reforms and the open door policy have promoted economic growth and improvement in the standard of living. Progress in medical technology has made prenatal sex identification and sex-selective abortion feasible. Therefore, people with a strong desire for a son usually have the resources to bribe medical personnel to perform an illegal examination and to use sex-selective induced abortion to achieve their desire. This practice is not unique to China but is also found in some of the other developing countries experiencing rapid economic development, technological progress and fertility decline.

Only a few changes in the above text are needed to describe the Indian situation. Das Gupta and Bhat examine all the relevant data and go on to estimate the number of girls 'additionally' missing, between 1981 and 1991. As we know, the female ratios were low even in 1981 because of the 'traditional' higher female mortality, at different ages. The worsening of the female ratio meant that there has been an 'additional' deficit of 1.8 million girls and women. The authors say:

> Of the total of more than 1.8 million 'additional missing females' of all ages...more than 61 per cent were children. There has been only a 0.22 per cent increase...in the percentage 'missing' above the age 7...In Kerala, Punjab and West Bengal, the number of females aged 7+ in 1991 actually exceeded the number estimated on the basis of the sex ratios of 1981, which shows an improvement relative to males in survival at these ages. This is consistent with other data which suggest that declining fertility in India has led to a reduction in excess mortality of adult females, especially at peak reproductive ages, whilst increasing discrimination against female children...

The point being made is that fertility decline has had beneficial effects on the survival of women in the reproductive age groups, through fewer births and a reduction in the associated mortality risks. That brings us to the question of death rates among female children. Demographers have generally found no significant worsening in the gender differentials in child mortality during the 1980s. But these differences persist, and male children have still higher chances of survival. These findings, along with the clear worsening of female ratios among children, clearly suggest an increase in sex-selective abortion and female infanticide, although the latter may be of a relatively small magnitude. Sex ratios at birth (SRBs) thus become crucial to our understanding of the changing patterns of female deficits in the overall. Unfortunately, reliable data on SRBs are lacking, given the incomplete registration of births. Das Gupta and Bhat, however, put together the available, suggestive evidence in this respect. They conclude with the portentous remark that "pre-natal sex regulation may replace post-natal regulation as a method of controlling the sex composition of families, because the psychological burden of abortion is lower than that of neglecting a living child" (1997:314). That is the new shape gender bias is taking. It is changing the regional spread of the bias as well, with the emergence of a new type of gender bias in the south.

The lack of data on the sex ratios at birth is made up to some extent by the effort of S Sudha and S Irudaya Rajan (who, with his colleagues, had earlier advanced the male double-count hypothesis to explain the 1991 fall in the female ratio). They make use of reverse survival methods based on available information to estimate sex ratios at birth and find an increase in the masculinity at birth in several parts of the country. Examining the sex ratios in the population and among children, along with their own estimates of the ratios at birth, they conclude that pre-natal sex determination, neglect of girls and female foeticide are among the factors that have contributed to the female demographic disadvantage observed in the 1991 Census [Sudha and Rajan 1999].

This study documents the spread of female foeticide and infanticide, using diverse sources, including field studies done by some non-governmental organisations (NGOs). For example, it refers to the work of Adithi (an NGO) in several districts of rural Bihar, reporting how female infanticide is carried out routinely – even now, as we near the end of the century – by 'dais', traditional birth attendants, who still conduct many deliveries. The killing is at the behest of senior males, overriding the protests of the women in the family [Adithi 1995]. The authors refer also to the work of Chunkath and Athreya (1997) and others on the spread of female

infanticide in some districts of Tamil Nadu, including Salem, Dharmapuri and Madurai, following the rapid decline in fertility in these areas. The estimates of the magnitude of female infanticide presented by these different sources are truly shocking; the national total, when assessed, will be even more so. With such accumulating information on female infanticide, and the manner in which clinics for sex determination have been mushrooming all over the country, including its rural parts, demographers are no longer sceptical about how sex ratios at birth have been skewing further in favour of preferred male progeny.

A north-south economic and cultural divide has been identified in the literature, with associated differences in demographic structures. The pattern in the north (and the north-west) has been characterised by traditionally higher rates of mortality and fertility and larger gender differences in death rates (in contrast to the south). Coincidentally, these regions had lower female ratios among workers and in the population. All this meant that women in the 'north' had a much lower status, defined in a very broad sense. This of course is a rough generalisation because many sub-regions do not fit into the neat pattern, and the regions in the east display many unique features although the female ratios there tend to be far better than in the north. These variations are attributed to both and economic cultural factors.

The economic argument is that women in the south had a greater economic role. Paddy, the main crop cultivated in the south, unlike wheat in the north, gave women work in fields and an independent income. Families were less patriarchal and income-earning gave women a voice of their own. However, other cultural factors, nothing to do with work, are given more importance in explanations of regional patterns in the sex ratio. One such factor, frequently cited, is endogamy in marriage, which was widely practised in the south. This system was associated with greater reciprocity in marriage transactions, and presumed to have fostered greater female autonomy: it placed less importance on the number of sons (than in the north) as a measure of reproductive success of a woman. On the other hand, in the north, exogamy was common and was associated with the dowry system among many castes. This was a factor behind the strong preference for sons. Likewise, the system of hypergamy (the practice of giving away daughters in marriage to grooms belonging to a higher caste, or what amounts to the same, sons bringing in brides of an inferior caste along with dowries) also led parents to regard girls as a liability. The search for a suitable boy was difficult and the dowry taxed many beyond their means. Female infanticide and neglect of girls were options chosen to eliminate unwanted females. (As recently as September 17, 1999, there was a report in *The Times of India*, Mumbai, on a village called Devra in Rajasthan. There, a girl child not only survived – through a series of accidental circumstances – but also brought a 'barat' – a groom's marriage party – to the village for the first time after 110 years. Girl children were routinely killed in such villages. The early Indian censuses reported villages with no girls in some parts of the north-west. Presumably, such villages still exist.)

Alaka Malwade Basu, reviewing the relevant literature raises the question whether these economic and cultural explanations for regional variations in gender bias are of any validity to the changing demographic patterns. The question is pertinent because endogamy is disappearing in the south, and the dowry system is becoming universal. The north-south divide in this respect is wearing thin. More importantly, even if one accepts that in the south women have a higher status – and that it has been improving, as measured by conventional indices such as literacy, life expectation and work participation – it is not clear how such a relatively high status can reduce the preference for sons. Indeed, the emerging evidence shows, if anything, that the preference is getting stronger and leading to female foeticide on a noticeable scale. These considerations make Basu to put forward the hypothesis that "*a kind of regional convergence is taking place*", with new forms of bias emerging in the south [Basu 1999:2433, italics in original]. The observation of deteriorating female ratios among children in all the southern states barring Kerala supports the hypothesis. Basu says, as did others we have referred to earlier, that the recent fertility decline, combined with a persistent son preference, is producing this type of regional convergence. It is in this context that she makes a detailed review of the dramatic reduction in fertility levels in Tamil Nadu. Along with fewer children, female infanticide has appeared in several parts of the state. This perhaps signifies the shape of things to come in other southern states as well.

The preference for sons may turn out in the next few decades to be a major determinant of sex ratios. It may outweigh the demographic gains that may be expected. For example, improvements in maternal mortality may result from fewer births per woman. Similarly, fewer children per family may mean better care for all children including girls. But, unless sex determination and female foeticide are halted, there is a distinct possibility for a further 'loss' of girls.

In this context, we may refer to another factor that has not received adequate attention in the Indian literature. Recent studies on gender differentials in mortality in western countries show that these differentials, traditionally in favour of females, are now narrowing down; that is, the female demographic advantage is getting eroded. This is attributed to the fact that in many of these countries, work participation rates among women are rising, they are increasingly entering stressful occupations, and finally their life styles are assuming forms associated with risks of heart disease [Trovato and Lalu 1996]. All this has implications for India, although only a few women, in urban areas, are taking up stressful careers. Rural women no longer lead secluded and peaceful lives. The stresses and strains of living are getting fairly similar in rural and urban areas. Over a period of two or three decades, the forces integrating rural and urban living patterns are likely to become stronger. This is an additional factor that may worsen female life disadvantage in India as a whole. EPW

[This is a revised version of the introduction to a book being brought out in memory of Asok Mitra by the Centre for Women's Development Studies, New Delhi.]

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Action India - New Delhi

DECLINING CHILD SEX RATIO - A CONCERN

The child sex ratio is declining at a very fast pace in India. The Juvenile sex ratio in 1961 was 976, and it fell to 927 in 2001.

Table-1

Sex Ratio in the age group 0-6years

Census year	Over all Sex ratio	Var. within a decade
1961	976	
1971	964	-12
1981	962	-2
1991	945	-17
2001	927	-18

Source: Census of India, 2001

Table-2

Distribution of districts by ranges of child sex ratio, 1991-2002c(Provisional)

Range of sex ratio (0-6)	Census years	
	1991	2002 (Provisional)
Total	577	577
Less than 800	-	16
800-849	1	32
850-899	68	71
900-949	181	208
950-999	306	242
1000-1049	21	8

Source: Census of India, 2002:provisional

The declining sex ratio is a clear indicator of the extent of inequity between male and female in the society. The female has always been the *unwanted sex* among the children in the Indian society. The cultural bias against the unwanted *sex* has been intense and the practice of female infanticide has been prevalent for centuries in several parts of India. The cultural legacy of strong **son preference** and neglect of daughters is inherited by all communities, religious groups and socio-economic backgrounds. The gender bias is rooted in a complex set of religious, economic, socio cultural factors further exacerbated by globalization.

If boys are preferred for their economic socio-cultural utility, daughters are only of secondary importance in our society. This renders them vulnerable to all forms of violence. Girls under 5 years of age in India face foeticide, infanticide, deliberate neglect in terms of child care, medical care, education not only this they face sexual abuse, physical violence and also bear the burden of child labour within their own homes. Females in the reproductive age face early marriage, early pregnancy, sexual violence, domestic violence, dowry harassment and torture in case of infertility. Not only that, if they fail to produce a son they face desertion, humiliation and witch-hunt. The pathetic situation is that the women are forced to endanger their own species either in the womb by practicing female foeticide or after birth by the way of neglect. The devaluation of girls is blatantly stated in the findings of the Census of 2001.

Action India Campaign

Action India was part of the women's movement in the 1980s when the campaign against female foeticide was for the first taken up in India. Until then, no voice had been raised on the growing imbalance in the sex ratio even though demographers were aware of the decline visible since 1901. The findings of the census 2001 of the drop in birth of girls in the last decade shook the nation. Voices from the grassroots were heard, our community based health workers decided to initiate a campaign immediately in the capital city. A street play was prepared "nks"kh dkSu", songs written, leaflets, pamphlets and posters were printed with the message to value your daughters, love them and care for them directly addressing the family.

In Nov. 2001, the KARVAN Network was formed of NGOs brought together by the Delhi Commission for Women. On 21 Nov, the स्त्री भ्रूण हत्या रोको अभियान was inaugurated at Bhartiyam, New Delhi, where 2000 women gathered to take forward the campaign to their working areas to reach out to all levels of the community. Surrounded by colourful banners the message of the PNDT Act was spelt out in simple but cleared terms. Sex determination was illegal and ultrasound clinics were to be registered. A puppet show was specially created to educate the public of the PNDT Act. and a pamphlet was handed out to viewers with information on the law.

The KARVAN Campaign was supported by 60 NGOs and CBOs and was successful in traveling to far-flung areas of Delhi over a period of 6 weeks from Nov 2001 to Jan 2002.

Network partners collectively had done some spadework in the form of survey of an Opinion Poll of 3000 persons across Delhi, to seek the causes of the decline in the birth of girls, as well as assess the perceptions of people on different aspects of the issue. Action India as an independent effort also did a small survey in *Nandnagri* and *Seemapuri* to know the prevalence of the service providers of these tests and also the perception of the doctors providing such services and their awareness of the law.

Second phase of the campaign

To go further in the cause a need assessment survey has been conducted by Action India with the support of two network partners MYRADO, Najafgarh in the south-west Delhi and Child Survival India, Narela in the north-west Delhi with the following objectives:

1. To focus on the most affected areas where the sex ratio is lowest in the capital as per the census, and work out a strategy for intervention.
2. To initiate a dialogue with the stakeholders in the community, particularly the opinion leaders and the service providers.
3. To design the communication and awareness package for the grassroots advocacy specific to the context to inform and educate the public about the PCPNDT Act 2003.
4. To make a case for violation of the fundamental right of a woman to be born and live with dignity as stated in Article 21 of our Constitution.

The study was designed and research by Ms Ifat Hamid.

SOME HIGHLIGHTS OF THE SURVEY

This Survey was conducted in two areas of Delhi: Najafgardh block in southwest and Alipur block in northwest. 3500 women were surveyed in five villages of Najafgardh Block (Premnagar, Gopalnagar, Dharampura, Maksudabad, Najafgard kasba) and three villages of Alipur Block (Kherakhurd, Kherakalan, Nayabaans) with the help of questionnaire. The community workers of the network partners MYRADO and Child Survival in the Najafgard and Alipur block respectively did the survey after proper orientation.

Table-3

ZONES	Sex ratio (0-6 Years)
Delhi	865
North West	854
North	870
North East	867
East	868
New Delhi	882
Central	902
West	858
South West	845
South	886

Table-4

0-6yrs	Boys	Girls	Sex ratio
Total	2607	2089	801
Najafgarh Block	1456	1100	755
Alipur Block	1151	989	859

Education of the Mother did not show any improvement in the sex ratio. The sex ratio is low both among the educated as well as uneducated mothers.

Table-5

Education of the Mother	0-6 yrs		
	Boys	Girls	Sex ratio
Uneducated	193	158	818
1-5 class	137	127	927
6-9 class	329	262	796
10-12 class	412	376	912
Graduation	62	55	887
Post Graduate	18	11	611

Table-6

	0-6 yrs		
	Boys	Girls	Sex ratio
Landed	591	460	778
Landless	2016	1629	808

As we see, the sex ratio in the group of uneducated mothers is 818, while the mothers who are postgraduate show a much lower ratio of 611.

Land as a factor: The child sex ratio is below 850 in both the groups though the landless show slightly better ratio.

Economic profile shows some parity /leveling in the sex ratio at the highest income levels in our survey Rs 15000-20000+. Interestingly the poorest income group between Rs 501-2500 has a higher sex ratio than the middle income between Rs 2500-10000

Table-7

Family monthly Income	0-6yrs		
	Boys	Girls	Sex ratio
501-1500	198	175	883
1501-2500	462	380	822
2501-3500	531	407	766
3501-5000	625	479	766
5001-10000	662	526	794
10001-15000	75	67	893
15001-20000	24	24	1000
20001+	8	8	1000

Family planning and the composition of children

While interviewing respondents were asked a question whether they have done family planning,67% of the respondents responded with a YES. While asking this question we did not define family planning. On the basis of their response we tried to see if there is any difference in the sex composition of the children in the respondents who according to them have done family planning, and the respondents whose responses were NO. Our findings reveal the following:

Table-8

2 children	2 Boys	2 Girls	1 Boy- 1 Girl
Planned	35%	5%	60%
Not planned	22%	22%	56%

3 children	3 Boys	3 Girls	2 Girls- 1 Boy	2 Boys –1 Girl
Planned	11%	2%	35%	52%
Not planned	6%	8%	54%	33%

4 children	4 boys	4 girls	2 boys- 2 girls	3 girls- 1 boy	3 boys- 1 girl
Planned	6%	0	53%	19%	22%
Not planned	4%	3%	26%	47%	21%

Social, demographic and legal awareness about the issue in the community

1. Most of the women are aware that father is responsible for the sex of the child but the social pressure not only from their in-laws but also from their own parents compels them to want a son.
2. Most respondents did not admit that they know about any sex selective tests. At the same time they admitted that the girls are decreasing because of the availability of the ultrasound and other sex determination tests.
3. The respondents were well aware of the social and biological consequences of this decline
4. With regard to PCPNDT Act as well as MTP Act, the level of legal awareness of the respondents was very poor.

TESTIMONIES

Desperation for the male Child

Caste: Jat
Education: 12th pass

Sunita, 39, had been happily married for 20yrs.She had two young daughters (elder one in IInd year college) and twin sons. But fate had something planned for her. About 2yrs back, she lost both her sons in a road accident. In a Jat family with large landholdings, it became a major issue and they were told that they would not get a share of family property as they now had just two daughters and no son. Sunita consulted doctors for recanalisation (reversing the tubectomy), but the doctors gave her no hope. She could not bear frequent bickering and tensions at home and thus decided to get her husband remarried to beget a male heir for the family. Last year, she got her 42yr. old husband married to a 20yr. old deaf and dumb girl from a neighbouring village. The young second wife fulfilled her assigned duty soon and recently gave birth to a baby boy. Sunita's in-laws and her husband are very happy now.

The Unending wait ...

Caste: jat
Education: B. A

Sarita, 29, was married in a joint family, wherein her husband is the second son. Her elder sister-in-law had two daughters. Sarita also had a daughter as her first baby. Her in-laws were not very happy and next time when she became pregnant, she was forced to undergo abortion as the ultrasound revealed a female foetus. The same story was repeated thrice and Sarita repeatedly went in for three abortions in the next 7 yrs. The fourth time, the ultrasound reported a male baby and the family became very happy and made a lot of preparations for welcoming the male child. Unfortunately, the ultrasound report proved wrong and Sarita gave birth to her second daughter. Sarita's own words are, "Yeh to baar baar aayi aur gayi,lekin isne aana hi tha". The pressure to have a male child is still there on Sarita. But her health has deteriorated. The male child still haunts her.

CONCLUSION

Crimes against women are soaring /on the rise. According to **National Crime Report Bureau** there has been 29.2% increase of crimes against women in 1998 as compared to 1994 and 92.25% increase as compared to 1990.

There is a "choice" today to eliminate daughters in the womb. Sex selective testing technology is widely available in urban and rural areas. The MTP Act is overlooked by the demand and supply nexus between the family and medical profession. There is social legitimacy to the killing of the female foetus, no one suffers any shame or guilt for this act. The value of a daughter's life is diminishing even as the preference for sons is rising.

The whole issue of female foeticide has to be understood in the wider context of an increasing male bias and continuing gender gap. Although discrimination against girls by their own families is not a new phenomenon, the recent fall in child sex ratio is a cause of fresh concern, or should be because of its increased intensity and wider spread than ever before. Eliminating females before birth is now a wide spread phenomenon across class, caste, region and religion. The tendency of falling child ratio has now affected all parts of the country since 1991. A strengthening of male biased norms and values across all caste and classes has grown simultaneously with economic development. What we need to understand is in what way the increasing male bias and economic growth are connected. The complex connection between development process and social change are often contradictory as we find the lowest sex ratio in the most developed states of Punjab, Haryana, Gujrat. Himachal Pradesh, which has a high female literacy, shows a sharp decline in sex ratio in the last decade.

Declining sex ratio is a political issue besides a social issue. It cannot only be the hostile social attitude towards the girls that is leading to the female Foeticide but it is more the factors that perpetuated it. To meet the challenges of the declining ratio, first and foremost the females right to life with dignity has to be valued by the society and the state. This means combating male child preference and its associated legitimacy. Not only that we have to intervene to make both the service providers and the service seekers accountable.

Society has to be motivated to value the girl child and also articulate concern on the issues so that the demand for PNDT services are no longer required. There is need to gear up the activities to make the medical professional accountable for the unethical practices and demand for the strict implementation of PCPNDT Act 2003.

Action India
Campaign against Female Foeticide

Media workshop on "Sex Selection and Female Foeticide" 6th -8th April 2004 at IIC, Conference Hall No.2

Female Demographic Disadvantage in India 1981–1991: Sex Selective Abortions and Female Infanticide

S. Sudha and S. Irudaya Rajan

ABSTRACT

Using evidence from a number of sources (including the 1981 and 1991 censuses of India, prior research, and NGO reports), this article examines whether bias against girl children persists during periods of development and fertility decline, whether prenatal sex selection has spread in India as elsewhere in Asia, and whether female vs. male child mortality risks have changed. The authors present estimated period sex ratios at birth (SRBs) calculated by reverse survival methods along with reported sex ratios among infants aged 0 and 1, as well as sex ratios of child mortality probabilities (q5), from the two censuses. The findings show an increase in 'masculine' SRBs and persistent (or even worsening) female mortality disadvantage, despite overall mortality decline, due to selective neglect and the spread of female infanticide practices in some areas. Research and reports indicate the increasing use of prenatal sex selection in some regions. In India, preference for sons appears to be undiminished by socio-economic development, which interacts with cultural sources of male bias. The increased masculinity of period SRBs in some areas, together with persistent excess female child mortality and female infanticide, creates a 'double jeopardy' for girl children. Legislation curbing prenatal sex determination and policy measures addressing societal female devaluation have had little impact, suggesting that female demographic disadvantage is unlikely to improve in the near future.

INTRODUCTION

Highlighted by sensational titles such as 'The Endangered Sex' (Miller, 1981) or 'More than 100 million women are missing' (Sen, 1992), studies have long pointed to the unfavourable life chances of females versus males in parts of East and South Asia. This female disadvantage is particularly concentrated in infancy and childhood years, and is rooted in long-standing social patterns of preference for male children. Practices regulating the numbers of female

This is a revised version of Working Paper No. 288 of the Centre for Development Studies, Thiruvananthapuram. It has been presented at the CDS-UNRISD Workshop on Gender, Poverty and Well-being, Centre for Development Studies, Thiruvananthapuram (24–7 November 1997), and at the T. N. Krishnan Memorial Seminar, Centre for Development Studies, Thiruvananthapuram (7–9 September 1997).

Development and Change Vol. 30 (1999), 585–618. © Institute of Social Studies 1999. Published by Blackwell Publishers Ltd, 108 Cowley Rd, Oxford OX4 1JF, UK.

children in a family traditionally included the post-natal methods of female infanticide, abandonment or out-adoption of girls, under-reporting of female births, and selective neglect of daughters leading to higher death rates. Lately in China and South Korea, prenatal sex determination and selective abortion of female foetuses have been increasingly implicated (Asia-Pacific Population and Policy Report, 1995; Johansen and Nygren, 1991; Park and Cho, 1995; Yi et al., 1993). When fertility declines and preference for male children remains strong, parents still take steps to ensure the birth and survival of sons, and prenatal sex determination and selective abortion of females are apparently preferable to female infanticide or abandonment of baby girls. Prenatal sex selection techniques appear to substitute for post-natal methods in these regions, as shown by increasing masculinity of sex ratios at birth, coupled with more equitable sex ratios of infant and child mortality (Goodkind, 1996). That is, fewer girls are allowed to be born, but those who are born are more wanted and tend to survive.

These issues are also significant in South Asia, which shares with East Asia a long-standing tradition of son-preference. In India, the issue has mostly been examined in terms of the masculinity of the population sex ratios observed since the first census taken in 1871 under the British Raj (Irudaya Rajan et al., 1991; Kundu and Sahu, 1991; Raju and Premi, 1992; Srinivasan, 1997; Visaria, 1969). The persistent preference for sons and disfavour toward daughters, leading to the phenomenon of 'excess female child mortality'[1] and highly masculine juvenile sex ratios (counter to the global norm of female mortality advantage and moderately masculine sex ratios among children) have been discussed as key factors in this imbalance (Agnihotri, 1996; Kishor, 1993; Miller, 1981; Saith and Harriss-White, this volume).

An important dimension of inquiry, that of changes in the relative pattern of births and survival of male versus female children in India, has been comparatively neglected, mainly due to lack of data. Indian authorities do not routinely publish data on sex ratios among births reported in the Census or Sample Registration System enumeration years. A few regional studies suggest that cohort sex ratios at birth are anomalously masculine in some parts of the country, particularly in the North (Clark and Shreeniwas, 1995 for Gujarat; Mason et al., 1992 for Karnataka; Irudaya Rajan, 1996 and Visaria and Irudaya Rajan, 1996 for Kerala). Therefore, it is not clear whether parents in India, as in East Asia, are substituting prenatal for post-natal discrimination against girl children, or whether bias against females is lessening over time. One all-India study has examined changes in juvenile sex ratios (ages 0–4) between 1981 and 1991, alongside trends in mortality sex ratios and fertility rates, and concluded that during fertility decline in India,

1. 'Excess female child mortality' refers to the phenomenon of higher death rates of females among infants and children than males, in contrast to the 'normal' pattern of higher mortality among males.

parents are not substituting prenatal for post-natal discrimination against girls, but are combining these two strategies. Male bias thus appears to be intensifying (Das Gupta and Bhat, 1997).

Our study explores this issue further, with more region-disaggregated and age-focused data. Using the 1981 and 1991 censuses of India, we present ratios among numbers of boys and girls aged 0 and 1 (taken together to minimize the effect of age misreporting). Next, using an unorthodox application of the technique of 'reverse survival' we estimate sex ratios at birth for these two census years. We also present sex ratios of child mortality probabilities (q5) from the censuses for these two time points. We examine variations by rural/urban residence and state/region, drawing attention to the specific sub-regions of India where changes have taken place over the decade. We summarize what has been reported about the incidence of prenatal sex selection and female infanticide in India, and place the evidence within the context of social and economic development in India, especially relating to the situation of women.

The rest of this article presents critical syntheses of prior research and reporting on gender-specific demographic trends in India. Arguments concerning the possible impact of social and economic development on gender stratification, and the consequent differences in the valuation and wantedness of male and female children, are summarized. Subsequently, the observed and estimated birth and mortality ratios calculated from the censuses are presented. The concluding section discusses the implication of the arguments and findings.

GLOBAL PATTERNS IN SRBs

Sex ratios at birth (henceforward SRBs), refer to the ratio of male to female children born in a specific period, such as a year, or among all the children ever born to cohorts of women. In most human populations, more boys than girls are conceived, and despite greater male than female foetal wastage, more boys than girls are born. This leads to a fairly stable SRB observed among human populations in countries with good vital registration, of approximately 104 to 106 boys per 100 girls (Johansen and Nygren, 1991). Subsequently, mortality rates at every age are slightly greater for boys than for girls due to a combination of biological and behavioural factors. Thus, with increasing age, the population sex ratio balances out to a slight female dominance overall. Most societies irrespective of level of income or development exhibit this pattern.

In societies that have a marked preference for male children, however, a different pattern is seen. In South Asia, population sex ratios are persistently male dominant. In East Asia, period SRBs appear highly masculine especially in recent years. In South Korea and China respectively, both of which have good coverage of vital registration, SRBs as high as 112 and

113 males per 100 females have been observed among all births. First order births are within the normal range (approximately 104–6 in each society). Second and higher order births, however, soar up to 120 and more for China, and third and higher order births to 185 and more for South Korea (Asia-Pacific Population and Policy Report, 1995). Clearly, therefore, biological patterns of SRBs are in these regions being overwhelmed by behavioural factors rooted in parents' preference for at least one male child (Coale and Banister, 1994; Hull, 1990; Johansen and Nygren, 1991). These skewed SRBs combined with anomalously masculine sex specific survival rates have generated the problem of millions of 'missing' females in East and South Asia (Coale, 1991; Sen, 1992).

Several mechanisms are advanced to explain the phenomenon of excessively masculine SRBs. In China, mechanisms include non-reporting of female births (leading to omission of girl children in all subsequent official records, tantamount to denying their social existence), abandonment and/or out-adoption of girls, and female infanticide (Hull, 1990; Johansen and Nygren, 1991). All these mechanisms can be viewed as varying types of discrimination against female children. Lately, in China and South Korea where there is a combination of lowered fertility, continued strong son preference, and widespread access to medical facilities, the increased use of prenatal sex determination techniques leading to abortion of female foetuses is implicated in the phenomenally higher masculine birth order sex ratios observed there (Asia-Pacific Population and Policy Report, 1995; Park and Cho, 1995; Yi et al., 1993).

REGIONAL TRENDS IN JUVENILE SEX RATIOS IN INDIA

In India, most analyses focus on juvenile sex ratios rather than sex ratios at birth. This is firstly because of the concern that excess female child mortality, which arises from the selective neglect of girl children compared to boys, manifests itself in childhood years rather than around the time of birth (Das Gupta, 1987; Dyson, 1988). Secondly, data on period sex ratios at birth are difficult to obtain in India, as the Census of India does not publish this statistic. Such data are only occasionally published by the Sample Registration System (SRS) of certain states, and thus nation-wide or time-trend analyses are ruled out. Vital statistics registration is of varying quality and completeness in different parts of the country, as are hospital records. Thus all-India or time-trend investigations of period SRBs are difficult, although some intra-state analyses are emerging (Visaria and Irudaya Rajan, 1996, for Kerala).

Regional analyses of juvenile sex ratios in India on the whole indicate that more masculine juvenile sex ratios and higher female than male child mortality go hand in hand (Agnihotri, 1996; Clark and Shreeniwas, 1995; Das Gupta, 1987; Das Gupta and Bhat, 1997; Kishor 1993). That is, higher

juvenile sex ratios at ages 0–4 are accompanied by higher female than male child mortality at ages 5–9. A well-known regional pattern is observed: the Northern and Northwestern parts of India, including the states of Punjab, Haryana, Rajasthan and Western UP, are areas most unfavourable to the life chances of female children. Other parts of the country, including the East, Central area and the South, exhibit more balanced rates.

A broad generalization has been made: the North/Northwestern regions of India fall within the so-called Northern cultural and demographic zone, distinguished by higher fertility, higher mortality, more masculine sex ratios, and lower status of women. This zone traditionally had a wheat-based agrarian economy (where women are less involved), and social systems marked by dowry, exogamous marriage[2] and the seclusion of women. In contrast, the South is broadly characterized by rice-based agrarian systems (with a greater role for women), endogamous marriage systems, marriage payments that are more egalitarian between brides' and grooms' families, and less seclusion of women. Women's literacy and education levels are also much higher in the South than the North. The status of women is higher in the South, which also has lower fertility and mortality rates, and more 'normal' sex ratios (Dyson and Moore, 1983).

Other scholars rightly stress that the simplistic dichotomization of India into 'Northern' vs. 'Southern' zones is inadequate. The rice-cultivating Eastern region could never be fitted into either pattern. Within-region variations have been ignored in the dichotomization, such as the 'belt of female infanticide' in the Salem/Dharmapuri/Madurai districts of Tamil Nadu noted by Chunkath and Athreya (1997). Alternative spatial patterns ranging from five to nineteen clusters of India's districts have been proposed, taking into account ecological and economic sub-regions, areas with greater proportions of Scheduled Caste/Scheduled Tribe populations (who are characterized by more gender-egalitarian cultures), and other criteria. Even in these alternative groupings, however, juvenile sex ratios appear most masculine in the North/Northwestern region of India. A so-called 'Bermuda Triangle' for the female child exists in a zone of twenty-four districts including parts of Haryana, Western Uttar Pradesh, some of Rajasthan, and the ravine areas of Madhya Pradesh (Agnihotri, 1996).

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2. Exogamy refers to the practice whereby the bride marries outside her natal kin, clan or lineage circles or village. It is argued that exogamous marriage makes women more vulnerable, by separating them far from their natal kin, and placing them in the position of outsiders in their marital families, until they 'prove themselves' by giving birth to sons and by bringing dowry and other gifts from their natal home. Conversely, endogamy refers to the practice of marrying within specific kin, clan or lineage circles or inside one's natal village, and is less detrimental to women.

FEMALE DEMOGRAPHIC DISADVANTAGE IN THE CONTEXT OF DEVELOPMENT

Globally, it should be pointed out that gender-imbalanced demographic measures are by no means simply associated with poverty or 'underdevelopment', such that poorer nations have more female disadvantage. African, Latin American and Caribbean nations, all with varying development philosophies, levels of poverty and living standards, exhibit 'normal' sex ratios at birth and of mortality. Any gender inequalities these countries may have is apparently manifested in other domains. On the other hand, countries such as China, South Korea and India which have a socio-cultural pattern of preference for male children, irrespective of level of development and philosophy of economic organization, exhibit gender imbalances in demographic measures that persist over time.

In India, too, the relationship between social and economic development and female disadvantage is not clear-cut. On the broadest level of generalization, the process of development in India has been mostly to women's detriment. The 1974 Report of the Committee of the Status of Women in India (GOI, 1974) was the first to point out that despite the progressive promises and provisions of the Indian constitution, development since Independence had been accompanied by a deterioration in women's situation, indicated by worsening sex ratios, declining female work participation rates, and persistent shortfalls in literacy and female mortality.

Neither has the trend since that time been positive. The majority of Indian women are involved in the agricultural sector, and have been adversely affected by agrarian development. First, while land reforms focused on redistributing land to the landless, in practice ownership was invested in the *household* head, always seen as the senior male. Women's alienation from the most critical productive resource was thus progressively institutionalized. Women's use rights in land, where they exist, are exercised during the goodwill of the male kin who have effective control over the land (Agarwal, 1994).

Second, although the Green Revolution dramatically increased food production and allayed fears of population growth outstripping food supply in India, it adversely affected women's work participation. Evidence from Punjab, Haryana, UP, and Tamil Nadu shows that the Green Revolution narrowed the range of agrarian tasks, displaced women from traditional occupations, and placed them at the bottom of the new labour hierarchies. Women's occupations became increasingly impermanent and casualized due to technological changes coupled with traditional norms about the gender-based division of labour (Kapadia, 1992; Nayyar, 1989; Nigam, 1988; Sen, 1982). Although the initial impact of Green Revolution technology was to increase the demand for labour to fertilize, weed, and harvest the new High Yielding Varieties (HYVs), this trend was short-lived, and tended not to involve women. For example, farmers in Gujarat utilizing HYV technology

preferred male to female labour since they felt that men were more efficient, more suited to the 'high-technology' innovations, could work for longer hours at a stretch, and could fulfil demands for group labour. Although women received lower wages than men for the same work, they had no training for even the simplest new tasks such as spraying, and were thus excluded (Hirway, 1979). In Bihar as in Gujarat, female work participation grew substantially less in irrigated districts, and the rise of mechanized dehusking and flour-making industries deprived women of significant work they had hitherto performed (Hirway, 1979; Sinha, 1988). Varghese (1991) states that rural Indian women's paid work participation is declining, and that women are highly concentrated (approximately 80 per cent of female workers) in the agricultural labour and unpaid family work sectors. The increased casualization of female labour is accompanied by consistently greater unemployment among women than men. He concludes that the 'female marginalization thesis' is supported in the Indian agrarian context.

Non-farm opportunities have not kept pace with the displacement of rural women. Though Deshpande (1992) shows that many urban women workers are absorbed into new occupations such as in export processing zones, and argues that despite low wages and poor working conditions they contribute up to one third of household income, pull their families above the poverty line, and thus gain a measure of respect and autonomy, Ramaswamy (1993) argues that the vast numbers of women (94 per cent of the total female work force) in the unorganized occupational sector indicates the failure of the Indian planning process with respect to women. The organized sector, depending on newly emerging technologies, offers little to the many women displaced from rural or sunset industries. There are opportunities only for those with education and skills. Though female literacy is rising, parents in much of India do not encourage their daughters to attend more than a few years of school, since higher education is seen as an unprofitable investment in girls who will marry and move to their husbands' households. Much of the impetus for girls' education comes from the increasing demand for literate brides on the part of young educated men. Women thus cannot compete for the new opportunities in significant numbers. Moreover, the masculine bias of the organized sector tends toward decreased security of even those women involved, as Indian trade unions usually downplay the needs of women workers, who have had to set up parallel organizations as a result. Ramaswamy (1993: 323) concludes that in India, 'developmental processes have only pushed women to states of survival'.

However, development has marginalized women in other less affluent nations too, which none the less continue to exhibit gender-balanced demographic measures. The fact that economic development devalues women is not sufficient on its own to make families discriminate against daughters. It is pointed out that both economic and cultural factors are jointly responsible for the variations in the status of women, and consequent

sex differentials in the wantedness, birth, care and survival of male and female children (Kishor, 1993).

Socio-cultural trends in India also place women at an increased disadvantage. The traditional patrilineal, patrilocal, and exogamous marriage and kinship systems prevailing over much of the subcontinent have always placed women in a low-status, precarious position, until they earn their place in the patriline by bearing sons. Although the southern part of the subcontinent had more endogamous and egalitarian marriage systems, with matrilineal family forms in many Southwestern coastal communities, social change in these regions has tended to move towards normatively patrilineal systems. Significantly, scholars also note the spread of dowry[3] nationwide to communities and castes where it had never been the custom. Insufficient research attention has been paid to this phenomenon. The bulk of sociological or anthropological research in India on the topic of kinship is abstract and descriptive in nature, viewing women as objects of study and exchange, and not problematizing the underlying causal and consequential gender relations (Agarwal, 1994; Ramaswamy, 1993). Some scholars have begun to address this issue (for instance, Palriwala and Risseeuw, 1996), but there is little scrutiny of the relationship between kinship organization, gender relations, and women's life and death chances.

Some attribute the spread of dowry to the process of 'Sanskritization', whereby lower castes achieve upward caste and class mobility by emulating the customs of the upper castes, including dowry and female seclusion. Others attribute the changes to the young age structure of the country: the greater ratio of young marriageable girls to potential mates in the higher age group increases the 'price' of grooms (Rao, 1993). The rise of consumerism is also implicated, drawing people into a growing web of expectations and demands. The continued importance of kin networks for economic resource mobilization, the spread of the dowry custom, the growing amounts of dowry changing hands, and the increasing importance of resource acquisition strategies for family status enhancement, have led to the concentration of wealth in families where the ratio of male children is greater, and female children are therefore increasingly seen as liabilities (Clark, 1987; Heyer, 1992).

The socio-economic bases of female mortality disadvantage have been examined with all-India level, and smaller-scale, localized analyses. All-India studies suggest that districts with higher indicators of conventional development, such as urbanization, industrial output, and agricultural productivity had significantly lower female vs. male survivorship, while girls in areas with a greater concentration of Scheduled Caste/Scheduled Tribe populations

3. Dowry is the transfer of wealth, in the form of money, gold, consumer goods, or other assets, from the bride's parents to those of the groom. Although the custom is supposed to provide the bride with pre-mortem inheritance of her share of her family's property, in practice, she has little control over the dowry, and her in-laws dispose of it as they wish.

(with largely more gender-egalitarian norms than the Indian mainstream), endogamous marriage patterns, and greater female empowerment measured by women's labour force participation and education, fared better (Agnihotri, 1996; Kishor, 1993; Murthy et al., 1996). These studies identify a constellation of economic and cultural factors jointly affecting female mortality disadvantage, improving on earlier and simpler models of female agrarian labour force participation alone (Bardhan, 1974).

The findings of smaller-scale studies do not, however, lend themselves to such consistent generalizations. The role of women's education in ameliorating female child mortality disadvantage might seem self-evident, and the district-level studies cited above support the notion. However, smaller-scale studies in rural Punjab and Gujarat indicate that mothers with some education might actually be more efficient in discriminating against their daughters, particularly in asset-poor households. Schooling may make women more aware of health, hygiene and nutrition, but female education alone is not enough to transcend the nexus of conditions that leads families to consider daughters a liability. Education often domesticates women rather than liberates them (Clark and Shreeniwas, 1995; Das Gupta, 1987).

Regarding the role of economic assets, studies in rural Tamil Nadu suggest that female child mortality disadvantage is greater among the landed and upper-caste groups, where women are also more secluded and have lower rates of work participation (Harriss-White, 1998; Heyer, 1992). In one Green Revolution community of UP, and in a dairy co-operative region of rural Gujarat, however, lower caste and landless groups are the ones where daughters appear in greater jeopardy (Clark and Shreeniwas, 1995; Wadley, 1993). While the specific castes involved depend on local conditions, the common factor is the family's effort to acquire land or other economic advantages through mobilizing kinship networks and manipulating the marriages of their sons and daughters. In a patrilineal kinship system where marriages are arranged on principles of dowry and hypergamy, and where women are objects of exchange along with other forms of wealth, excess female mortality is argued to be an inevitable outcome (Clark, 1987).

Contradictions notwithstanding, a pattern is discernible where increasing economic marginalization and social devaluation make daughters increasingly viewed as liabilities. Productive activities and resources are increasingly concentrated in the hands of men. Conventional socio-economic development accentuates rather than ameliorates this trend. Families therefore respond by discouraging the birth and survival of female children. Numerous studies document widespread gender inequality within households in the allocation of food and health care; women and girl children have last priority. This directly heightens female child mortality (reviews in Agarwal, 1994; Kishor, 1995; Miller, 1997). The role of selective neglect of daughters in excess female child mortality has been more extensively researched in the Indian context, and is not addressed in this paper. We instead scrutinize the related practices of female infanticide and foeticide, which have been less

examined in India for reasons obviously connected with the sensitivity of the issues. The main findings not surprisingly come from the documentation efforts of women's groups and NGOs active in these fields rather than from academic research.

FEMALE INFANTICIDE IN INDIA

Infanticide is an age-old post-natal practice among human populations to regulate the numbers of children and eliminate less wanted offspring. The practice of 'exposing' girls or weak or deformed babies was noted in ancient Roman and Greek society in the West (Scrimshaw, 1984). Little is known about female infanticide in India prior to the advent of British observers (Miller, 1987). However, since then, female infanticide has been widely recorded among upper caste (especially Rajput) groups in Northern and Northwestern India.

Historically, the main reasons for this practice in India included the system of hypergamy, whereby women must marry into a social sub-group above their own. Among the uppermost castes this was impossible. Since it was unthinkable that the rules of hypergamy could be transgressed, or that girls could remain unmarried, girls in these groups were killed and boys married females from sub-castes slightly lower than their own. Nineteenth century records show large groups of villages in Rajasthan and Gujarat, comprising several hundred upper-caste households, where no female child had been allowed to survive for many generations (Vishwanath, 1996). In that era female infanticide was also part of a set of household strategies among these same land-owning upper-caste groups, to acquire further holdings and improve and consolidate their socio-economic status. This was achieved through manipulating the marriage of sons and acquiring dowry from daughters-in-law; daughters, as dowry-takers, were clearly a liability in this scheme of things (Clark, 1983). Thus, the twentieth century socio-economic processes linked to female societal devaluation and demographic disadvantage discussed in the previous section, are foreshadowed in the nineteenth century.

Similar processes are suggested to explain the spread of female infanticide in modern India. Female infanticide has been recently noted among some castes in remote village clusters in South India, in Tamil Nadu state, a region where this practice was historically little known. Increasing landlessness and poverty, an escalating dowry custom, high gender differentials in wages, low education among women and few economic opportunities for them are suggested as reasons (Chunkath and Athreya, 1997; George et al., 1992). Newspaper reports describe the conditions of poverty and misery of the families who turn to female infanticide, and their suspicion of alternatives such as adoption offered by the Government and grassroots organizations in the region (Aravamudan, 1994). Government plans to tackle the problem

range from a 'cradle baby' adoption system for unwanted girl children, to economic incentive packages for women who only have daughters and who agree to undergo sterilization. The coercive design of some of these schemes, and corruption and inefficiency in their management, have led to their falling short of their targets and having a very limited impact on the problem. In 1995, an estimated 3174 female infanticides occurred in Tamil Nadu state (George, 1997).

In rural North India, the historic practice of female infanticide apparently never died out. Jeffery et al. (1984) state that up to the 1900s female infanticide was practised among Rajput castes in Bijnor, UP state. Their study in the 1980s in villages around Bijnor town noted that part of a traditional birth attendant's duties continued to be disposal of unwanted (i.e. girl) children at birth. They also report that the practice is spreading across the social spectrum to caste groups among whom it had never been practised.

The same observation is made in rural Bihar state. In 1995, Adithi, an NGO working in rural Bihar and having an excellent rapport with its target population, conducted an in-depth investigation. It revealed that female infanticide, foeticide, and excess female child mortality due to selective neglect were widespread in the eight districts studied. Infanticide was carried out by *dais* (traditional birth attendants), who were coerced by the senior male kin of the woman giving birth, overriding the protests of the women in the family. Fear of reprisals, poverty, lack of alternative occupation, and socialization to obey the commands of those in authority led the *dais* to comply. Other medical practitioners such as compounders and doctors also carried out infanticide when approached by the family members of a newborn girl. There was no difficulty in committing infanticide, because the birth and death followed quickly upon each other, with no certificate recorded for either event. Unscrupulous medical practitioners also conducted abortion of female foetuses, especially after techniques like sonography became widespread. The traditional skill of *dais* in identifying the sex of a foetus in the seventh or eighth month of pregnancy is also used to avert the birth of a daughter. Estimating a count of 68,000 *dais* in seven contiguous and culturally similar districts of Bihar, and that each *dai* killed about two infants a month (according to the interviews), Adithi (1995) estimates that the number of female infanticides each year in these districts could total as many as 1,632,000.

The Adithi report noted that whereas previously only upper castes such as Rajputs and Brahmins practised female infanticide, the custom has now spread to all other groups in the rural spectrum, including Scheduled Tribes, Christians and Muslims. The main reasons are the spread of dowry with exorbitant demands, due to marginalization of women from traditional occupations and the concentration of income in the hands of men, with the consequence that women's seclusion and dependence on men increased, and men began to assert their right to emulate upper caste customs, including the practice of female infanticide. Emulation of upper caste social customs would

enable the men to tap into upper caste economic networks to further upward class mobility. This spread of female infanticide across the Indian rural spectrum supports the arguments made above about the association of women's social devaluation and economic marginalization with female demographic disadvantage.[4] The underlying socio-economic processes, first analysed for the nineteenth century and intensifying in the twentieth century, can be seen as going hand-in-hand with the persistence of excess female child mortality and the spreading infanticide custom. The question of whether some families turn to female foeticide as an option thus arises.

PRENATAL SEX DETERMINATION AND SEX-SELECTIVE ABORTION IN INDIA

Unlike countries in East Asia, statistics on period sex ratios at birth, which would have enabled us to assess the birth patterns of boys versus girls and thereby make direct inferences regarding sex selective abortion, are not available for India. Statistics on abortion are also incomplete and largely unavailable. In order to examine the possibility of the spread of female foeticide in India, we thus turn to other kinds of evidence. In this section, we summarize reports from a variety of sources about the increasing availability and use of prenatal sex selection techniques. In the next section, we estimate sex ratios at birth from the available census data. We then discuss the picture that emerges from these complementary pieces of evidence.

Abortion was legalized in India in 1971, after a 1965 UN mission to India recommended this step to strengthen the population policy, and the report of the 1966 Shantilal Shah Committee also advocated it to reduce the numbers of illegal and unsafe abortions. Although the stated reasons for passing the Medical Termination of Pregnancy (MTP) Act were humanitarian (to 'help' victims of sexual assault), health-related (to provide an alternative to those whose contraceptive measures failed) and eugenic (to reduce the numbers of 'abnormal' children born), there was a strong population control motivation underlying the passage of the Act (Menon, 1996).

In 1975, amniocentesis techniques for detecting foetal abnormalities were developed in India, at the All India Institute of Medical Sciences, New Delhi. It was soon known that these tests could also detect the sex of the foetus, and doctors at the Institute noted that most of the 11,000 couples who volunteered for the test wanted to know the sex of the child and were less interested in the possibility of genetic abnormalities. Most women who already had two or more daughters and who learnt that their expected child was female, went on to have an abortion (Chhachhi and Sathyamala, 1983).

4. Violence against women is growing, within and outside the home. Bihar has extremely low female literacy: 23.1 per cent (Adithi, 1995).

Between 1977 and 1985, in an effort to curb this misuse of the technique, three circulars were sent to Central and State government departments making the use of prenatal sex determination for the purpose of abortion a penal offense (Kulkarni, 1986). Women's groups, civil liberties groups and health movements also launched a campaign against prenatal sex determination and female foeticide (termed 'femicide'). In 1984, a broad-based coalition, the 'Forum Against Sex Determination and Sex Pre-selection' (FASDSP) was formed, with headquarters in Bombay, to monitor all aspects of the situation, and document the growing use of the technique, and the legal and policy steps taken against it. As a result of these efforts, the state government of Maharashtra passed the Maharashtra Regulation of the Use of Prenatal Diagnostic Techniques Act in 1988. The states of Punjab, Gujarat, and Haryana followed suit and the Central Government passed the Prenatal Diagnostic Technique (Regulation and Prevention of Misuse) Act in 1994. The Act states that determining and communicating the sex of a foetus is illegal; that genetic tests can be carried out only in registered facilities; and only offered to women who meet certain medical criteria, such as being over the age of 35, having a family history of genetic disorders, and so on.

However, these acts are full of loopholes. Most restrictions pertain to government facilities. Private laboratories and clinics are not banned from carrying out tests that can be used to reveal a foetus's sex: they must only be registered. While they are forbidden to communicate the foetus's sex, many evolve covert methods by which to do so. Second, the government can overrule the decisions of the body set up to monitor facilities, which is empowered to suspend or cancel the licences of offending clinics or laboratories. The government can also exempt any facility from the Act. While in Maharashtra the monitoring committee included representatives of NGOs, the State Directorate of Medical Education and Research, and the Indian Council of Medical Research, the Central Government Act appointed only two State employees as regulators. Given the dubious record of the State as a monitoring body, the Act is thus considerably weakened. Further, an ordinary citizen cannot directly move the courts, but must approach the monitoring body, which can refuse to release any records if it is deemed in the public interest to keep them sealed. Moreover, these regulations cover ultrasonography facilities to a lesser extent, and this technique is also being widely used for sex determination. The possibility that newer technologies will be developed to determine a foetus's sex has not been allowed for (Arora, 1996; Menon, 1996; Sengupta, 1992). The result of such partial regulation is that sex determination facilities have privatized, commercialized, and mushroomed. Doctors indicated that despite bans, they would continue to communicate the sex of the foetus to parents who wanted to know, verbally rather than in writing, and would hike the test fees to compensate for the legal risk. The Maharashtra bans did not have much impact as sex determination facilities continue to operate in that state (Kishwar, 1995). One study asserts that sex

selection continues to be the major purpose of prenatal diagnosis in India (Wertz and Fletcher, 1993).

Systematic studies clearly indicate the increasing spread and acceptability of the techniques. A 1982 study in Ludhiana, an urban area in Punjab state, randomly sampled 126 individuals, of whom approximately half each were male and female and most of whom were educated and middle class. All the respondents had heard of the amniocentesis test; 66 per cent of them thought it was intended for sex determination; few knew that it was actually for detecting foetal abnormalities. While 73 per cent of the women and 59 per cent of the men believed that a girl should be aborted if the couple already had two or more daughters, only 25 per cent of the respondents felt that a boy should be aborted if the couple already had two or more sons. The reasons given indicated the nature of male-dominated society, dowry problems, greater responsibilities in bringing up daughters, and social pressure to bear sons. Over 71 per cent of the respondents felt that amniocentesis as a sex determination test should not be banned (Singh and Jain, 1985).

These results were uncannily echoed over a decade later, in rural Maharashtra state, among six villages of Pune district, three with road and access to a health facility, and three others more remote and without these amenities. Results indicated that 49 out of the 67 women interviewed in-depth were aware of ultrasound and/or amniocentesis techniques and 45 per cent of those who knew approved of aborting female foetuses. Only four women were aware that such tests were actually for the detection of foetal abnormalities (Gupte et al., 1997). The spread of awareness of these techniques to rural areas is thus clearly documented.

The increase in number and reach of facilities offering sex determination and abortion is also clear. In the early 1980s, Jeffery et al. (1984) noted that in villages adjacent to Bijnor town in UP state, clinical services offering sex determination and abortion had already appeared. The first newspaper reports of private clinics offering sex selection techniques appeared in 1982–3, in cities such as Amritsar, Bombay, and Delhi. Within two to three years, the numbers of such clinics rose to several hundred in the larger cities, and several dozen in smaller towns in Maharashtra, UP, Punjab, and Gujarat states. A few clinics reportedly had begun to offer services from the late 1970s onward, but were brought to widespread public attention and formed the subject of a Parliamentary debate only in the early 1980s, after a senior and well-connected official's wife underwent an abortion of a foetus that was mistakenly diagnosed as female but turned out to be male (Ahluwalia, 1986). The ensuing media storm ironically only served to increase awareness of the techniques.

The use of these techniques thus became widespread not only in towns, but also among rural areas with access to a road or transport system to the nearest town. Newspaper reports describe mobile sex selection clinics, offering ultrasound detection and immediate abortion if the foetus is female, in smaller towns of Haryana state in the mid-1980s. The clientele included farmers who

had come from villages half-an-hour away by road (Vishwanathan, 1991). Remote districts that lacked basic amenities such as drinking water or electricity were reported to have sex determination clinics; where refrigeration and cold chain facilities for vaccinations were not available but amniotic fluid samples were sent in ice packs to towns for testing (FASDSP and Saheli Women's Resource Centre, nd, cited in Menon, 1996). Grassroots workers and concerned medical practitioners have observed an increase in female foeticide in all segments of society in rural Bihar state, especially after sonography techniques became common. Unscrupulous doctors identify the sex of the child, and provide abortion if it is female (Adithi, 1995).

Nor is the cost of the test (ranging over time from Rs 500 to over Rs 1000) a barrier. While we may expect that the largest consumers of such tests will be those with at least a modicum of disposable income, education, and awareness of medical technology, landless labourers and marginal farmers are also apparently willing to take out loans at high rates of interest to avail themselves of these tests (FASDSP and Saheli Women's Resource Centre, nd, cited in Menon, 1996). In 1981–2, the approximate average daily wage of a skilled male agricultural worker in Punjab was Rs 25, that of female and male field or other workers ranged from Rs 10 to Rs 13. In Haryana, the figures are Rs 18 for skilled workers, and Rs 7–15 for female and male field and other workers. By 1991–2, the figures were Rs 84 for skilled male workers in Punjab, Rs 77 in Haryana, and around Rs 40 in Bihar and Tamil Nadu. Field workers in these states earned Rs 30–40 in Punjab/Haryana, and Rs 20–5 in Bihar and Tamil Nadu (Government of India, 1983; 1993). Thus, even taking the seasonality of wages, other expenses, and rural indebtedness into account, affording the price of a sex determination test would not be totally out of the question even for the poorer sections of rural society, especially in the relatively rich states of Punjab and Haryana. The logic underlying the motivation is illustrated by the now infamous slogan: 'Better Rs 500 today than Rs 500,000 tomorrow' that was widely used in the early 1980s to advertise sex determination clinics until protests from women's groups put a stop to it. The slogan may no longer be used, but the underlying logic — that an expenditure now (on the test) will save many multiples of the sum later (on dowry, if the foetus is a girl) — still holds.

Performing the tests has become an extremely profitable practice for doctors. A rough calculation may be made, that if the fee for a test is currently around Rs 1000, and a clinic performs ten to twelve such tests a day, based on a six-day work-week, a clinic can gross up to Rs 2.8 lakh (one lakh = one hundred thousand; currently approximately 42 rupees = 1 US $) per month. Some newspaper reports describe the tremendous wealth amassed by practitioners offering this facility, and how training doctors in the techniques has itself become a lucrative business. Nor is this trend toward exploitation confined to the 'modern' medical sector. In March 1991, health and consumer groups in Gujarat successfully lobbied the State Government to ban a best-selling herbal pharmaceutical product called 'Select' that,

according to the manufacturer's claims, used an ancient Ayurvedic technique called 'Punsavana Prayog' to change the sex of a pregnant woman's foetus to male (VHAI, 1992).

Attitudes of medical practitioners reveal that they view sex determination tests as a 'humane' service they provide to couples not wanting any more daughters; as a regrettable but unavoidable result of the preference for sons in Indian society which they feel powerless to change; and as a necessary weapon in the 'population control' arsenal (Kulkarni, 1986). Many also argue that aborting a female is preferable to condemning an unwanted daughter to a lifetime of neglect and abuse. These attitudes are also echoed among large sections of the general public (Ravindra, 1995). Further, some eminent economists also endorse the argument that abortion of females is preferable to neglect, and assert that if the sex ratio of India further worsens as a result of these technologies, then the law of supply and demand will operate and raise the value of women; thus curbing these tests and technologies is unnecessary or even retrograde (Kumar, 1983a, 1983b).

Making even approximate computations of the numbers of such procedures occurring in India is difficult. One retrospective estimate (Saheli Women's Resource Centre, cited in Arora, 1996) suggested that between 1978 and 1982 nearly 78,000 female foetuses were aborted after sex determination tests. Arora (1996) also cites a statistic purporting to come from the Registrar General of India, that based on hospital records alone, 3.6 lakh female foetuses were aborted in India between 1993 and 1994.

ESTIMATING SEX RATIOS AT BIRTH IN INDIA

To complement such reports, and to assess the geographical spread and the magnitude of impact of the increasing use of prenatal sex selection in India, we use data from the 1981 and 1991 censuses. We present sex ratios of children aged 0 and 1, i.e. under age 2. We then estimate sex ratios at birth by means of the 'reverse survival technique' (UN Manual X, 1983: Chapter VIII), using the counts of boys and girls aged under 2 and observed male and female q2 mortality probabilities in the 1981 and 1991 Census of India records, fitting to a South Model Coale and Demeny Life Table (Coale and Demeny, 1966). In essence, the technique is based on the notion that children aged x are the survivors of births that occurred x years ago. Therefore, it is possible to take the numbers of children observed at age x, and observed mortality probabilities for children in that population and, using a model life table suitable in shape and level of mortality for the population in question, 'resurrect' the numbers who have died. Here, we 'resurrect' the numbers of boys and girls under age 2 who died prior to the census enumeration, add them to the numbers of reported males and females aged under 2, and take the ratio of male to female children in the resulting total, to estimate a sex ratio at birth.

The authors warn that the reverse survival technique is sensitive to age misreporting, especially for children aged 0 or 1. Das Gupta and Li (in this volume) state that Indian census data show marked age-heaping, especially at young ages. Our estimates overcome this potential danger by basing calculations on children aged 0 and 1 taken together, i.e. those under age 2. (In calculations not presented here, we examine sex ratios among infants aged 0, and the results are very similar to those among infants aged <2; none differed by more than 2 per cent.) Moreover, we use this technique to generate sex ratios among children ever born, not to present or evaluate estimates of actual fertility. Even if there is a nation-wide tendency to underreport the numbers of females (a contention doubted by Visaria, 1969), the comparison we present, that is the trend over time in sex ratios, should not be affected. In the absence of reliable statistics on abortions or on period sex ratios at birth, we argue that infancy sex ratios and estimated SRBs provide information that can illustrate and evaluate the impact of continuing son preference in India, under conditions of social change, economic development, declining fertility and mortality, and spread of new medical technologies.

It was pointed out some time ago that the distribution of prenatal sex determination facilities in India was greater in areas where females were more devalued, i.e. the North/North-west (Patel, 1988). During the decade covered in this study (1981–91), reports suggest that such techniques were more widely available in urban areas, although there is every indication that their awareness and use spread into the rural hinterlands too. Urban areas are characterized in developmental terms by higher female literacy, more non-agrarian employment opportunities, more paid employment opportunities for women, and better infrastructure, including availability of health services. Moreover, a more egalitarian ethos may accompany increasing education, income, and exposure to diverse groups and thoughts.

Thus, while scrutinizing the estimated SRBs, one might contrast urban/rural SRBs over the decade, to investigate whether urban SRBs grow progressively more 'normal' with improved education and greater accuracy of reporting/recording births, and decreasing scope for female infanticide or abandonment of girls. On the other hand, if gender stratification in India is intensifying, attested by the increase of phenomena such as dowry and economic marginalization of women, many urban families would not necessarily have greater incentive to welcome daughters. They would also have more access to the means to avert their birth, i.e. prenatal sex determination and selective abortion, which may be seen as more acceptable and practicable alternatives to female infanticide, abandonment, or non-registration of girls' births. In fact, families with some amount of education and disposable income might have better access to these techniques and thus be more efficient in discriminating against their daughters. Particularly with fertility falling in many parts of the country, with urban areas in the forefront, Indian families may take steps to ensure that at least one son is

born to them, as do Chinese or Korean families. Thus, if urban SRBs grow anomalously masculine over the decade, the most likely cause is the increasing use of prenatal sex selection techniques rather than under-reporting, infanticide, or abandonment of baby girls.

Appendix Table 1 presents the observed sex ratios among infants aged under 2, and the corresponding estimated SRBs for rural and urban areas of each state, for 1981 and 1991. Ratios are presented here as males per 100 females. There is, by and large, little difference between sex ratios at ages 0 and 1, and estimated sex ratios at birth. As may be expected, once mortality at infant ages is taken into account, most ratios lessen, but only very slightly. However, in some states, predominantly in rural areas, the ratios heighten slightly, such as in rural MP, North-eastern states (Mizoram, Nagaland, Arunachal Pradesh, Tripura), and the South (rural Kerala, Tamil Nadu and Karnataka, urban and rural Maharashtra and Orissa). In 1991, far fewer regions show this pattern: Himachal Pradesh, and urban parts of Sikkim, Goa, Dadra and Nagar Haveli, and Pondicherry. The census was not conducted in Assam in 1981, and in Jammu and Kashmir in 1991, thus the corresponding Table and Figure entries are blank.

Spatial and Temporal Trends in Estimated Sex Ratios at Birth

The spatial distribution of trends in estimated SRBs from the two censuses are presented in Figure 1, which identifies rural and urban areas of those states with 'abnormally' masculine SRBs (i.e. >107). The actual sex ratio values on which Figure 1 is based are presented in Appendix Table 1.

Figure 1 shows that in 1981, most parts of the country exhibited SRBs that were not 'abnormally' masculine. The few masculine regions were mostly within the North/North-western zone such as urban Punjab, Jammu and Kashmir, and Chandigarh, also urban Gujarat in the West, and, surprisingly, the Lakshadweep Islands off India's South-west coast. Appendix Table 1 shows that the 'masculine' SRBs mostly have values at the lower end of the range (107–110). Thus, in 1981, we can conclude that SRBs in India were in general not very masculine. Appendix Table 1 bears this out by showing all-India values within the normal range.

In 1991, Figure 1 shows a greatly changed picture. We see masculine SRBs not only in the urban areas of the North/North-western zone (Himachal Pradesh, Punjab, Rajasthan, Haryana, Delhi, and Chandigarh), but in the corresponding rural areas, and a spread of anomalous masculinity outward from this zone to urban areas of Central and Western zone states, namely Gujarat, UP, MP, Bihar, Maharashtra, and Goa. Arunachal Pradesh, Assam and Sikkim in the North-east also have masculine SRBs. Appendix Table 1 shows a stark shift toward excess masculinity, with SRB values in the range

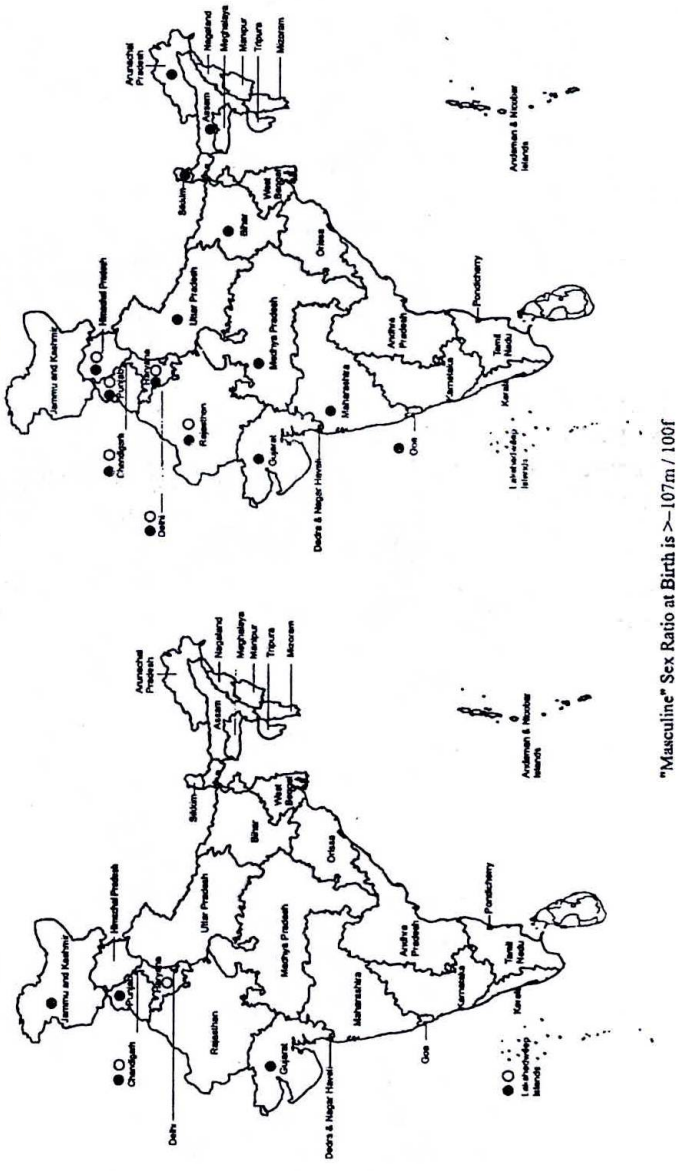


Figure 1. Spread of "Masculine" Sex Ratio at Birth, India, 1981–1991

of 107–118. The lowest abnormal values are 107 for urban Bihar, UP, and Goa, and the highest values reach 118 for urban Punjab and 116 for urban Haryana. Appendix Table 1 shows that the all-India urban area SRBs now reach 108, reflecting the increase in masculinity of urban SRBs of many states. The Southern states' SRBs appear normal in both decades. The Lakshadweep Union Territory (off the Kerala coast) that had masculine SRBs in 1981 is in the normal range in 1991.

For 1981, Appendix Table 1 shows some states (Andhra Pradesh and urban Tamil Nadu in the South; Manipur, urban Nagaland, Meghalaya and Arunachal Pradesh in the North-east; Madhya Pradesh, urban Orissa and rural Bihar in the Centre; Rajasthan and urban UP in the North/North-west; urban Dadra and Nagar Haveli) have SRBs that may be seen as 'feminine' (below 103). We speculate that this might be due to under-reporting of infants that might have been born alive but died shortly thereafter. They would not be enumerated, and would thus not show up in either the counts of infants, or the mortality statistics. Since neonate and infant boys have higher mortality than girls, boys may be over-represented in the uncounted children, leading to unusually feminine SRBs. In 1991, the phenomenon of excess femininity of SRBs has greatly lessened, now noted only in Dadra and Nagar Haveli, Nagaland, and rural Arunachal Pradesh, Manipur, Meghalaya, Andamans and Lakshadweep, and MP. This could be due to improved enumeration and tabulation, or lessening of male infant/child mortality due to the improvement in health facility coverage, or to the general country-wide trend toward the masculinization of SRBs.

We conclude that while SRB figures have grown anomalously masculine across several states, the numerical magnitude of the impact of sex selective abortion in India is not great as yet, at least according to these Census records. In East Asia, the impact of such practices amounts to about 5 per cent of female births (Asia Pacific Population and Policy Report, 1995). In India, the impact is less than this. Since the 1991 all-India rural SRB was within the normal range, if we examine the change in all-India urban SRB from 104 in 1981 to 108 in 1991, and consider that an SRB of 106 is the upper bound of 'normal', then only 2 per cent of female births are affected. This translates to a shortfall of some 74,600 female births (all-India urban), mostly in the North-west zone. Since official records of induced abortion in India are notoriously flawed and incomplete, Mishra et al. (1998) have estimated the likely number of abortions occurring in India using National Family Health Survey data (1992–3). They show that the possible numbers of induced abortions for all-India were over 207,000. However, the fact that the numerical magnitude of sex-selective abortion as judged from Census records is not very great, does not diminish the gravity of the issue, for two reasons. First, since Census records are only picking up the 'tip of the iceberg' of this phenomenon, the reality is probably greater than the figures show. Second, even Census records indicate that the phenomenon is increasing over time, which is itself a grave cause for concern.

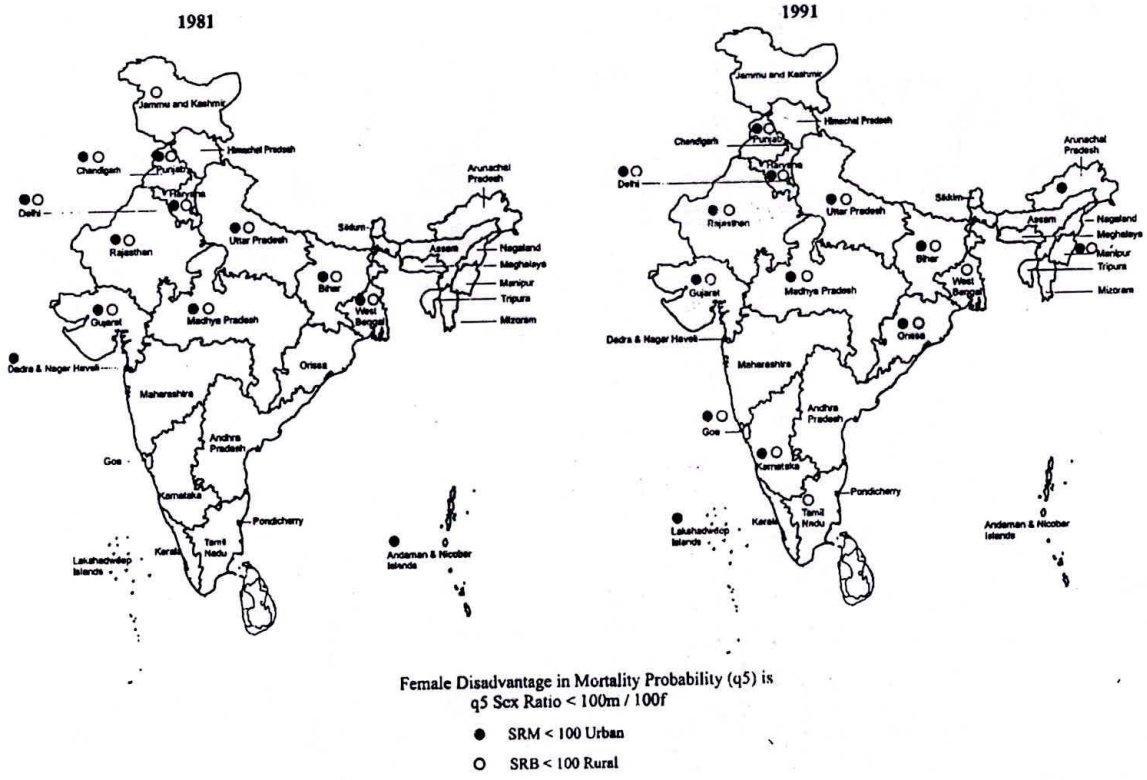
SPATIAL AND TEMPORAL TRENDS IN FEMALE DISADVANTAGE IN CHILD MORTALITY PROBABILITY

We examined evidence that prenatal sex determination and selective abortion of female foetuses occurred on an increasing scale in India during the decade 1981–91, in specific urban areas. We also reviewed studies and reports that female infanticide is spreading across the rural Indian spectrum. We now turn to the examination of sex-specific child mortality probabilities, to examine whether girl children in India continue to face heightened mortality risks *vis-à-vis* boys. In Appendix Table 2, we present sex ratios of under-5 mortality probabilities for children (q5) for 1981 and 1991, for each state, for rural and urban areas. Mortality ratios that indicate female disadvantage (i.e. male to female q5 ratio <100) are considered anomalous. Ratios that show male disadvantage are considered 'normal'. Figure 2, based on this table, maps the spatial and temporal distribution of female mortality disadvantage.

Figure 2 shows the spatial distribution of trends in mortality sex ratios across 1981–91, identifying rural and urban areas of those states with ratios showing female disadvantage. In 1981, all the Northern/North-western states (except Himachal Pradesh and urban Jammu and Kashmir) had excess female child mortality, in urban and rural areas. In 1991, all these areas continued to exhibit female mortality disadvantage, with the exception of Chandigarh, which along with urban Dadra and Nagar Haveli and Andaman Islands, were the only regions shifting to 'normal' female vs. male child mortality risks. Furthermore, in 1991, female mortality disadvantage appeared in areas that were 'normal' in 1981, namely rural and urban Orissa, Goa, and Karnataka, and rural Tamil Nadu (in keeping with reports of female infanticide in that state). Thus, the phenomenon of excess female child mortality not only persisted over the decade, but also actually spread across more of India.

Overall, levels of child mortality in India declined considerably from approximately 152 per 1000 (both sexes, all India) in 1981 (Government of India, 1988: 5), to 96 per 1000 in 1991 (both sexes, all India, in Irudaya Rajan and Mohanachandran, 1998, based on 1991 Census records). Appendix Table 2, however, shows that the sex ratio of mortality actually became more male-biased during 1981–91, indicating that mortality fell more for males than females, and that females still have higher mortality than males. Positive changes (i.e. lessening female mortality disadvantage 1981–91) are seen in only a few areas, such as Himachal Pradesh, the Union Territories of Delhi and Chandigarh, rural Punjab, urban Rajasthan, West Bengal, Mizoram, Dadra and Nagar Haveli and Andaman Islands. However, of these areas, only the small regions of Chandigarh, Mizoram, Dadra and Nagar Haveli and Andaman Islands show 'normal' male to female mortality risk ratios in 1991, the other regions still exhibit female disadvantage. Increasing female disadvantage appears in many North/North-western and Central states:

Figure 2. Spread of Female Disadvantage in Mortality Probability, India 1981–1991



rural Rajasthan, urban Haryana, all of UP, Bihar, MP, and Gujarat, which all had female mortality disadvantage in 1981. Orissa, which had 'normal' mortality sex ratios in 1981, shifts to female disadvantage in 1991. In South India, Karnataka, Goa, and rural Tamil Nadu also shift from 'normal' ratios to female disadvantage. Thus, substantial parts of India in 1991 exhibit persistent excess female child mortality, in keeping with research documenting persistent selective neglect of girls.

While the 1991 Census mortality figures for Kerala also indicate female disadvantage, infant and child mortality is generally so low in this state, that a small absolute difference between the sexes has translated into a large difference in the ratio in this case. Thus, in the case of Kerala, we do not suggest at this time that excess female child mortality has suddenly emerged in this state, since, unlike Tamil Nadu, no study has identified this phenomenon here. This logic also applies to some Union Territories and states in the North-east, that indicate extreme values of the mortality sex ratios. Values in 1981, such as 152 for urban Meghalaya or 128 for urban Sikkim, are an artifact of small sex differences in low reported levels of mortality.

To contextualize the scenario of birth and life chances of boys and girls in India, Appendix Table 3 shows fertility trends in different regions of India 1982–94. This decade witnessed a moderate fertility decline in the country as a whole (20 per cent), from a TFR of 4.5 in 1982 to 3.5 in 1994 (SRS Reports). However, we observe dramatic declines in the South, such that Kerala now has below replacement fertility and Tamil Nadu is at replacement level, and Karnataka and Andhra Pradesh are below the national average. The Eastern states register moderate declines, as do Gujarat and Punjab. The other Central and North/North-western states record more modest gains.

The demographic picture that emerges for the period 1981–91 is one of all-India declines in fertility and mortality, worsening sex ratios of child mortality in many major states, and increasing masculinity of SRBs in the North/North-west, and in urban areas of some Central states. Prior studies showed that higher birth order females were at the greatest risk of mortality in Northern and North-western India (Das Gupta, 1987; Kishor, 1995). It is therefore argued that with declining fertility, the proportion of births of higher order would decline, lowering excess female child mortality overall. Since the mortality ratios have not shown lessening female disadvantage in the face of declining fertility, this contention is clearly not upheld. Furthermore, SRBs in the North/North-west regions indicate increasing sex selection to ensure that the greater proportion of babies born are of the wanted (male) sex. Thus, excess female child mortality appears combined with prenatal sex selection in a specific zone of the country — the North/North-west — to create a 'double jeopardy' for Indian daughters there, with increasing female mortality disadvantage in other regions that have 'normal' SRB patterns.

CONCLUSION AND DISCUSSION

The first point we highlight is the great need for suitable data to be collected and released in a timely manner by the Government of India. The decennial census does collect information on the number and sex of births in the enumeration year. Statistics on period SRBs for all parts of India could be directly furnished, removing the need for indirect estimation to illuminate this important question. In our findings, it should be kept in mind that the SRBs have been estimated based on the reported numbers of infants aged under 2 years, and thus may be affected by any under-registration of female births or female infanticide, though we argue otherwise.

However, even with indirectly estimated measures, there is a clearly marked shift toward increasing masculinity of SRBs in North/North-west India, and urban areas of Central India. This suggests the rising use of prenatal sex determination and sex selective abortion there. The studies and reports we summarize, and the spatial distribution of the SRB figures we present, indicate plausibly that prenatal sex selection techniques are being increasingly used in these regions. The trend initially began (as might have been expected for a medical technological innovation) in urban areas and spread out over time to the rural surroundings, especially concentrated in those regions of the country that have a socio-cultural history of disfavour toward women. As we saw, in 1981, only urban areas of the North-western region had somewhat abnormal SRBs. By 1991, urban and rural parts of the North-west, and urban parts of Central regions, all had masculine SRBs, some with very high values. Since the increased masculinity is seen in urban areas, we cannot attribute the trend to increased under-reporting of girls, or rise in female infanticide, both of which are less likely to be successfully carried out in urban areas.

Some argue that increasing masculinity of SRBs could be caused by development, especially in the health sector, because improved health conditions provide better life chances to male foetuses that are by nature more frail and prone to die. The trend in many parts of India between 1981 and 1991 of SRBs moving from excess femininity to normal masculinity may be due to this factor. The intense masculinity in the North/North-west region is, however, a little difficult to attribute entirely to improved health. If improvements in health were mainly at the bottom of increasing masculinity of SRBs, then regions such as Kerala and urban areas elsewhere in the South would also have witnessed much more masculinity of SRBs than they have. We thus conclude that improved male survivorship is in itself an insufficient explanation for the temporal and spatial trend in sex ratios in India. Since, as discussed above, other alternative explanations such as female infanticide and under-registration of births are less likely in urban areas, the spread of prenatal sex selection is further implicated.

Evidence indicating women's increasing economic marginalization and greater socio-cultural devaluation underlines the contention that develop-

ment in India has generally been to the detriment of women, and further research investigating how these trends are causally linked to female demographic disadvantage is needed. Families in India respond to developmental stresses by increasing discrimination against daughters, since this strategy fits with the matrix of choices deemed culturally acceptable, which are largely patriarchal in nature. Alternative strategies such as investing in girls' education, ensuring daughters' inheritance, and including females in the production process, are less considered. Resisting dowry pressures generated by a 'groom shortage' by marrying women to men their own age or younger, or leaving them unmarried, or finding a spouse of another caste or community, appear unthinkable. Despite gains in education, longevity, and income for some groups of women, large sections of Indian society apparently still consider daughters a liability, and may prefer to avert their birth. While infanticide in earlier eras had been confined to certain limited caste and geographical groups, neglect of daughters, female infanticide and foeticide now appear widespread in some parts of India, and have pervaded groups and classes where they were hitherto unknown (Adithi, 1995; Harriss-White, 1998; Jeffery et al., 1984). Selective neglect of daughters persists. In fact, the co-existence of female foeticide, infanticide, and selective neglect of girls renders the distinction between pre- and post-natal sex selection techniques invidious: the bias against girls is entrenched, and the choice of methods may depend on convenience rather than conscience. Some scholars have gone so far as to term the persistent and multi-layered bias against girls, as 'gender-cleansing' (Harriss-White, 1998).

However, while the aggregate statistics for 1981–91 indicate that pre- and post-natal sex selection methods co-exist in many regions, conclusions regarding additive rather than substitutive strategies should also consider whether some local differences are being obscured in the aggregate. A study of a rapidly urbanizing and changing rural area near New Delhi revealed that local parents of the Jat community had an ideal family composition of two sons and one daughter, and thus formed the clientele of the flourishing local sex determination clinics. However, the subsequent infant/child mortality rates among their children did not reveal female disadvantage any more (Khanna, 1995, 1997). This suggests that a pattern of substitution is indeed occurring. More such micro-level studies would better illuminate whether within any region, some families use certain strategies and others follow other methods, or whether the same groups are indeed following both strategies. Future research should prioritize examination of demographic behaviour, development trends and policies in India from a gender perspective, and focus on the nexus between macro-level cultural and economic structures and micro-level household organization and strategies.

The contention that selective neglect or infanticide affect mainly higher birth order girls and that therefore the gender imbalance in demographic rates and indicators should decline with decreasing fertility and mortality is clearly not upheld in this study. Consider that if the Jat families in the study

just referred to could actualize their desired family size and sex composition, the community would show a TFR of 3.0 and an SRB of 200! In fact, the ideational shift to controlled fertility that includes acceptance of modern means of contraception has, in India, also meant a growing societal acceptance of medical technologies surrounding conception, prenatal sex selection, and abortion. Abortion selectively directed against female foetuses is acceptable to large sections of society in the name of 'population control', or couples' greater reproductive choice. The secular societal trend that increasingly devalues female lives remains largely unquestioned.

The argument that an adverse sex ratio will lead to a shortage in the supply of women, which will drive up their value since demand will remain high, is also unconvincing. The sex ratio in India has been noted to be adverse to females, and more or less steadily worsening, since the first recorded Census of 1871. The population sex ratio of India declined from 972 females per 1000 males in 1901 to 929 per 1000 in 1991. In this same period, the status of Indian women has been steadily eroded, despite gains made in some sectors by some groups of women. A 'shortage' of women does not lead to their increasing valuation, but to greater restrictions and control being placed over them. The increasing intensity of violence against women in all domains of life is testimony to this. Scholars predict increased social unrest in China once the shortage of females to males of the appropriate ages in the marriage market is felt, as a result of the skewed SRB patterns there (Tuljapurkar et al., 1995). The same might be said for India.

The trend toward greater use of prenatal sex selection despite legislative proscription, combined with persistent female disfavour in mortality ratios, combines to produce a scenario that is not likely to improve in the near future. These demographic phenomena are themselves only symptoms of the worsening situation of women in the Indian socio-economic developmental context. Policy measures addressing women's societal devaluation have either not been implemented, as in the Central Government scheme proposed in early 1997 of cash subsidies to girl children in all families identified as poor; or have had very limited impact, as illustrated in Tamil Nadu state's cash subsidy schemes or 'cradle baby' schemes (George, 1997). NGO strategies to tackle infanticide or female devaluation range from the very long-term (consciousness-raising), to the confrontational (reporting suspicious female infant deaths to the police), to the ineffective (attempting to dissuade parents from infanticide). Examples of plans that have successfully involved women and men in local development efforts are rare and recent, and their impact on demographic behaviour is as yet small.

Furthering the legislative drive against discriminatory practices, on 9 January 1996, the Indian Government announced a ban on the abortions of healthy female foetuses identified during permissible genetic tests. Under the new law, mothers, fathers, and doctors can all be punished with fines ranging from $300–$1500 and prison terms from three to five years, escalating for repeat offenses. Critics point out that women are rarely the primary

decision-makers in the use of these technologies, and such legislation places a dual punishment on them. It is feared that women will be driven to seek terminations of unwanted pregnancies under illegal conditions, in a country where the majority of abortions are already reported to take place illegally. It remains to be seen how effective new legislative measures will be in reversing the trend of female foeticide, when past actions have not shown marked success. Our review of the literature suggests that any policy measures must not focus primarily on restricting technology used to women's detriment, but must also address the root causes of devaluation of Indian women, or they will not succeed in eradicating discriminatory practices but will drive them underground where they will continue to flourish.

ACKNOWLEDGEMENTS

This research was supported by a grant from the UNFPA Population and Sustainable Development Programme at the Centre for Development Studies, Thiruvananthapuram, as a 'Research in Support of Training' activity. We are grateful to the office of the Registrar General of India for providing the data and to the Centre for Development Studies for institutional support. We thank Dr P. Mohanachandran for technical advice, Dr R. Homan for programming help, and Ms A. Mini for research assistance. We are grateful to Tom Swasey and John Vogler of the Carolina Population Center for assistance in preparing maps. We thank Sarthi Acharya, Cecile Jackson, Helen Lambert, Alec Mercer, Uday Shankar Mishra, Richard Palmer-Jones, and Shahra Razavi for their helpful comments. The following NGOs generously shared their information with us: ADITHI, Patna; JAGORI, New Delhi; MATRIKA, New Delhi; M. S. Swaminathan Research Foundation. Chennai. S. Sudha thanks family and friends for child care, inspiration and moral support without which this paper could not have been written.

APPENDIX

Table 1. Sex Ratios at Ages 0 + 1, and Estimated Sex Ratios at Birth: 1981–91

State/Region	1981				1991			
	Sex ratio (M/F)				Sex ratio (M/F)			
	Observed ratio 0 + 1		Estimated SRB		Observed ratio 0 + 1		Estimated SRB	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
INDIA	103	104	103	104	106	108	106	108
North/Northwest								
Himachal Pradesh	105	105	105	105	108	113	109	114
Jammu & Kashmir	105	110	105	110	—	—	—	—
Punjab	107	108	105	107	117	119	117	118
Rajasthan	103	103	101	102	108	111	107	110
Haryana	109	107	108	106	114	117	113	116
Delhi (UT)	105	104	105	106	111	111	110	110
Chandigarh (UT)	112	103	111	107	110	109	110	109
Uttar Pradesh	104	102	103	102	107	109	106	108
Central								
Bihar	102	104	101	103	107	108	105	107
Madhya Pradesh	101	102	102	101	103	108	102	107
Gujarat	105	108	104	107	107	112	106	111
Maharashtra	102	101	106	105	103	108	106	109
Orissa	101	103	102	104	104	104	103	103
Goa	104	105	104	105	103	106	103	107
East/Northeast								
West Bengal	102	104	103	103	104	105	103	104
Assam	—	—	—	—	105	108	104	107
Mizoram	103	100	104	100	102	104	103	104
Nagaland	101	103	102	103	99	103	99	102
Meghalaya	102	104	102	104	101	103	101	103
Arunachal Pradesh	100	105	102	105	101	109	101	109
Tripura	105	104	106	104	104	104	104	104
Manipur	101	101	101	100	103	105	102	105
Sikkim	105	99	104	98	105	123	105	124
South								
Kerala	102	107	103	106	106	106	105	106
Andhra Pradesh	101	102	102	102	103	104	103	103
Tamil Nadu	103	102	104	101	105	105	105	105
Karnataka	102	104	103	104	105	105	105	105
Union territories								
Andamans	102	94	104	95	100	104	100	103
Lakshadweep	109	110	109	108	102	106	102	106
Dadra Nagar Haveli	98	100	99	103	101	94	101	101
Pondicherry	102	102	103	103	103	105	103	106

Notes: Any value above 107 can be considered 'excessively' masculine. The census was not conducted in Assam in 1981, or in Jammu and Kashmir in 1991.
Source: Censuses of India 1981 (Government of India, 1988); and 1991 (Government of India, 1991).

Table 2. Sex Ratios of Child Mortality: 1981–91

State/Region	1981		1991	
	Sex ratio of child mortality q5 m/f		Sex ratio of child mortality q5 m/f	
	Rural	Urban	Rural	Urban
INDIA	93	98	89	95
North/Northwest				
Himachal Pradesh	104	107	108	110
Jammu & Kashmir	97	102	—	—
Punjab	87	92	92	92
Rajasthan	89	89	85	90
Haryana	81	89	81	82
Delhi (UT)	85	95	89	96
Chandigarh (UT)	88	99	107	110
Uttar Pradesh	83	86	79	82
Central				
Bihar	87	90	72	79
Madhya Pradesh	96	98	92	92
Maharashtra	101	106	100	104
Orissa	103	101	93	86
Gujarat	92	94	80	82
Goa	106	103	96	91
East/Northeast				
West Bengal	99	99	92	152
Assam	—	—	103	108
Mizoram	107	111	113	116
Nagaland	106	132	100	107
Meghalaya	105	126	104	105
Arunachal Pradesh	106	152	104	91
Tripura	105	108	102	104
Manipur	104	103	90	94
Sikkim	120	128	110	106
South				
Kerala*	113	101	94	88
Andhra Pradesh	105	107	103	108
Tamil Nadu	101	104	88	100
Karnataka	101	102	96	97
Union territories				
Andamans	107	92	112	102
Lakshadweep	121	105	136	91
Dadra Nagar Haveli	113	97	133	136
Pondicherry	103	104	107	103

*See explanation in the text. For all other cells, any value <100 can be considered to indicate female disadvantage.

Sources: 1981: Government of India (1988); 1991: Irudaya Rajan and Mohanachandran (1998).

Table 3. Profile of Fertility Decline in Major States of India (1982–94)

State/Region	Total fertility rate (TFR)		
	1982	1994	% decline
INDIA	4.5	3.5	22.20
North/North-west			
Rajasthan	5.3	4.5	15.10
Uttar Pradesh	5.7	5.1	10.10
Haryana	4.9	3.7	24.50
Punjab	4.0	2.9	27.50
Central			
Bihar	5.6	4.6	17.90
Madhya Pradesh	5.3	4.2	20.80
Gujarat	4.2	3.1	26.20
Maharashtra	3.8	2.9	23.70
Orissa	4.3	3.3	23.30
East			
West Bengal	4.1	3.0	26.80
South			
Andhra Pradesh	3.9	2.7	30.80
Karnataka	3.6	2.8	22.20
Kerala	2.9	1.7	41.40
Tamil Nadu	3.3	2.1	36.40

Source: Government of India (1982, 1994).

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Population and Health Policies

National Population Policy : Small Family Norm & Sex Selection

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Paper Presented at the Seminar on
The New Paradigm of Development and Sex Selection

Organized by
Nehru Memorial Museum & Library (NMML)
& Action India

at
Teen Murti Bhawan, New Delhi

August 6 - 7, 2004

National Population Policy : The Small Family Norm & Sex Selection

- A R Nanda

National Population Policy - An Overview

India's National Population Policy (NPP) of 2000 is a significant move towards a humane and effective development policy aimed at improving the overall quality of life by promoting better awareness of and access to health care options with a focus on women. It is in fact a first big step in the country's effort to look at population issues from the perspective of social development and is the reference point for India's current rights based approach to the subject. It reflects a shift from earlier demographically driven target oriented approach to one that addresses the special concern of reproductive and child health. As a signatory to the International Conference on Population and Development (ICPD) Plan of Action in 1994, India focused on inter-linkages between population, development and gender. NPP, 2000 asserts the centrality of human development, gender equality and equity, adolescent reproductive health and rights among other issues to stabilising the country's population.

NPP, 2000 is in fact an affirmation and articulation of India's commitment to the ICPD agenda, and forms the blueprint for population and development programmes in the country. The overriding concern of the NPP 2000 is economic and social development and human well being. It seeks to provide quality services and supplies, information and counselling, and a basket of contraceptive choices. It will enable people make informed choice and access quality health care services.

It also states that stabilizing population is not merely a question of making reproductive health services accessible and affordable, but also of increasing the coverage and outreach of primary and secondary education, extending basic amenities like sanitation, safe drinking water and housing, empowering women with enhanced access of education and employment.

The NPP affirms the commitment of government towards:

- Voluntary and informed consent as the basis for availing of family planning services.
- A target free approach in administering the family planning services.
- Improving the health and nutrition status of women.
- Implementing child survival initiatives to bring about reduction in infantand child morbidity and mortality.
- Decentralization of planning and implementation which will promote need-based, demand-driven, area/location specific, integrated and high quality reproductive and child health care services.

The National Population Policy (NPP), 2000 is gender sensitive and incorporates a comprehensive and holistic approach to health and education needs of women, adolescents and the girl child.

The immediate objective of the NPP 2000 is to address the unmet needs for contraception, health care infrastructure, and health personnel, and to provide integrated service delivery of basic reproductive and child health care. The medium term objective is to bring the TFR to replacement levels by 2010, through vigorous implementation of inter-sectoral operational strategies. The long term objective is to achieve a stable population by 2045, at a level consistent with the requirement of sustainable economic growth, social development and environmental protection.

Emphasizing the goal of TFR 2.1 by 2010 without linking it with other socio-demographic goals (like reduction of IMR & MMR, 100 percent registration of births, deaths etc, delaying age at marriage etc). is a matter of concern. The details of socio-demographic goals and strategic themes are enclosed in annexure- I.

10th Anniversary of ICPD

The International Conference on Population and Development (ICPD) held in Cairo in 1994, was a milestone in the history of population and development as well as in the history of women's rights. It heralded a paradigm shift in the approach to population and development, placed women's equity center stage and introduced the importance of rights based programming. This year 2004 marks the 10th anniversary of the ICPD, the mid-point of it's 20 year programme of action. In India a number of events and activities are taking place to commemorate ICPD + 10. A series of planning and preparatory meetings were held with civil society and experts in last few months to identify population issues requiring priority attention. In these meetings a key theme which was identified as an issue requiring urgent attention was the theme relating to "Missing Girls". This theme captures some of the foremost concerns in population issues viz. declining child sex ratio, sex selective abortions and two-child norm.

Sex Selection and Child Sex Ratio (CSR) in India:

While the improvement in overall sex ratio is noticed in the census 2001 what is most alarming is the decline in the Child Sex Ratio (CSR), i.e the sex ratio of children in the age group of 0-6 years.

Census 2001 showed a decline of 18 points from 945 in 1991 to 927. The decline of child sex ratio is so wide spread that out of the 28 States and 7 Union Territories, only 4 States namely Kerala (5 points increase), Tripura (8 points increase), Mizoram (2 points increase) and Sikkim (21 points increase) and only one union territory, Lakshadweep (33 points increase) are free from this socially harmful and degrading phenomenon. Details attached in Annxure – II.

The States and Union Territories that have shown large declines in child sex ratio are Punjab (-82), Haryana (-59), Himachal Pradesh (-54), Gujarat (-50), Chandigarh (-54) and Delhi (-50) though they are economically quite developed with high female literacy rates. There are 122 districts spread over 14 states having CSR less than 900.

Several questions have been raised with regard to trends in child sex ratio in the last decade. The indications are that this alarming trend is due to large scale practice of female foeticide. Female foeticide or sex selective abortion is the elimination of the female foetus in the womb itself. The decline in child sex ratio may be due to different factors such as neglect of female children resulting in their higher mortality at younger ages, female infanticide and female foeticide. Female foeticide refers to a practice where the female foetuses are selectively eliminated after prenatal sex determination thus avoiding the birth of girls.

The factors Responsible for Female Foeticide are:

- The obsession to have a son
- The discrimination against the girl child
- The socio-economic and physical insecurity of women
- The evil of dowry prevalent in our society
- The worry about getting girls married as there is the stigma attached to being an unmarried women.

- Easily accessible and affordable procedure for sex determination during pregnancy
- Failure of medical ethics
- The two child norm policy of certain state governments.

As seen from the above, one of the important factor responsible for female foeticide is the "Two child norm" policy adopted by certain state governments.

Small Family Norm vis-à-vis Two Child Norm

A running theme of the NPP 2000 is provision of quality health services and supplies and a basket of contraceptive choices. "People must be free and enabled to access quality health care, make informed choice and adopt methods for fertility regulation best suited to them" - it is in this spirit that the NPP 2000 speaks of the ***"small family norm"***. No where the policy advocates for ***"two child norm"***. However, it is unfortunate and some times even disturbing to note that while talking about NPP ***"small family norm"*** is often misinterpreted as ***"two child norm"*** *(Which has a definite coercive connotation).* ***"Two child norm"*** implies that the state promotes two children per family & has a system of incentives and disincentives/punishments for achieving it. A *"two child norm"* has the potential to cause immense harm to women's health in the existing social situation where son preference is high and women's status is very low. One of the gravest risks includes increase in sex selective abortion and consequent reduction of girl children.

We feel that compulsion to have no more than two children would result in increased female foeticide. This happened in China when government declared that no couple should have more than one child. The *"one child policy"* in China appears to have created more societal and family problems like skewed sex ratio, female infanticide and foeticide, rather than helping in smooth stabilizion of population. There are thus lessons to be learnt from the Chinese experience in governance. We tend to misrepresent the Chinese story, whenever we compare the Indian situation for advocating coercive polices like ***"two child norm"*** and the concomitment regime of incentive and disincentives to solve our population problem quickly.

The *"two child norm"* policy of certain state governments which are not in harmony with the NPP can become an important factor responsible for exacerbating female foeticide in these states in future.

Annexure – I

National Population Policy (NPP), 2000

Socio demographic goals for 2010

1. Address the unmet needs for basic reproductive and child health services, supplies and infrastructure.
2. Make school education up to age 14 free and compulsory, and reduce drop outs at primary and secondary school levels to below 20 percent for both boys and girls
3. Reduce infant mortality rate to below 30 per 1000 live births.
4. Reduce maternal mortality ratio to below 100 per 100,000 live births.
5. Achieve universal immunization of children against all vaccine preventable diseases.
6. Promote delayed marriage for girls, not earlier than age 18 and preferably after 20 years of age.
7. Achieve 80 percent institutional deliveries and 100 percent deliveries by trained persons.
8. Achieve universal access to information/ counseling and services for fertility regulation and contraception with a wide basket of choices.
9. Achieve 100 percent registration of births, deaths, marriage and pregnancy.
10. Contain the spread of Acquired Immunodeficiency Syndrome (AIDS), and promote greater integration between the management of reproductive tract infection (RTI) and sexually transmitted infections (STI) and the National AIDS Control Organisation.
11. Prevent and control communicable diseases.
12. Integrate Indian Systems of Medicine ((ISM) in the provision of reproductive and child health services, and in reaching out to households.
13. Promote vigorously the small family norm to achieve replacement levels of TFR.
14. Bring about convergence in implementation of related social sector programs so that family welfare becomes a people centered programme.

Strategic Themes

i. Decentralized Planning and Programme Implementation
ii. Convergence of Service Delivery at Village Levels
iii. Empowering Women for Improved Health and Nutrition
iv. Child Health and Survival
v. Meeting the Unmet Needs for Family Welfare Services
vi. Under-Served Population Groups
vii. Diverse Health Care Providers
viii. Collaboration with and Commitments from Non-Government Organizations and the Private Sector
ix. Mainstreaming Indian Systems of Medicine and Homeopathy
x. Contraceptive Technology and Research on Reproductive and Child Health
xi. Providing for the older population
xii. Information, Education and Communication

Annexure- II

Child Sex Ratio in the States

States	Year	
	1991	2001
Punjab	875	793
Haryana	879	820
Chandigarh	899	845
Himachal Pradesh	951	897
Jammu & Kashmir	NA	937
Delhi	915	865
Rajasthan	916	909
Uttar Pradesh	927	916
Bihar	953	938
Orissa	967	950
Madhya Pradesh	941	929
Uttaranchal	948	906
Jharkhand	979	966
Chhatisgarh	984	975
Sikkim	965	986
Arunachal Pradesh	982	961
Nagaland	993	975
Manipur	974	961
Mizoram	969	971
Tripura	967	975
Meghalaya	986	975
Assam	975	964
West Bengal	967	963
Gujarat	928	878
Daman & Diu	958	925
D & N Haveli	1013	973
Maharashtra	946	917
Andhara Pradesh	975	964
Karnataka	960	949
Goa	964	933
Lakshadweep	941	974
Kerala	958	963
Tamil Nadu	948	939
Pondicherry	963	958
A & N Islands	973	965
India	945	927

Distribution of States/UTs by Districts having less than 900 Child Sex Ratio.

Sr. No.	States/UT	No. of Districts
1	Uttar Pradesh	24
2	Haryana	18
3	Punjab	18
4	Gujarat	16
5	Rajasthan	10
6	Maharashtra	9
7	Delhi	8
8	Madhya Pradesh	5
9	Himachal Pradesh	4
10	Tamil Nadu	4
11	Bihar	2
12	Jammu & Kashmir	2
13	Chandigarh (U.T)	1
14	Uttaranchal	1
Total		122

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National Population Policy 2000: A Critique

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Paper Presented at the Seminar on
The New Paradigm of Development and Sex Selection

Organized by
Nehru Memorial Museum & Library (NMML)
& Action India

at
Teen Murti Bhawan, New Delhi

August 6 - 7, 2004

The National Population Policy: A Critique

The National Population Policy 2000 of the government of India policy is among the first of its kind that firmly puts centre-stage[1] the imperatives of social development and access to healthcare which can safeguard the rights of vulnerable groups like women, children and economically deprived groups. This is in keeping with the government commitments made in the international treaties like the CEDAW and agreements like the ICPD Program of Action (PoA) to which India is a signatory. In 1994 the Program of Action of the International Conference on Population and Development emphasized the relationship between population, sustainable development, comprehensive reproductive health services of good quality, gender equality, and the right of individuals and couples to freely and responsibly decide on the number and spacing of their children.

The new strategy of the ICPD PoA focussed on meeting the health needs of individual women and men rather than on achieving demographic targets. In keeping with this, the NPP 2000 consistently avoids the word "population control" and talks instead of "population stabilization" despite widespread and entrenched convictions about the "population explosion" in India. This is a courageous stance in consonance with the current understanding of "demographic momentum"[2] in India, which indicates clearly that the need of the hour is not coercion and control but information and services for family planning. However, the word "stabilization" is not supplemented by an unambiguous refuting of the myths that surround the population issue. Moreover, the word "stabilization" remains limited to the quantitative aspect: for example the high seasonal rural-urban migrations in the absence of viable livelihood options over vast tracts of the country remains unmentioned. Similarly, the decimation of indigenous groups through neglect and disease, the shocking decline in the under-five sex ratio and an estimated 130,000 preventable maternal deaths each year are some of the qualitative 'unstable' aspects of the population that remain largely unaddressed in the NPP 2000.

It is only in the Demographic Profile at the very end that the NPP warns- "the sex ratio has been steadily declining" and that "India has a century old deficit of females.[3]" In fact, given the steeply declining adverse child sex ratio in the most developed parts of the country, the NPP needed to explicitly incorporate safeguards for halting and reversing this trend. One way might have been to ensure the births of girl children would be closely monitored and followed up, another way could have been to tone down the rhetoric on the small family norm and promote affirmative action for girl children. The fact that affluent, developed and educated sections of the country showed the steepest decline in the sex ratio shows that the small cash incentive of the *Balika Samriddhi Yojana* (Rs. 500 for survival of the girl child) would not be an effective in halting the trend.

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[1] The policy has the long term objective of achieving a "stable population by 2045" which would be consistent with "sustainable economic growth, social development and environmental protection." The medium-term objective is to "bring the Total Fertility Rate to replacement level by 2010 through vigorous implementation of inter-sectoral operational strategies" and the short–term objective is to improve access to contraceptives and basic reproductive and child health care.

[2] (para. 9, NPP 2000) "...high TFRs in the past have resulted in a high proportion of the population being currently in their reproductive years.."

[3] Appendix Three, para 5, NPP 2000

The NPP 2000 is a consolidation of the earlier post-ICPD policy directions away from the long-standing 'target-oriented' approach in the family welfare programme. It represents a bold deviation from the earlier "top-down control" thinking on population, and brings in fresh concepts like women's empowerment, social development and holistic strategies to improve the quality of life of the people. At the level of service delivery, the NPP represents a move towards a more decentralized model of management and advocates partnering with the private sector. All these paradigm shifts needed to occur in contested areas of power, and do not occur by default. As such the new policy needed very strong support not only from its patrons but also from the marginal groups whose interest it was representing, from civil society and media. It also needed a strong implementation system. However, the reality was quite different. If we re-examine the problem analysis for the new policy, there emerges a certain level of ambiguity, since the demographic imperative still informed the understanding of most of the players in the policy process. It was obviously difficult to forge an unequivocal consensus understanding of what the policy was actually attempting to change. Even after formulation, the Population Commission went so far as to say that the policy approach needed to be fundamentally changed to a 'control' approach. The ownership of the policy was therefore somewhat limited among those who were to steer its implementation.

At the level of policy implementation, the governance structure to manage the implementation was the MoHFW but the states were permitted to formulate their own policies despite Population being a Central subject. There was urgent need to review and amend existing national or state-level laws and policies to ensure system-wide coherence with the new approach of the NPP 2000 and achieve its goals. Unfortunately, the continuing dominant paradigm of population control led to many of the state policies contradicting the NPP and thus aggravating the negative population trends in the country. Some of the state policies formulated after the NPP 2000 openly announced a return to target-oriented approaches, long discarded in family planning policy and programming. Targets were re-instated in the state of Uttar Pradesh (State Population Policy 2000). Andhra Pradesh already had a Population Policy that contradicted the target-free approach of the NPP 2000, and openly used incentives and disincentives to enforce the two-child norm. Attempts were made in the state policies of Maharashtra and Gujarat to bring in draconian provisions that would even violate constitutional rights.

Some states had already made laws that conflicted with the NPP such as the provision for disqualifying persons having more than two children in holding and contesting Panchayat positions (also known as the two-child norm). None of these laws were revoked as conflicting with the NPP 2000. Rajasthan was the pioneer in introducing this norm for Panchayats and municipalities in 1992, later incorporating it as a disqualification within the Panchayati Raj Act of 1994. Later a number of other states Haryana (Panchayati Raj Act,1994), Andhra Pradesh (Panchayat Raj Act of 1994), Orissa (Amendment to Orissa Gram Panchayat Act 1994) also opted for this norm for elections to Panchayat bodies. Madhya Pradesh was the latest state to have included two-child norm in their panchayat legislation through a special amendment in its panchayat law in May 2000. It has also

extended the norm to include elections to municipalities, agricultural produce marketing committees (*Mandis*) and co-operatives. It includes provisions for the denial of state programme benefits e.g. loans, subsidy, poverty alleviation programs, and entry in government jobs to those who exceed the norm. A study by Mahila Chetna Manch of Bhopal shows that a number of disqualified representatives had resorted to induced abortion to avoid the birth of their third child and many woman were compelled to undergo sex pre-determination tests. Uttar Pradesh had produced a similar Population Control Bill in 2002 that women and health organisations were able to stop after a struggle. Yet even as I speak today, there is a similar Bill tabled in the U.P. State Assembly, which has the tacit approval of almost all the political parties.

The application of a two-child norm is based on the fallacious assumptions that compelling people to have smaller families leads to an improvement in the overall development status, that choice of number of children is independent of the sex of the children, and that contraceptive services are universally available. But given that son preference has long emerged as a social reality in most parts of India, while planning for fewer children, most families would prefer a certain number of sons as insurance for future welfare. The NPP also encourages sterilisation after two children through a variety of incentives[4]. The technologies for sex pre-determination are more easily available than appropriate contraceptives and providers are always ready to conduct sex-selective abortions. Although the NPP mentions 'strict enforcement of the PNDT Act', it is open knowledge that convictions under this Act are rare and difficult.

As a result, the promotion of 'small family norm' or 'two-child norm' has a dangerous possibility of aggravating the already declining sex ratio rather than leading to development. The 'norms' are leading towards a future instability in the population, where men will largely outnumber women. In fact the substantial evidence of the NPP's commitment to improving the status of women and achieving gender equality is outweighed by the fact that the 'small family' approach is slowly doing away with women altogether. This is ironical in a country whose Constitution was among the first globally to grant women equal status in all matters, and which ratified the international Convention on Elimination of All Forms of Discrimination Against Women (CEDAW) ten years ago.

To conclude, the NPP 2000 is a commendable statement of political will, but for the reasons given above, it remained vulnerable to misinterpretation and dilution in implementation. In its translation and implementation at the state level, the NPP 2000 has in the last four years been substantially altered in both letter and spirit. The demographic imperative unfortunately continues to shape the thinking of lawmakers, law-enforcers, managers and providers all over the country, despite evidence to the contrary. The need of the hour is to honestly question whether such 'norms' about family size are necessary for development and population stabilization, given that the growth rates and total fertility rates are already low and there is already a substantial unmet need for contraceptive services. It may be more judicious to promote other norms that lead to a more stable future population.

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[4] Promotional and Motivational Measures for Adoption of the Small Family Norm, para 46, NPP 2000.

National Population Policy

Save the Girl Child

Re-examining Critical Issues on National Population policy 2000

- by Devaki Jain and Mohan Rao*

National Population Policy:

The policy announced "affirms commitment of the government towards voluntary and informed choice and consent of citizens while availing of reproductive health care services, and continuation of the target free approach in administering family planning services" (GOI:2000:2).

The immediate objective of the National Population Policy (NPP) is to meet the unmet need for contraception and health infrastructure. The medium-term objective is to bring the total fertility rate to replacement levels by 2010 through inter-sectoral action and the long-term objective is to achieve a stable population, consistent with sustainable development, by 2045. Towards this end the goals set out include:

- Making school education free and compulsory up to age 14
- Reducing IMR to below 30 per 1000 live births
- Reducing maternal mortality ratio to below 100 per 1,00,000 live births
- Promoting delayed age at marriage
- Achieving 80 per cent institutional deliveries and 100 per cent deliveries by trained persons
- Creating universal access to information and counselling and services for contraception with a wide basket of choices
- Ensuring 100 per cent registration of vital events – births, deaths, marriages and pregnancy; and prevention
- Controlling communicable diseases, especially AIDS.

The strategies to achieve these goals include:

- Decentralised planning and implementation through panchayat raj institutions (PRIs)

- Convergence of health services at the village level
- Empowering women for improved health and nutrition
- Ensuring child survival interventions
- Involving diverse health care providers
- Developing increased partnership with NGOs and the private corporate sector
- Encouraging a range of clinical, laboratory and field research on maternal, child and reproductive health care issues.

Areas of concern:

The NPP, following the ideas of the Swaminathan Committee Report had attempted to move away from both the two-child norm and target-based approach. There was however a subtle disincentive approach in the sections dealing with the institutional arrangements for delivering the policy. At the same time, the NPP also emphasised the importance of high quality social development services at the ground level as being the most crucial arrangement for enabling people who would like to have fewer children to exercise that will.

At the conceptual level, the question to be asked is do we have a population policy or a family planning policy? Imbricated in a population policy ought to be a vision for development, with macro-issues of income, employment, food, health and rights as the focus and not merely strategies for generating acceptance of contraceptives. Second, what are the instruments for such policy? How are macroeconomic forces shaping the enabling conditions necessary for health and family planning? What, then, are our priorities with specific reference to the poor? How are issues of livelihood, poverty, inequality, hunger and ill health reflected in the NPP? Finally, there was a need for reconsidering some of the tools to attain the goals of the NPP, specifically the move to induct long-acting, provider-controlled and women-centred hormonal contraceptives in some states and policies of incentives and disincentives in all of them.

It is clearly necessary to distinguish between the philosophy and actions towards a population policy, and those towards a family planning policy. The former should

include, besides demographic concerns, larger issues of sustainable and equitable development. In this context it is necessary to spell out the links between macro economic policy and population. The government's repeated stress on the need to stabilise the size of the population as a precondition for economic development misjudges the linkages, and sidesteps the lack of effective and equitable development policies. The NPP is not linked to an effective and equitable health policy. The fact that health itself receives low priority among planners is a matter of great concern. It is desirable, and eminently possible, that at least 5 per cent of GDP be earmarked for health. It is unambiguously clear that the state, and state alone, can play the necessary role in the universal provision of comprehensive primary health care, irrespective of people's ability to pay. It is deeply disturbing that the NPP appears to regard primary health care as merely primary level care.

The increase in the incidence and prevalence of communicable diseases, in infant mortality rates and in maternal mortality attests among other factors, to the erosion of public health services in the country. There is an urgent need to arrest this alarming trend. The dilution of the state's commitment to public health, and the subsidies given to the private and NGO sectors in the name of efficiency and increasing inaccessibility to health care for the people of the country. There is an urgent need to regulate the private sector that is currently not accountable to any institution, while simultaneously improving managerial and supervisory capacities in the public.

Disincentives, incentives and targets have no place in a family welfare programme. First, they are unnecessary, as birth rates have commenced a decline in large parts of the country. Second, as experience in the past indicates, they are ineffective and serve only to generate false programme performance data. Third, the financial allocations for incentives are a drain of scarce resources that ought to be utilised for strengthening Primary Health Care. Fourth, they inflict damage on the credentials of a so-called welfare programme by deeply alienated people the poor and the powerless in particular, from the health care system. Finally, they profoundly violate democratic rights. Indeed,

considering the NPP is framed in the discourse on rights, it is fundamentally at variance with policies of incentives, disincentives and targets.

There is an urgent need to strengthen MCH services that have suffered as a consequence both of the collapse of the public health system and the focus on the family planning programme. At the same time, there is a need to promote user-controlled, safe, effective and temporary methods of contraception. Equally important is the need to monitor and systematically study the health implications of contraception, including sterilisation. Strengthening the PRIs is an important step in the right direction even though the experience has not been the same all over the country. They have a crucial role in the planning, monitoring and implementation of all health and family welfare programmes, but cannot supplant the role of the state. The existing data collection system leaves much to be desired. This has to be strengthened as part of the overall strengthening of the health care system rather than by initiating parallel systems of data collection or launching ad hoc studies.

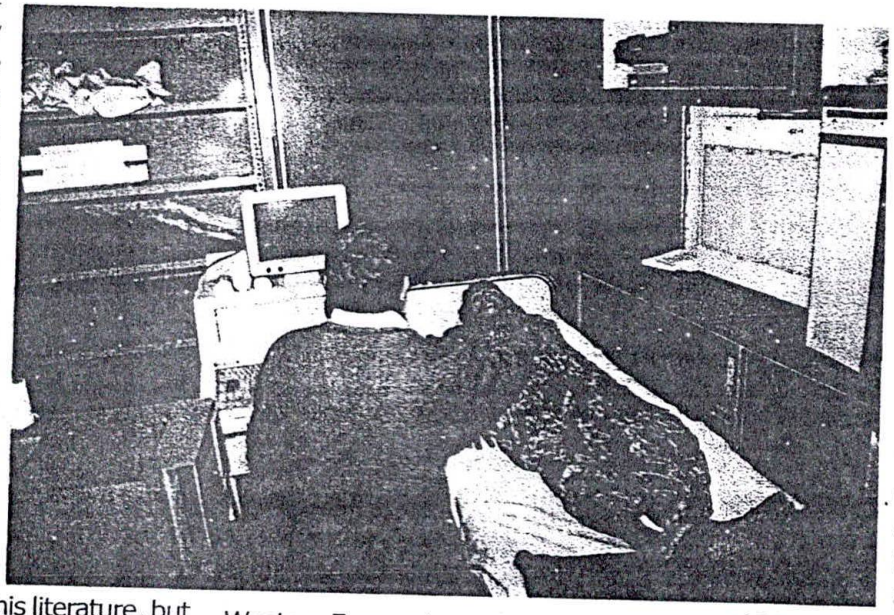
Research should be an ongoing activity of all health and family welfare programmes rather than end-term project appraisals that lead to neglect of process oriented research. Research funding should not be centralised but should be available at different levels for appropriate, epidemiologically and socially relevant inter-disciplinary health research. There is no place for donor-driven agendas of research that are all too frequently epidemiologically misplaced. In this context, there is an urgent need to strengthen public institutions of research that at one time produced nationally and internationally acclaimed epidemiologically relevant studies but are now suffering the consequences of systematic neglect and fund cuts. PRIs should be involved in the ethical review of research since ideas of informed consent have proved problematic in the Indian context. There should be a renewed focus on the family, on groups such as landless labourers, dalits, and other marginalised groups especially in the light of globalisation and SAP

***Excerpts from the report – Economic and Political Weekly dated 9th April 2001**

Female Sex Selective Abortions: Some Iss

In this important article, Mohan Rao, professor at the Centre of Social Medicine and Community Health, Jawaharlal Nehru University, draws attention to the magnitude of the problem and argues that along with the spread of conservative ideologies, state policies are also contributing to the reinforcement of traditional anti-female ideologies and in engendering masculinity.

The human race sometimes uses the most modern means in the service of ancestral anxieties, the fatal promise of immortality supposedly offered by a son. This is reflected in the utilization of the most advanced technologies proffered by the reproductive technology industry to abort female fetuses in the country, in what is referred to as Sex Selective Abortions (SSA)[1], or indeed select only male embryos for implantation. There has been much concern, even in official circles, and a huge amount of academic and journalistic literature. I do not intend, in this paper, to review this literature, but instead, after a brief description of some selected studies, discuss some of the arguments that enfold the issue, sometimes occluding it. It is admittedly a profoundly complex issue – touching at the heart of Indian society, of caste, class, religion and region. Above all, its is about patriarchy which finds support in the most unlikely quarters. It is also a concern with the strangeness of bedfellows that politics around this issue throws up, as indeed around the debates on the Uniform Civil Code: the most patriarchal Hindu and other religious groups are apparently "progressive" on this issue, while some feminists are not.



The female male ratio (FMR) in the world - that is the number of females per thousand males - is 990. Western Europe has a figure of 1,064 females per thousand males and Africa, 1,015. Asia as a whole has FMRs of 953, but India shares extremely negative sex ratios with a number of her neighbours in Asia. Values of less than 950 females per thousand males are found in countries of West Asia (940), Pakistan (929), India (933), Bangladesh (939) and China (941), an arc of anti-female countries, cutting across religions.

In India, there has been a steady decline of the sex ratio c 20th century. The 1901 census s 972 females per thousand m declined steadily to 946 in 19 in 1961, and 930 in 1971. Th Census threw up a happy figure females per thousand male optimistic thouc indicated a halt decline in th ratio. The 1991 however put p this optimisr revealed a fu decline to 927 1981 figure, it is accepted demographers, caused by a signi under-countin females due decline in the qu of the 1971 cer Demographers agreed that the 1 and 2001 Censuses are free from infirmity. This is to say that the 2 census figures, of 933 females thousand males, are real and indica of an improvement in the ove survival of females. Have we tl turned the corner?

The Sex Ratio could turn femin simply because more men than wor have migrated. But the Juvenile or C Sex Ratio (CSR) is not subject to t limitation. And it is this that is dee worrying. Despite the slight ove

improvement in the SR, the CSR in India as a whole has declined significantly - from 945 in 1991 to 927 in 2001. It is estimated that there are 35 million missing females in India as per the 2001 census (Patel 2004).[2]

This decline in the CSR has been particular notable in Himachal Pradesh (897), Punjab (793), Chandigarh (845), Haryana (820) and Delhi (865), the classical region of the north and west referred to by Oldenberg as the Bermuda triangle for missing females (Oldenberg 1992).[3] In all these states the number of female children per thousand male children in the 0-6 years age group declined by more than 50 between 1991 and 2001. Gujarat (929) and Maharashtra (946) have also unfortunately joined this group of states.

A part of the declining CSR is due to continuing anti-female rates of infant and child mortality. But more significantly, there has also been a marked masculinisation of the Sex Ratio at Birth (SRB) In India a figure of 105 male births for 100 female births is considered the norm.[4] However, estimates of the SRB for 1998 reveals an all-India figure of 111 males per 100 females. This is indicative of sex-selective abortion (SSA) of females (Premi 2001).[5] Figures above this national average of the SRB are seen in Gujarat (113.9), Haryana (123.3), Punjab (122.8), Rajasthan (114.8) and Uttar Pradesh (118).

A 2003 report simply titled *Missing*, prepared by the United Nations Population Fund (UNFPA), Ministry of Health and Family Welfare and the Census Commissioner, which mapped the adverse CSRs in India captures the decline in the number of girls (UNFPA 2003).[6] It reveals that 70 districts in 16 States and Union Territories have recorded a more than 50-point decline in the CSR between 1991 and 2001. For instance, in Gujarat, Rajkot shows a decline from 914 in 1991 to 844 in 2001; Mehesana had a figure of 899 in 1991 but 798 in 2001; only eight districts continue to record a CSR of more than 900 girls as compared to 20 districts in 1991. In Maharashtra, eight districts of central and southern Maharashtra have shown sharp decline to less than 900 girls per 1000 boys. Except for three, all districts of Rajasthan recorded CSR of less than 950 girls. The majority of districts of Delhi record CSR of less than 900 girls; the prosperous South Delhi declining from 912 in 1991 to 886 in 2001, South West Delhi from 904 in 1991 to 845 in 2001. In Haryana, the state average has declined from 879 in 1991 to 820 in 2001, with almost all districts revealing figures of less than 850 girls to a 1000 boys. In Punjab, the state average has declined from 875 in 1991 to 793 in 2001, with none of the districts recording more than 850 girls per 1000 boys In Himachal Pradesh, the state average declined from 951 in 1991 to 897 in 2001, with eight out of 12 districts showing less than 950 girls. In Tamil Nadu, the state average has declined from 948 in 1991 to 939 in 2001; in Salem the epicentre of female infanticide the CSR declined to 826 girls per 1000 boys.

The decline in CSR has spread to regions and populations hitherto considered immune, namely the states of the south and west of India and populations of SCs and STs. Indeed the masculinisation of CSR has been particularly precipitate among the Scheduled Castes population (Agnihotri 2000).[7] What is also interesting is that the decline is more marked in the more developed and better-off regions and in more literate and better-off social groups.

A large number of explanations have been proffered for the devaluation of female lives in India. These range from marriage and

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"I would suggest that along with the spread of conservative ideologies, state policies are also actively contributing to the reinforcement of traditional anti-female ideologies and in engendering masculinity."

"What is often not recognised is the withdrawal of the state – from health, education, employment generation and actively combating anti-women traditional values – engenders both the feminisation of poverty and the shrouding and enfoldment of women, sacrificing them to the altar of the family."

kinship patterns, to female work participation rates in wheat and rice cultivation, to laws governing inheritance of property and so on. Evidence of this was evident as early as the 1961 Census, as revealed by Krishnaji, which showed a significant relationship between landholding and negative sex ratios (Krishnaji 2000).[8] Harris White (Barbara Harris White *et al*1996)[9] , Judith Heyer (Heyer 1997)[10] and Alice Clark (Clark 1987)[11] have all drawn attention to the imbrications of Brahminical marriage patterns among other castes, the interlocking of class and social mobility and the spread of dowry. I would suggest that along with the spread of conservative ideologies, state policies are also actively contributing to the reinforcement of traditional anti-female ideologies and in engendering masculinity.

One of the earliest studies on the subject found 430 of 450 women in an urban clinic who, when told that the sex of the baby was female, wanted to have an abortion. In contrast, all 250 cases where the baby was male continued with the pregnancy, even with risk of genetic disorders (Ramanama and Babawale 1980).[12] It is often argued that women themselves accept and endorse sex selection but are they in fact making a choice? Some researchers certainly seem to think not. The decision is often a response to intense pressure to produce male heirs, often through implicit threats of violence or husband's remarriage. Most women make their choices in the context of their families and the patriarchal system that does not favour the birth of a female child (Oomman and Ganatra 2002).[13]

That we have a problem of large magnitude is realized. Yet the early steps to deal with this have been extremely problematic indeed. The Indian Medical Association has been reluctant to take action against erring members. But it joined UNICEF and the National Commission of Women organising a meeting with so-call religious heads, the very struts patriarchy, and some among thei defenders of widow immolatio Although a large number of progressi women's groups and health grou boycotted this meeting, Madhu Kishw defended this as "cost –effective"(Ra 2001).[14]

Although all religious heac present at this meeting condemne SSA, the moot question of course i why groups, who in the past ha opposed widow remarriage amon Hindus and more recently, afte Deorala, supported widow immolation have now become progressives ir opposing SSA. The answer of course is the familiar anxiety about so callec Muslim rates of population growth. Earlier Mr. Giriraj Kishore of the Vishwa Hindu Parishad had condemned access to abortion in India, arguing that Hindu women disproportionately aborted fetuses *(Ibid)*.[15] I need hardly add that lack of access to safe abortion is one of the leading causes of the high maternal mortality rate in the country.

What is often not recognised is the withdrawal of the state – from health, education, employment generation and actively combating anti-women traditional values – engenders both the feminisation of poverty and the shrouding and enfoldment of women, sacrificing them to the altar of the family. Thus the 1990s have seen a sharp increase in violent crimes against women, especially dalit women (Human Rights Watch 1999).[16] It has also witnessed a significant increase in so-called honour killings, especially in the same areas of north and west India that have also seen an increase of SSA (Chowdhry 2000).[17] Particularly sharp increases in dowry deaths have also been documented in these regions. As Chowdhury has revealed in her study, in all these cases, it is almost impossible to obtain

state action (*Ibid*).[18]

Punitive and coercive population policies, especially those announced by several states, are an invitation to female SSA. Not curiously, a large number of respondents in a study of female infanticide in Salem district explicitly stated this. The women interviewed felt that they could not accept sterilisation as it interfered with their ability to work on the fields. What they were doing, they argued, was "traditional" and achieved precisely what the Government of India wanted. A study in Mumbai revealed that a majority of doctors performing sex-selective abortions stated that they did so in order to control population growth (FRCH Study cited in Gupta 2000).[19] The clients were largely educated and came mainly from the middle classes.[20]

Some feminists referring to the issue in terms of reproductive rights and choice ironically justify SSA. This argument goes that people have no use for abstract concepts as sex ratios. The lives of Indian women were so terrible that this technology offered them an element of choice, indeed of empowerment. Over time a decline in the supply of girls might improve the demand for girls and thus their status. What this argument misses out is extremely important: women are not in fact exercising agency when they exercise this "right" to SSA.

The appeal of the reified concept of rights was also evident during the hearing of the Parliamentary Committee on the Empowerment of Women on the issue of Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Amendment Bill 2002, that considered representations from the public to proposed modifications in the PNDT Act. The modifications, in essence, sought to include a range of pre-implantation diagnostic techniques in the purview of the Act, making their use for sex-selection actionable. They also sought to create structures for the registration and monitoring of all facilities offering these services, as well as tightening punitive measures for the violation of the Act. Not surprisingly, representatives of the medical industry — that has contributed to the dismal scenario of the adverse sex ratios in the country — objected to the proposals on the grounds that such technologies were essential for bringing down unconscionable levels of maternal mortality and for reducing the incidence of congenital abnormalities.

While it is indeed true that the Maternal Mortality Rate in the country is high and needs to be reduced, it is nevertheless true that the contribution such technologies can make towards this is extremely limited, if not non-existent. As epidemiological data on maternal deaths in the country indicate, even within the reproductive age group of 15-45 years, causes related to reproduction account for merely 12 per cent of all causes of death. Even within the reproductive age group of women, anaemia and communicable diseases take a far higher toll. Excluding these major causes of death, the most significant factor is lack of access to safe and effective natal care. In the absence of these, to argue that pre-natal diagnostic technologies are necessary to bring down the MMR is clearly spurious.

Representatives of health groups and women's groups pointed out that the medical profession's commitment to bringing down congenital abnormalities is highly selective and thus deeply suspicious (Delhi Science Forum 2002)[21]. Some years back, when health groups and women's groups were involved in a campaign against high dose oestrogen-progesterone based contraceptives, since banned, on the grounds that they induced congenital abnormalities in

"Representatives of health groups and women's groups pointed out that the medical profession's commitment to bringing down congenital abnormalities is highly selective and thus deeply suspicious (Delhi Science Forum 2002)[21]."

What this underscores is not epidemiological priorities or indeed concerns about women's health but the power of the global reproductive technology industry to seek markets. There is no doubt that India constitutes a large and lucrative market estimated at Rs.126,270 crore in 1998 (Srinivasan 2004).[23]

foetuses exposed *in utero*, the medical profession completely disregarded the existing scientific information and campaigned against the ban (Rao 2004).[22]

It was also pointed out that scientific evidence on the prevalence of congenital abnormalities in India is woefully inadequate. There is also no data to substantiate the claim that ultra-sound and such other technologies that have been so cavalierly used have indeed brought down the prevalence of congenital abnormalities. It is thus incumbent on those who wish to continue to use such technologies on this ground to furnish data in support of their claim. On the other hand, those who wish to curtail the misuse of these technologies, have data on increasing masculinisation of both the CSR and the Sex Ratio at Birth, attesting to SSA on a large enough scale not warranted by the prevalence rates of congenital abnormalities.

From a public health perspective, then, there is very little role for such technologies. Doctors can perhaps be forgiven for not reflecting on Say's Law that supply creates its own demand. They have evaded the responsibility of creating an injection culture in our population just as they now evade the responsibility of a "tests" culture. But they cannot be forgiven for not knowing that the prevalence of congenital abnormalities in 1.5 per cent of all pregnancies; that of these, possibly only fifty per cent can be identified by non-invasive technologies. Yet there has occurred an epidemic of the spread of sonogram and ultra-sound clinics in a completely unregulated manner. Indeed Pre-Implantation Diagnostic Techniques (PDTs) are already available in our metropolitan cities.

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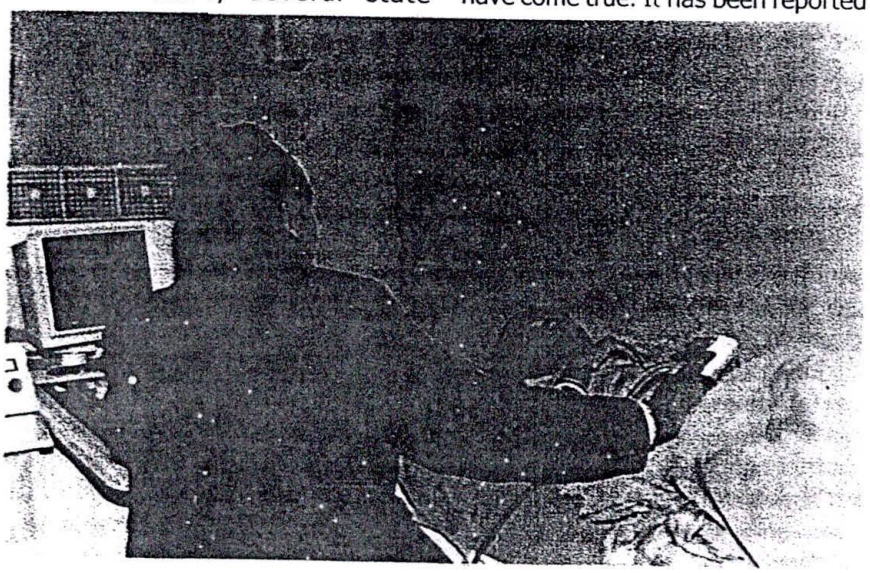
What this calls attention to, abo all, is the urgent need to monitor a regulate all public health technologi and practices, especially given the fa that India has the dubious distinctic of being one of the largest unregulate private health care markets in th world. This is the case with pre-nat and natal diagnostic tests as wit ~~contraceptive~~ technologies. A surve carried out by Women's Centre Mumbai, revealed that between 198 and 1986, the number of clinics offerin sex-determination tests in Mumba alone increased from 10 to 600 (citec in Gupta 2000).[24] In the year 198 alone, 40,000 female fetuses were aborted in Mumbai.

Representations to the Parliamentary Committee pointed out that the limitations of legal action alone to curb female sex selective abortions are very real. Yet, they are nevertheless crucial in a society to establish norms of ethical medical practice.

In a sense rising to the defense of the medical industry, Madhu Kishwar, the leading feminist-revisionist, pleaded against widening of the ambit of the law. Kishwar argued that women in India exhibited choice, indeed agency when they undertook sex-selective abortions. It is not for the state to intervene in the family— the deeply personal, she said. On the other hand, Kishwar also argued that a corrupt state merely brought in laws in order to increase levels of corruption. Indeed she argued that doctors were by and large helpless, coerced into performing SSA by influential people. What was forgotten of course is that far from showing their agency, women who took recourse to sex-selective abortions were doing so under pressure from families, and

were thus victims of patriarchy (Bhalla 2004).[25] What this also reveals is the miraculous power of the concept of reified rights to turn things on the head, and indeed become part of the arsenal to further oppress and subordinate women.

The National Population Policy, 2000, emphatically rejected any element of coercion or disincentives in the implementation of the family planning programme. Yet in contravention of the NPP, and indeed the commitments made by the Government of India at the ICPD in Cairo in 1994, several state governments have announced population policies that carry a string of disincentives and a Two Child Norm for Panchayats. Women's groups and health groups had protested to the National Human Rights Commission that such a norm was discriminatory and would lead to a further increase in SSA (Rao 2003).[26] Subsequently the NHRC in a Declaration stated: " Note further that the propagation of a two-child norm and coercion or manipulation of individual fertility decisions through the use of incentives and disincentives violate the principle of voluntary informed choice and the human rights of the people, particularly the rights of the child. Similarly, the use of contraceptive targets results in undue pressure being put by service providers on clients" (NHRC: 2003:1-2).[27] Ironically just a few days later, on the 31st of July 2003, newspapers announced that a three-judge Bench of the Supreme Court upheld a Haryana Government law prohibiting a person from contesting or holding the post of sarpanch or panch if he or she had more than two children.



Unfortunately the fears of the health groups and women's groups have come true. It has been reported that a study commissioned by the Ministry of Health and Family Welfare did indeed find expectedly dolorous outcomes with the imposition of the Two-Child Norm for Panchayats. The study, covering A.P., Haryana, M.P., Orissa and Rajasthan concluded diplomatically: "The way the norm is conceptualized and currently implemented is not without serious unintended negative consequences" (*The Hindu* 2003:5).[28] Thus 75 per cent of those disqualified from contesting elections to the PRIs were from the SC, ST and OBCs. In Orissa and A.P., 55 per cent and 48 per cent of those disqualified were women. The study also found an increase in the number of pre-natal sex determination tests, followed by SSA. It also found an increasing incidence of desertion, divorce and the "donation" of children in adoption. Yet another study concluded, "women, especially from marginalized groups suffered the consequences of the Act from causes beyond their control (Sama 2003:2).[29]

It is now abundantly clear that given the ideology of son-preference in the country, particularly marked in the high fertility areas, a vigorous pursuit of the two- child norm is an invitation to female SSA. Indeed, it was the explicit recognition of this link that compelled the Chinese government to modify its one-child per family norm.

A recent study of abortion in Maharashtra found that a large number of doctors were performing SSA even though they knew it had been banned (Bandewar 2003).[30] Their reasons were many: that it was for the woman's sake - to save her from illegal abortions; that if they did not do it, other doctors would; above all that it for the good of the country since it brought down population growth. The fight against SSA is thus a fight against anti-women population and health policies; it is also a fight against a medical system profoundly dismissive of wider social concerns in the rush for profits. Above all, it is a battle for women's democratic rights to equality in property and against anti-female religious world-views.

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Analysis

"The two-child norm only leads to female foeticide"

By Madhu Gurung

Commenting on the serious decline in the 0-6 sex ratio in India, leading demographer Ashish Bose states that the government's policies are all wrong. The two-child policy has got mixed up with female foeticide. Government slogans like '*Beti ya beta, dono ek hain*' make little sense. And financial sops for couples having a girl-child can make no dent in the traditional preference for sons in India

Census 2001 figures, released recently, showed that the child sex ratio has dropped even further – from 94! in 1991 to 927 in 2001. States such as Punjab, Haryana, Himachal Pradesh, Chandigarh and Delhi now have fewer than 900 girls per 1,000 boys. What are the causes and implications of this shocking drop in sex ratio?

Leading demographer Professor Ashish Bose recently conducted a study of female foeticide in Punjab Haryana and Himachal Pradesh, which showed that "demographic fundamentalism" or preference for a boy child is on the rise in the country, resulting in a declining sex ratio. In this interview, Prof Bose discusses the sex ratio figures and also comments on the recent controversy over the growth-rates of population in India by religion.

What are the most significant findings of Census 2001?

The latest Census shows that the juvenile sex ratio, which had become a concern in the 1991 Census, has gone down even further. In 1991, the national average for the child sex ratio, in the 0-6 age-group, was 945 Several states, including Punjab, Haryana, Himachal Pradesh and Uttar Pradesh, had fewer than 900 girls per 1,000 boys. However in Census 2001, in Punjab, Haryana, Himachal Pradesh and Gujarat alone, the sex ratio had plunged. In 1991, all districts of Punjab except Nawanshahr, recorded a child sex ratio lower than 900. In the 2001 Census, while Nawanshahr recorded a child sex ratio of 810 girls per 1,000 boys, more alarmingly, 10 of the 17 districts of Punjab recorded fewer than 800 girls per 1,000 boys.

The past decade also saw a worsening sex ratio in Haryana. In 1991, not a single district recorded less than 800. In 2001, Haryana's well-known districts like Kurukshetra, Kaithal, Ambala, Sonepat, Rohtak, al recorded figures less than 800.

Gujarat, in 1991, enjoyed a sex ratio of 900 girls for every 1,000 boys, but the 2001 Census throws up a dismal picture. There is a sharp decline in a large number of its districts. Of the 20 districts in Gujarat, only eight recorded a child sex ratio of 900, the rest of the districts were very low. In fact in Rajkot and Mahesana the situation is alarming and showed a ratio of just 798 girls per 1,000 boys.

In Himachal Pradesh too there is a drastic drop in the child sex ratio, especially in districts adjoining Punjab and Haryana. What was deemed a normal sex ratio of more than 950 in 1991, had dropped drastically in Himachal Pradesh, eight out of 12 districts being the worst. Most of the prosperous northern states have recorded more than a 50-point decline in the child sex ratio in the past 10 years.

In Rajasthan, more districts have recorded child sex ratios lower than 950, and it's slightly better amongst predominantly tribal populations. But even there, there has been a drop in child sex ratio especially in Chittorgarh and Udaipur. The child sex ratio has declined in Alwar, Sikar, Jaipur and Jhunjhunu districts. This could be attributed to the two-child norm pushed actively by the state government.

In 1991, Delhi's child sex ratio was lower than 950. Ten years later, the 2001 Census shows that almost all districts recorded a child sex ratio less than 900, with its more prosperous southwestern part showing a decline from 904 girls in 1991 to 845 girls in 2001.

In Maharashtra, in Jalgaon, Aurangabad, Beed, Solapur, Sangli and Kohlapur districts, the child sex ratio has gone from bad to worse. Maharashtra's eastern districts like Nagpur and Jalna also show a significant drop.

Of all the southern states that come up on the map of worsening child sex ratios, is Tamil Nadu. Little seems to have changed since 1991. Dharmapuri, Namkkal, Theni and Madurai districts had recorded a low child sex ratio in 1991. But the recent 2001 Census shows that the problem has spread to Tiruchi, Cuddalore and

Vellore districts. In 1991, Salem had recorded the lowest child sex ratio at 830 girls which, the latest 2001 Census shows, has further declined to 826 girls per 1,000 boys.

What are the reasons for the decline in sex ratio? Census 2001 shows that during the 1991-2001 decade the overall sex ratio increased from 927 per 1,000 to 933 per 1,000 (an increase of six points). But during the same decade the child sex ratio (0-6 years) dropped from 945 to 927 (a decline of 18 points) while the sex ratio in the 7+ age-group increased from 923 to 935 (an increase of 12 points).

When you talk of the Indian Census, it is important to understand that our sex ratio is defined as the number of females per 1,000 men, unlike the West where sex ratio is the complete opposite and defined as the number of males per 1,000 females. Like China, in India too masculinity is increasing. But having said that, I also want to say that in India we have a poor civil birth registration system and most of our data are from hospitals where births have been registered. In India there are thousands of births that go unreported. So what we have is really biased data, not very reliable, but these are data constraints that we have to work with.

If you analyse in detail, India has 28 states and seven union territories that add up to 35 administrative units. We have data of 593 districts that were there in 2001, now the districts have gone up to 600. We have to demographically map them. Your figures are correct – those are the figures we have arrived at.

The phenomenon of declining sex ratio that showed up in Census 2001 is worst in Punjab, Haryana, Chandigarh, Delhi, Western Uttar Pradesh, Gujarat and Maharastra. This defies all demographic theories as these are prosperous states. You expect that when people live better, have better education and economic security, there will be less of a traditional bias against the girl-child; but in India, like China, it has only worsened the situation. Suppose like China, instead of just one, we had a two-child policy, then the Jats and Punjabis would ensure that they had two sons.

In India, there is an unholy alliance between tradition and technology. Tradition is marked by son-preference. Technology started in the '80s with amniocentesis, most readily available in Punjab, the state made most prosperous by the Green Revolution, and having a long tradition of son- preference. Today ultrasound is the sex-selective technology that is widespread in most prosperous states.

The reasons are easy to define – prosperity ensured better infrastructure, more machines and more doctors to perform the tests. People had money-power to pay for the technology and of course, as infrastructure improved, people could access the clinics easily. All this made foeticide rampant. If we look at the historical perspective of Punjab, where the sex ratio is the worst, the state has a long martial tradition, and women were seen as liabilities. Sons were preferred as they could carry on the martial tradition.

The new factor in Punjab is migration. Punjabis are the most eager to migrate to the West. The propensity to migrate is higher for young boys than for young girls. In Chandigarh, most young people are looking towards New Zealand for migration because that country is also agriculture-oriented.

In Haryana, the Jats have their own tradition of land ownership, so sons are preferred. It is a dismal situation. In the future, Punjabis will have to marry non-Punjabis, probably girls from Bihar and UP, which are demographically surplus-populated states.

Son-preference has spread even to south India. Social wokers are saying the reason is patriarchy, or women having internalised the value systems of men. The whole phenomenon is supply-driven rather than demand-driven and women feel they have a better self-image and status in society if they have sons.

A UNFPA report in 1997 pointed out that if Kerala's sex ratio of 1,036 females per 1,000 males prevailed in the entire country, there would be close to 32 to 48 million missing women. In the light of the Census 2001, what is your estimate of missing females?

This was a romantic expression coined by Amartya Sen. You cannot arrive at figures like that because you must look at the individual family unit. For me this is a non-issue because much more fine-tuning is required to understand the social phenomenon of declining sex ratio. All this is hypothetical and good for newspaper headlines.

Does the latest census show that the DEMARU trend (an acronym you coined standing for Daughter Eliminating Male Aspiring Rage for Ultrasound) has proliferated in the states and reflects a skewed sex ratio?

Yes, it is spreading, and the reason is better infrastructure, better education, which ensures more doctors, and overall prosperity, which ensures people's ability to pay. The next Census will also show the declining sex ratio. I was in Rajasthan on fieldwork, collecting data along with a team, and we had a questionnaire we had prepared, and I had some young people going around the villages asking the same question. The question was: how many sons do you want? And almost everyone had put down two sons, so I decided they had all sat together and put it down. So I went around and met a woman on the road and asked her the same question and she said she would like at least two sons. When I asked why, she said, why do you have two eyes?

In your booklet *Darkness at Noon*, in a chapter on societal action, there is a doctor who is quoted as saying that prenatal tests should be permitted if the first child is a daughter so that couples can have a planned birth, that is, a son thereafter. After this they can go in for sterilisation. What do you say?

I think the government's two-child norm and female foeticide have got mixed up, through no fault of either the government or the people. The famous family planning slogan, *Hum do hamare do*, mathematically adds up to only three possibilities – that people have two sons, two daughters, or one son and one daughter. Two daughters are usually not acceptable – culturally or economically, because they have to be married off. While one son and one daughter are tolerable, the ideal situation people strive for is two sons. When a vast majority of people are poor, with no health or social security, sons make the best survival strategy. Slogans like *Beti ya beta dono ek hain* make little sense. How can they be equal for people, when girls have to be married off and sons can be used as crutches?

It's nonsense when people say Hindus need sons for cremation rights. Who is thinking of death, when survival is questionable on a day-to-day basis.

As for the government's sterilisation incentives, it has not really worked because they pay a pittance. It's barely Rs 200, or Rs 500 at most. Money-power cannot be invoked over this social phenomenon. Schemes like sterilisation are only good on paper, but do not have the desired impact.

An amendment to the Pre-natal Diagnostic Tests (PNDT) Act was instituted on January 14, 2003. Has it helped? What should the ideal government policy be?

Without insulting the Supreme Court order, it has not helped. How can anything help against demographic fundamentalism? How can anyone question why sons are required over girls? However, I am not opposed to the law as it creates an enabling environment to create awareness against female foeticide.

Our doctors are cleverer than our policemen, our law demands evidence and not a single one has been caught with anything incriminating. Sex determination tests are the chief money-spinners. The Supreme Court has ordered that all ultrasound machines have to be registered, but who will supervise this – the chief medical officer, who is also a doctor? How can he complain against other doctors? The truth is the PNDT Act is not implementable.

As to what should be the ideal government policy, one suggestion that I have given the government is to hire private detectives who should collect incriminating information against doctors who flout the PNDT Act, something like *Tehelka*... create a stir to get people working and rethinking.

Do you feel the girl-child schemes and financial help offered by the government are enough? Is there any one state where the girl-child policy has worked?

There may be marginal impact or no impact in most states, however well-meaning the government schemes may be. Schemes have to be innovative, imaginative and implementable. Sure, in states like Goa, Tamil Nadu, Andhra Pradesh and Kerala, the government family planning programme has worked, but not in states like Bihar and Madhya Pradesh. But there is not one state where the girl-child policy has been successful or the census data would not show up so negatively.

In Bangladesh, most of the schools I visited had more girls than boys, when culturally they have the same biases as us in India, and I learnt it was because each girl who came to school could take home a bag of rice for every month she stayed in school. Yes, such schemes may have their pluses and minuses. But we have to examine schemes that give people incentives, education to the girl-child that would enable her to earn in the future, and flexible school hours that ensure she stays in school and also contributes to the family income.

What are your recommendations? Is government policy addressing the problem?
Female foeticide is the result of an unholy alliance between the traditional preference for sons and modern medical technology, the increasing greed of doctors, the rising demand for dowry that makes daughters financial burdens, the ineffectiveness of the PNDT Act and the liberal Medical Termination of Pregnancy (MTP) Act, and the lack of any serious involvement of civil society in fighting this menace. The gender balance cannot be restored unless we make a frontal attack on all the players and stakeholders.

One possible way could be job reservation for women, because without economic empowerment, political empowerment will not be enough. However, this may not be acceptable to the government. I suggest a three-tier model involving the government, NGOs and panchayati raj institutions, with technical back-up from academic experts, social activists and management experts. Local initiatives by NGOs and individuals with vision in such fields must be permitted. No more additions to the already existing government schemes are recommended.

Funds must be made available to organisations, especially in the health sector, to initiate an awareness campaign through the electronic and print media. A nation-wide campaign must be launched to recognise and spell out all forms of gender violence and the disastrous consequences of the demographic imbalance. The role of the father in determining the sex of the child must be highlighted. All suspected cases of female

foeticide must be examined by state commissions and women's organisations, and action to punish erring doctors must be undertaken. The PNDT and Dowry Acts must be implemented in letter and spirit. The government should consider empowering reputed NGOs to deal with cases of female foeticide on a trial basis. There has to be vigilance at the local level and state supervisory boards and authorities at the district level have to be activated.

While recommending continuation of the government's sterilisation programmes, the concept of a small family norm should be left to the zilla parishads, panchayat samitis, panchayats and gram panchayats, to be handled at the local level. Financial sops to couples that have two daughters and agree to sterilisation are not effective because reproductive behaviour cannot be manipulated by such incentives. It would therefore be better to invest in special incentives for girls in the employment market, empowering them in terms of their earning capacity. This could ideally be handled by the Planning Commission instead of the Ministry of Health and Family Welfare, as is being done now. Years of propaganda have made people accept the small family norm of one son and a daughter or even two sons and a daughter. The Ministry of Health and Family Welfare should continue to propagate its population policy without emphasising the two-child norm, as it only leads to female foeticide.

High priority has to be given to field studies and research. There has to be collaboration between universities and research institutes, with NGOs that are qualified in this field. Only then can meaningful intervention strategies be evolved.

What are your comments on the recent 'by religion' growth rates?

When we talk about communities, it is important to point out that no two communities grow at the same rate. The newspapers write things to sensationalise their papers. What is important to know is that there is no decline in the population in any community in India barring the Parsis. In absolute terms, the proportion of population of each community must add up to 100. These proportions will depend on the growth-rate of population of different communities. So when I say that the Muslim population has gone up, that does not mean that the Hindu population has gone down. The Hindu population has also gone up, but the proportion has gone down.

Three things affect population growth: natural increase in population (that is birth minus death), net migration and geographical territorial adjustments (if any). In 2001, the census was conducted all over India. But in 1991, the census could not be conducted in Jammu and Kashmir (J&K) because of disturbed conditions, and likewise in Assam in 1981 census enumeration did not take place. So it is important to compare the comparables. Now that J&K has been enumerated in 2001, adjustments have to be made comparable to the 1991 Census.

So all I can say is that all over the world, the Muslim growth-rate is higher than the non- Muslim growth-rate. But in Muslim-dominated countries, where they do practice family planning, the growth-rate is less than in countries where Muslims are in a minority – as in India and Nepal, where there is some resistance to family planning.

Community-wise, in India, the Parsis have the lowest growth-rate, in fact it is running in minus. The Muslim growth-rate is 29.3%, the Hindu growth-rate is 19.9% and the Sikh growth-rate is the lowest at 17%. The Sikh growth-rate was 25% in the 1991 Census, so it has dipped drastically. The Christian growth-rate is 25%.

(Madhu Gurung is a Delhi-based journalist and consultant working on gender issues.)

InfoChange News & Features, November 2004