Sex Selection

Issues & Concerns

Cehat
Centre for Enquiry into Health & Allied Themes

Sex Selection Issues & Concerns

A compilation of writings

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Centre For Enquiry Into Health And Allied Themes

(Research Centre Of Anusandhan Trust)

CEHAT, in Hindi means “Health”. CEHAT, the research centre of Anusandhan Trust, stands for research, action, service and advocacy in health and allied themes. Socially relevant and rigorous academic health research and action at CEHAT is for the well being of the disadvantaged masses, for strengthening people’s health movements and for realising right to health care. Its insti-tutional structure acts as an interface between progressive people’s movements and academia.

CEHAT’s objectives are to undertake socially relevant research and advocacy projects on various socio-political aspects of health; establish direct services and pro-grammes to demonstrate how health services can be made accessible equitably and ethically; disseminate information through databases and relevant publications, sup-ported by a well-stocked and specialised library and a documentation centre.

We are a multi disciplinary team with training and experience in Medicine, Life Sciences, Economics, Social Sciences, Social Work, Journalism and Law. CEHAT’s projects are based on its ideological commitments and priorities, and are focused on four broad themes, (1) Health Services and Financing (2) Health Legislation, Ethics and Patients’ Rights, (3) Women’s Health, (4) Investigation and Treatment of Psycho-Social Trauma. An increasing part of this work is being done collaboratively and in partnership with other organisations and institutions.

Editorial

Son preference has been one of the most evident manifestations of gender discrimination in our society. With the advancement in medical science and technology sex selection has moved from female infanticide to sex selective abortions. Clear evidence of this is that the sex ratio in the 0-6 age group declined sharply from 979 females per 1,000 males in 1981 to 945 per 1,000 in 1991 and further down to 927 per 1,000 in 2001. Addressing the issue of sex selection and son preference has posed several challenges. It has been a long journey from the time the campaign against sex selection began to the present public interest litigation to examine the Pre natal diagnostic tests (Regulation and Prohibition of Misuse) Act and its implementation.

Historical Antecedents

The 1980s saw the rise of a campaign against the misuse of science and technology for the continuing discrimination against women. In 1982, women's groups protested against the results of a survey which indicated that an overwhelming majority of couples (90 percent) who had volunteered for clinical trials at the All India Institute of Medical Sciences in Delhi, were desirous of aborting female foetuses once their sex was known. This provided an impetus to begin a campaign to check the malpractice of sex-determination using modern technologies.

The Forum Against Sex Determination and Sex Pre-selection (FASDSP), an organisation of activists from women, health and people's science groups was then formed in Bombay in 1985 with a view to preventing sex determination tests. The prime objective of the campaign that was launched was to focus on the broader issue of discrimination against girls in all sectors of Indian society and not to pass a moral judgment on technology itself. The strategy was to enact a new law regulating diagnostic techniques without demanding a total ban, as it was felt that the detection of genetic abnormalities and other pathological conditions was essential.

Through its course the campaign faced several debates, dilemmas and contradictions. The first challenge was to regulate the practice of sex determination without modifying the Medical Termination of Pregnancy Act (MTP Act). This meant formulating a separate legislation and hence the Maharashtra Act (Maharashtra Regulation of Use of Prenatal Diagnostic Techniques Act, 1988) came into being in 1988. While the Act was in place and some implementation in terms of licensing clinics and laboratories was done, the monitoring machinery was a failure and no efforts at making the medical profession accountable were made. Further while Maharashtra had an Act, the absence of legal provision in other states provided opportunities for the medical profession to expand business across the border in Gujarat, Goa, Karnataka etc. After experiences with the Maharashtra Act, it was clear that doctors and providers of such technology were directly promoting sex-determination and hence national level intervention was needed to curb this malpractice. What was also much debated within the campaign was giving greater control over women's bodies in the hands of the state even though it was in the context of demand for greater state protection for women's rights. Nevertheless the demand for a national level legislation was made because efforts at getting the medical profession to self-regulate and follow ethical principles in medical practice had yielded no results. The intensified

campaign in the late eighties and early nineties lead to the formation of a legislation, now known as the Pre Natal Diagnostic Tests (Regulation and Prohibition of Misuse) Act, 1994 (known as the PNDT Act for short) which came into force by Jan 1996.

Continuing Downslide

Despite the PNDT Act being in force nationally the practice of sex determination continued and the sharp decline witnessed in the child (0-6 age group) sex ratio in 1991 was further down by 2001 Census clearly speaking of the deep-rooted trend of son preference. Though the census has reported an increase in overall sex ratio at the national level and also in majority of the districts at sub state level, as many as 465 districts, constituting a whopping 79% of the total 577 districts in the country, have registered a decline in child sex ratio between 1991-2001. The declining trends in child sex ratio have been glaring in Gujarat and Maharashtra where almost all districts have registered a decline in child sex ratio during the decade. Within Maharashtra economically better off districts such as Aurangabad, Kolhapur, and Sangli show the most adverse child sex ratios of 884, 859 and 850 respectively. States such as Haryana, Punjab, Himachal Pradesh and Tamil Nadu also lag behind. In districts such as Ambala (Haryana) and Amritsar (Punjab) the sex ratio in the 0-6 age group is as low as 784 and 783 respectively.

Such a dip clearly points towards increasing incidence of female foeticide and infanticide. On the decline in sex ratio, the census commissioner himself observed that the alarming down slide could be attributed to the "recent medical support in terms of sex determination tests" and to "social cultural bias against the girl child".

The Legal Battle

The PNDT Act after being in force for 4 years had not shown any evidence of stopping the malpractice of sex-determination. On the contrary new technologies relating to pre-conception sex selection were being promoted in the name of free choice. With this lack of concern on part of the State a Public Interest Litigation (PIL) being filed by Sabu George, MASUM and CEHAT in 2000. The main objectives of the PIL were firstly to shed light on the poor implementation of the Act and secondly, to upgrade the Act itself, to keep it at par with technological advancements which were creating far more sophisticated alternatives to carry out sex selection (the use of pre conception techniques such as the Ericsson method and Pre- implantation Genetic Diagnosis or PGD for short).

One of the main concerns through the campaign has been the issue of medical ethics involved in the practice of sex selection. With modernisation and development there has been a rapid proliferation of diagnostic technology. Techniques such as amniocentesis in the 80s or currently ultrasound are widely available and their use has become a routine that women are expected to go through in different trimesters of their pregnancy. Doctors have been instrumental in popularising several pre-natal diagnostic techniques as methods for sex selection as they have a lot to gain economically from such a practice. The widespread knowledge about the availability of sex determination tests coupled with a strong preference for sons means good business for them. The medical associations in the country haven't done much to check the unethical practice of its members.

There have been encouraging outcomes of the litigation. The first positive step forward was a favourable interim judgement by the Supreme Court of May 4, 2001. The order called for all the state governments to take necessary steps towards the implementation of the Act. The government, that is the Dept. of Family Welfare too got energised and they issued an advertisement in national dailies saying that it is a crime to carry out sex selection and also activated the Central Supervisory Board by calling a meeting. This was a step forward. The order also came down heavily on the medical profession and their unethical practice. As a result the Indian Medical Association (IMA) at the national level made a turn around and issued a warning to its members. The Federation of Obstetrician and Gynaecologist Societies of India (FOGSI) too showed some concern through its newsletter. The governments were also asked to conduct a survey of the existing bodies conducting these tests. The

hearings since then have been follow-ups on the May 4th directive. There has been very poor compliance by the State Governments including Maharashtra.

Another major landmark in the course of the PIL was the hearing held on the 11th of December 2001. The SC called upon the Chief Secretaries of Punjab, Delhi, Bihar, Rajasthan, Gujarat, Haryana, Uttar Pradesh, Maharashtra and West-Bengal to remain present before the Court on the 29th of January 2002 for non-compliance of orders passed by them. The SC also directed companies manufacturing ultrasound machines to provide information about the individuals or groups to whom Ultrasound machines have been sold during a period of last 5 years. Furthermore, the Customs & Excise Department were directed to supply information on number of ultrasound machines imported/sold to clinics or individuals as the case may be. The Centre was asked to frame rules for ensuing action. Till the time that such rules are framed some companies were directed to supply such details. These companies include Wipro GE, Philips Medical Systems, Siemens, Toshiba, Larsen & Toubro and Aloka. It also directed states to publish details of the stipulated committees within the Act.

On the 29th of January 2002, just as the earlier hearings, most States admitted on paper to having complied with the directives. As far as conducting surveys of clinics having ultrasound machines and registering of ultrasound machines, it was disappointing to note that no action was taken against defaulters in almost all States. There were also lists that made a mention of activities conducted to raise awareness on the issue, the objective and impact of which need to be looked into. Maharashtra in particular submitted a very shabby affidavit, but the Principal Secretary of Family Welfare present at the hearing claimed that the State has done a lot. A breakthrough during the hearing though was an order passed which directed the FOGSI, the IMA and the Indian Radiologist Associations to submit names of their members who posses ultrasound machines and verify if they are registered. This is the first time that the medical community has been pulled up ever since the PIL was filed two years ago. There have also been interventions made by doctors and the radiologists association during the course of the PIL.

The international debate on sex selection projects it as an opportunity for parents to choose the sex of their offspring and hence 'plan' their families. This is the argument adopted by one of the interventionists. The same cannot apply to the Indian scenario with son preference being so deep-rooted. The argument that the state shouldn't interfere with couple's 'freedom of choice' is invalid as son preference itself isn't a private but a socially shaped choice.

Through our courtroom experiences, often availability of legal abortion was seen as a hindrance to implementing a ban on sex selection and there was a tendency proposing amendments in the existing Medical Termination of Pregnancy Act (MTP Act) as a solution to this perceived hindrance. We would like to reiterate here that the MTP Act must be seen independent of the PNDT Act and any changes in the MTP Act should be independent of the PNDT Act. Also a number of supporters of a ban on sex selection subscribe to the pro-life argument, which compels one to be critical of the support the campaign gets. Litigating for a ban on sex selection has been a tight rope walk, especially in the context of protecting the right to abortion. Also harnessing a secular support to it is not an easy task.

Taking the Campaign Forward

A strong need has been felt to revive the campaign again to look at issues at a local level by collaborating with the state machinery at various platforms and externally act as pressure groups to ensure proper implementation of the Act. Anarea that needs focus is the medical profession. The increasing malpractice and poor concern for ethics within the profession should be brought to focus. An emphasis must be made on the profession and its associations to take responsibility to regulate the unethical practice of sex determination/ selection.

A core group of individuals and NGOs in Maharashtra, for instance, has been formed to provide direction and address various issues that would arise in the course of future advocacy. Sensitising on

gender issues (through collaboration with schools, colleges, youth festivals etc.), dissemination of information available on the issue and coordination between various NGOs were identified as certain key areas of work.

Sex selection in the present context is a complex issue with several stakeholders - doctors, the government machinery looking after the implementation of the Act, health and women's groups and civil society at large. Each has to play their part to deal with it at various levels. Implementation is what the Act lacks like most laws concerning women's rights do.

This publication is a collection of papers, articles and news reports on the issue. The purpose of this compilation is to bring together various points of view and voices that have shaped the sex selection debate to date. The first section traces the rising concern over sex selection across time. It puts into focus crucial debates that eventually led to the genesis of the campaign against sex determination. The section also comprises of papers studying the extent to which such a practice prevails.

The second section deals with the role of state and the legal battle towards a ban on the practice from the formulation of the Maharashtra Regulation of Use of Prenatal Diagnostic Techniques Act, 1988 to the Pre Natal Diagnostic Tests (Regulation and Prohibition of Misuse) Act, 1994. Section three looks at the impact such rampant practice of sex determination has on demographic indicators.

The last section looks at the social, cultural, economic and political aspects linked to the prevalence of such a practice.

Having been a part of the campaign against sex determination we feel a strong need for more groups and individuals to join in. Having got the state machinery to become functional in administering the provisions of the PNDT Act through the PIL, it is now time to take this process forward by engaging in a dialogue with civil society, educating them and monitoring the implementation of the Act wherever we are located. We urge all to join us in the journey towards ending discrimination against the girl child.

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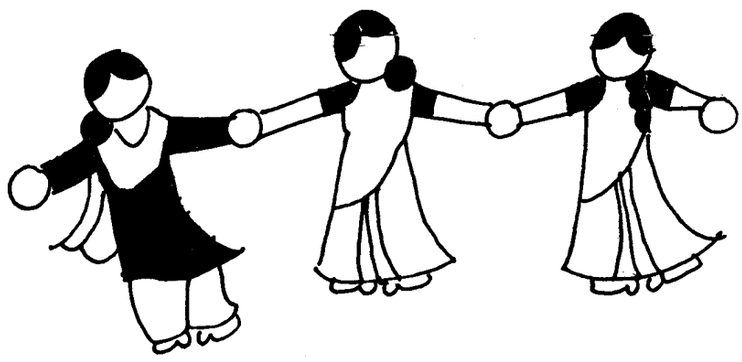

Section I

Sex Selection and the Campaign

1

Using Technology, Choosing Sex
The Campaign Against Sex Determination And The Question Of Choice

Forum Against Sex Determination and Sex Pre-selection

The Forum Against Sex Determination and Sex Pre-selection (FASDSP) is an organisation of activists from women and people's science groups. It was formed in Bombay in 1985 with a view to preventing sex determination tests. But the campaign that was launched as not focused on whether the technology was good or bad in itself but on the broader issue of discrimination against girls in all sectors of Indian society. An illustrative example is that it has been estimated that the sex ratio in India has declined from 972 females per 1,000 males in 1901 to 929 per 1,000 in 1991. The initiative of FASDSP differed from earlier and less successful efforts in that it attempted to tackle the problem more broadly and at multiple levels. Thus, the question of sex determination and sex pre-selection was seen as an integral part of the oppression of and the discrimination against women: as a misuse of science and technology against people in general and women in particular and, finally it's a human right issue. The strategy was to enact a new law regulating diagnostic techniques without demanding a total ban, as it was felt that the detection of genetic abnormalities was essential. In June, 1988, a law was passed in the State of Maharashtra. Although the state machinery has been rather unresponsive and the implementation slow, the work of FASDSP and the passing of the Act has attracted great interest and stimulated concerted action in many parts of India three more state governments - Goa, Gujarat, and Orissa - have announced their intension to introduce similar legislation. Even the Central Government of India has introduced a bill on sex determination tests and held discussions with organisations and people active in the campaign to secure their advice. The work of the Indian NGOs is, however, not easy and they are faced with a number of special problems and contradictions in this particular context like most NGOs. FASDSP has been wary of state control while the basic idea of its campaign has been to demand greater state protection of women's interest and in view of the fact that bias in favour of male children seems to be a predominant feature of Indian society, it has been an unpleasant task to go against what the majority of the people believe at and to collaborate with the state structures which are considered 'anti-people'. Another dilemma concerns the extent to which new technologies should be accepted. FASDSP does not believe in saying a categorical to technology. But certain questions have to be asked: Is there a qualitative difference between the various technologies? If so, how does one identify it and, if not, how does one evolve criteria by which a distinction can be made to help determine those technologies that are desirable and appropriate? Two final problems are brought up, which illustrate the realities of serious NGOs at work: one is the fear that the debates in groups will move further and further away from the concerns of those who are directly affected when technological innovations backfire, the other is the all-embracing question of how the debates in these groups can be translated into political and social action.

This collective contribution from FASDSP to the Bangalore seminar and, in revised form, to Development Dialogue gives a deep and penetrating picture of a problematique which is very close to the lives and thoughts of the women in India and, indeed, of many women all over the world.

In a world dominated by the scientific mode, Newtonian models for understanding natural and physical phenomena have displaced earlier world extent. Instead of placating such forces, we now endeavor to control them: scientific 'knowledge' is being used to determine and achieve the desired ends.

One dramatic illustration of this is the

use of a highly developed technology, amniocentesis, for detecting genetic abnormalities in foetuses and also as a means to determine their sex. Society has hitherto looked to gods and supernatural powers to realize its desire for male progeny; it has now turned to the petitioners of modern medicine.

This is not to say that the shift has been sudden. Traditional systems of medicine and healing have also contributed their share: Ayurveda lists a number of practices for determining the sex of the foetus after conception, and for selection at or after conception. Ayurvedic texts state that the sex of the foetus is determined only six weeks after conception, and therefore may be 'manipulated' prior to this. Pre-selection exists in prescribed copulation postures, times and days in diet, eating and consumption habits, especially after conception: certain rituals to be performed before and after conception, and so on.

What then do we find so different or shocking about modern allopathy medicine providing fail-state techniques for sex determination and pre-selection? For one, the fact that they are precisely that: accurate and irreversible. Then in the security of its modernism and 'neutrality' science reinforces or legitimizes conservative, orthodox prejudices. Again, is philosophy has become the dominant mode of thinking in society today, and the belief is that it invests men with more or less full control over lives and bodies. For all these reasons we feel that its 'achievements' need to be examined more closely.

Over the last ten years, efforts have been made to campaign against the practice of sex determination and sex pre selection. In the following pages, we as members of the Forum Against Sex Determination and sex pre selection (FASDSP) present our perception of this campaign in which we have been active participants as a group for the last seven years. We offer a detailed account of our efforts, a critique of our actions and strategic an appraisal of our understanding and a formulation of the issues as they emerged in the course of the campaign.

Obviously our journey has not been altogether smooth. We have consciously and unconsciously shifted lanes according to our understanding or as demanded by the prevailing situation. We wish to share our progress in order to help arrive at an understanding of the commonalities as well as the specificities of all the issues in which we are involved in one way or another.

Our journey begins in 1982

The government of India brought about a partial ban or sex determination tests in 1976. This followed a protest launched by women's groups against survey results which indicated that an overwhelming majority of couples (90 percent) who had volunteered for clinical trials at the All India Institute of Medical Sciences in Delhi, were desirous of aborting female fetuses once their sex was known. When the Government banned the tests in public hospitals, the issue was forgotten.

The existence of private clinics offering this test remained more or less unknown, until some national dailies published news and advertisements about a particular clinic in Chandigarh in 1982. Immediately women's groups from Bombay, Delhi and other places issued a statement against the test. People's science and health groups such as the Lok Vidayan Sangathana and the Medico Friends Circle, as well as research organisation such as the Centre for Women's Development Studies. Research Unit on women's studies, SNDT, Bombay and the voluntary Health Association of India joined in the protest, questioning the role of scientists and doctors who helped to propagate the tests.

During this period the emphasis of the campaign was mainly on writing articles in the media and creating a pressure group by highlighting the issue. The focus of concern was the dangerous effects that these techniques could have, either of permanent damage to the foetus or injury to the woman's uterus. Further, the efficiency of the test was also questioned: indeed the very information regarding the availability of such testing in private clinics came as a result of a newspaper report of a 'wrong' detection in one (Dr. Bhandari's clinic in Amritsar, where a 'male' foetus had been aborted. But when it started to

look as if improving the test would eliminate all the problems associated with it, the campaign petered out.

The 'Forum' is formed

In November 1985, a group of activists from women's groups and people's science groups in Bombay agreed on the need for more consistent action in banning the sex determination tests, seeing the extent to which they had spread. After a series of discussions, we came together as a joint action group the Forum Against Sex Determination and Sex Pre-selection. Keeping in mind that one of the primary weaknesses of the earlier attempts at building up coordinated action was back at a broader perspective, it was decided that the campaign must consider the issue at multiple levels. The question of sex determination and pre selection was then primarily seen as: (i) an integral part of women's oppression and discrimination: (ii) a misuse of science and technology against people in general and women in particular: (iii) a human rights issue. Due to the multi-dimensional character of the issue, activists from various social action, people's science, health, human rights and legal action groups, as well as concerned individuals joined in the campaign alongwith women's groups.

To handle the technical aspect of the issue, a two-pronged approach was used. All of us including those with an aversion to science, medicine or any kind of 'technical' staff went through the process of understanding the basic techniques. The focus of the campaign, however, was not on their 'goodness' or 'badness', but on the issue of discrimination between boys and girls in all sections of society. Linked to this was an attempt to show that that sex determination was yet another form of violence against women, part of the chain made up of female infanticide, wife burning, *sati**, etc. The threat to the survival of women was itself evident from their declining sex ratio: from 972 females per 1,000 males in 1901 to 929 females per 1,000 males in 1991 a rather shocking statistic.

After long discussion and an initial workshop to equip ourselves with the technicalities (medical, social and legal) of the matter, we set out. An immediate regulation of pre-natal diagnostic techniques was sought for which, naturally, we had to turn to the legal and state machinery. Simultaneously we wanted to conduct the campaign so that public pressure could be mounted, and our basic message *Ladki na ladke se kum* (A girl is no less than a boy) could reach the people.

The first problem with regard to framing any regulation was of proving that an abortion was consequent upon a sex determination test; next, on we would need to modify the Medical Termination of Pregnancy Act. Not wanting to curtail women's right to abort, we did not pursue this idea for long. The alternative was a new law-the first law of its kind, regulating diagnostic techniques. We had decided not to ask for a total ban because we did feel that the detection of genetic abnormalities was essential in situations like ours, where mothers have to pay such a heavy price for bringing up children with birth defects. But strategically, top, we felt that a demand for a total ban might be squashed altogether.

*The ritual immolation of a widow on her husband's funeral pyre.

We formulated the Act, as we would have liked it to be and tried to push the idea through with the state bureaucracy. A sympathetic health secretary and a few contacts in the Legislative assembly helped the process. Signatures were collected from all over the country and from eminent persons from all walks of life. Lobbying was done with members of the Assembly and others who mattered. Articles were written in the media and events ad to highlight the issue, mainly for press coverage, at crucial junctures in this legal campaign. We managed to be represented in the expert committee to formulate such a law. We also had a pilot study done in Bombay on the prevalence of sex determination tests, which revealed the following:

About 84 per cent of the gynecologists interviewed for the study were performing amniocentesis for sex determination: on an average they together performed 270 amniocenteses per month.

Some doctors had been doing such tests for 10-12 years, but the majority (over 85 per cent) had been doing so only for the past five. About 74 percent of the doctors said that over half the women who came for the tests were

middle class, and more than 85 per cent of the doctors said that they had tested no lower class women, although the areas selected for the study had a substantial lower class representation.

A majority of the women already had two or three daughters, while the percentage of those seeking a sex determination test after the birth of four or more daughters was relatively low. Significantly enough, about 24 per cent of the doctors said that in 20 per cent of the cases, women had only one daughter when they came in for the sex determination test, a 29 percent of the doctors said that up to 10 percent of the women already had one or more sons. A majority of the doctors thought the sex determination tests were a human service for women who did not want any more daughters, and some even felt that they could be an important family planning device for our country.

Lobbying to get the Act passed remained our primary objective at this stage. It helped give us a direction; it helped to raise the issue on various platforms, and it focused attention on the point that we were trying to make.

In June 1988, the Act came into being in the State of Maharashtra. Although it demonstrated the state's response to the campaign, the Act itself has certain provisions, which are clearly counter productive.

(i) Punishment for the women: According to the Act, a woman undergoing a sex determination test is presumed to be innocent, but is still fined Rs. 50; if proved otherwise, she is subjected to imprisonment for three months and/ or a fine of Rs. 1,000/-

In practice, a woman under severe pressure from her in-laws will tend to internalize blame and accept the punishment, thus making for further victimization. Meanwhile, the husband or parents-in-law are not held liable. An exceptional woman, who musters up courage to lodge a complaint under this Act, would not dare to do so if she were afraid of being punished by it.

(ii) Granting licenses to private labs/ clinics/ centres: In Maharashtra as anywhere else, the granting of licenses to private institutions would only legitimize unethical practice carried out by them earlier. Government institutions all over India have been following the ban on the misuse of amniocentesis for the past several years, but not one case of violation of this ban has come to light so far. In Maharashtra, a reputed geneticist was found to be performing this test illegally after the ban and although the news was flashed in leading city newspapers, the government chose to ignore it. As far as the genetic testing for foetal abnormalities is concerned, looking at the number of people who have availed themselves of the facility in Maharashtra, we feel that the infrastructure an expertise available in government hospitals and those attached to medical colleges is sufficient to cater to their needs.

(iii) *Prohibiting access to the judiciary*: According to the section 21(1) of the Maharashtra Act, no person other than the authorities laid down by the Act can seek the help of the judiciary against any alleged violation of it. The person has to give notice of not less than 60 days to the State Appropriate Authority or State Vigilance Committee in the prescribed format, which is not given in the rules governing the Act. If the committee itself is not formed in time, this clause delays all probability of any action.

(iv) *Non - answerability of government machinery*: The various bodies appointed under this Act are not accountable to the public. No punishment is given out to them for failing in their duty this leaves people with no recourse in the face of repeated negligence on the part of the state.

Despite all its loopholes, however, the Act served to bring the issue into the limelight and it also gave us legal sanction to confront sex determination clinics. We are aware even then that it would not stop clinics from offering the 'facility' altogether: what we hoped for was some restraint because of the illegality that was attached to it.

We were also aware that even nominal implementation of the Act could take place only if people did not want to avail themselves of these facilities. In the initial stages of the campaign itself, however, we came to the painful realization that the vast majority of people were not likely to

spontaneously support the campaign. We tried our own very general ways of reaching out, of establishing connections between different issues and of emphasizing the slogan that we had evolved specifically for the campaign: *Ladki na ladke se kum*. Films were made, songs written, meetings held at various places, and with all kinds of people. Skits were enacted with children, and positive action taken by holding parent-daughter marches and children's day programmes.

Along with this, in April - May 1988, eight organisations jointly organized a fortnight-long programme *Nari jeevan sangarash yatra* (A quest to liberate women's lives). The focus of the programme was on all the issues related to women's survival. An exhibition, accompanied by a booklet, was set up, linking the issues of female foeticide and infanticide, wife murder, rape, *sati*. Programmes comprising of video films, slide shows, poster exhibitions, plays, skits, debates, etc., were organized at twelve different places in the city of Bombay.

After June 1988

Up until then, we had been so preoccupied with getting the law passed that we had little time to pause. Not that there were no doubts, having worked on other legal campaigns, we were quite aware of the limitations therein. However, the momentum set up by the state administration and the prospect of an Act soon kept us going, forced us into taking some kind of action. The unanimous passing of the Act by the state government made for a sudden slowing own in pace. Central legislation was nowhere in sight and the state bureaucracy was taking its own time to constitute committees, register private genetic clinics and laboratories and so on. We paused too.

We realized that there had been growing restlessness within all of us about doing the kind of work required for getting legislation passed. That apart we were most uncomfortable about really not being aware of what people in general felt about such legislation. Coupled with this was the fact that we were asking for more state control over women's lives. On the one hand we have always been wary of state control, and on the other, the thrust of our campaign had been just this. In fact, in a society where the bias in favour of a male child is so predominant, our unyielding stand against sex determination certainly did not reflect majority opinion. So we had the unpleasant option of going against what the majority of people seems to believe in an collaborating with the state which, most of the time, is anti - people.

In this situation where we were forced to work with the state, we had tried to ensure some system of check and balances. Access to information was one of these. The Act had provided for the mandatory publishing of periodic reports giving details of the number of tests carried out in registered centres, indications that required such tests, and their diagnoses. We tried to pursue this by demanding full access to all documents for members of the vigilance committees and the public. We also tried to get voluntary organisations represented on the former.

The experience of the state of Maharashtra, however, demonstrated the limitations of these suggestions in the face of an unwilling state machinery. No reports have been published to date. Committees took a long time to be formed and voluntary organisations were inadequately represented on them. Almost all the non-government appointees, including representatives from voluntary organisations working with women, are medical professionals. How and in whose favour these committees would work is anybody's guess.

In June 1989, local level committees were formed for all districts except Bombay, and in June 1992, registrations were given to 24 labs and clinics all over the state. 17 of them in Bombay! No case has been registered under the law so far, and the test is still available in Bombay.

In a sense, state legislation was effective only in marginally reducing the number of clinics and increasing the charges for the tests. In another sense, however, since the Maharashtra Act was passed, interest in the issue has been aroused in the entire country, something that had not happened earlier. Today, joint action forums have been formed in Bangalore, Delhi and several cities of Gujarat. Concerned groups

in Chandigarh, Calcutta and Pune are also actively campaigning for an all - India ban on sex determination tests. As a result, three other state governments - Goa, Gujarat and Orissa - announced their intension to introduce similar legislation.

Having waited for a long time the Central Government has also finally introduced a bill in this regard. It has the same major loopholes as the Maharashtra Act, but this time, public opinion has been sought on the bill. A Joint Parliamentary Committee was constituted which has held discussions and dialogues with organisations and people active in the campaign in various cities.

Based on our experiences with the Maharashtra Act, there have been some changes in our stand. We feel today that only those who actually provide the facility should be penalized. We are therefore against any punishment being given to persons seeking the test, whether it is the woman herself or the family who might have persuaded her. In our opinion, the law is meant to regulate the tests and to present their misuse: thus only doctors or providers of the technique are responsible for their violation. Moreover, the burden of changing the social evil of discrimination against daughters is not the laws alone.

The Central Bill does not envisage any role for voluntary organisations in the vigilance committees: based on our experiences we feel that representation through voluntary organisations is not sufficient - *it is essential that the general public have direct access to information and judicial action.*

The proposed central legislation is in a sense an achievement of the nationwide campaign. The way in which this achievement has been credited to us and the whole question of democratic principles and values, trouble us. In a way we see a parallel in our use of the law and in the establishment's promotion of technological solutions. Society tries to find solutions to social problems in technological innovations: are we, too, seeking such solutions through the agency of the law? Whenever we ask for reforms in existing laws or the formulation of new ones, are we expecting the government to be on the side of women?

This is the dilemma which comforts all women's groups. Whether it is the Dowry prohibition Act or Section 498 A of the Indian Penal Code, or the family Courts Act or the present Act under discussion we do believe that we really cannot rely on these alone or on government to get justice for women. But through the process of campaigning for them, through the protest and pressure generated, more and more women are exposed to diverse views and a social atmosphere is created which can strengthen women in their struggle. Various groups can forge links and strengthen the movement by reaching out to more women and mobilizing public awareness.

At the same time we feel that the demand for and enactment of, such legislation is one way of making a statement opposing discrimination against women in society. It is necessary that the government be forced to take note of such practices in society, and register the fact that society, represented in parliament, takes serious objection to their continuance. It is also necessary to strip the garb of respectability, from such brutal practices through their legitimation by modern medical technology. By making them illegal the tacit, social sanction that they enjoy can be removed.

Our other dilemmas are related to much wider issues. In the campaign we had taken the stand that these pre-natal diagnostic tests needed to be regulated that they be allowed for the detection of genetic abnormalities, taking into account women's burden as the principal child rearers in our society. Although we have some questions on this point, we still feel, that until society takes collective responsibility for child care we would have to abide by our present stand.

The wider problem of acceptance of new technologies

While campaigning against sex determination an trying to think of how to launch a campaign against sex pre selection, we were faced with a totally new dimension of the technologies themselves. A series of issues, such as in vitro

fertilization (IVF), gamete intra fallopian tube (GIFT), and the whole domain of genetic engineering needed discussion. Not all of them could be explained away only as discrimination against women or the misuse of science and technology. We needed to undertake a critique of modern science and technology as well a society's views on all forms of reproduction.

At the conference of the Feminist International Network of Resistance to Reproductive and Genetic Engineering (FINRRAGE) in March 1989 in Bangladesh, the debates left us battled and bewildered at times. Intervention in nature's biological processes began as early as agriculture. How does one distinguish that intervention from the one made by genetic engineering? Artificial insemination (AI), IVF, hybridization and so on are techniques that have long been used in farming and cattle breeding. Why is it that we begin to question and protest only when such engineering is proposed for human beings? Is our view genuinely holistic or are we still being propelled by an androcentric urge, the loss of this earth and its environment, which is crucial for 'us' human beings?

What does one mean by eastern and western science in today's context? While evolving or trying to evolve a new philosophy of science, how does one accept and understand the knowledge acquired so far? How does one work towards a non-reductionist methodology of science? We surely do not believe in saying a categorical 'No' to technology. Is there a qualitative difference between the various technologies? If so, how does one identify it and, if not, how does one evolve the criteria by which a distinction can be made to help s determine those that are describe and appropriate and those which are not.

The list of questions is unending and answers are not simple. We also know that they need much more collective thinking. What we fear, however is that these and similar debates are getting further and further away from the people who are directly affected when technological innovations backfire - witness the gas leak at Bhopal, the control over women's reproduction whether in treating fertility or infertility and so on. We realize that those of us who have access to information and can afford the luxury of theorizing have the responsibility to make this a broad based debate, to initiate and maintain communication to bridge the chasm. As of now our efforts are far from sufficient.

Finally there is the question of translating these debates into action. The campaign against sex determination and sex pre-selection is one limited example of these efforts. There are many more scattered all over the country - that question development, that force one to rethink modern science and technology, that identify whose interests are taken care of by what. In all of these a common feature has been that while in the long term, the effects of environmental disasters are for 'life on earth' itself, in the short term they appear to be a clash of interest between two sections of people.

On the Narmada dam issue, for example, the apparent gain of water for irrigation and power generated, especially for the State of Gujarat, seems to be posited against the loss of people's homes, communities and life styles. Cost - benefit figures differ because people's notions of costs and benefits differ. But due to the presence of a large number of people who are immediately affected, will suffer loss and do not benefit in any way from a project like the Narmada dam, there exists a broad people's base to the struggle against it.

The case of reproductive technologies, however, is slightly different. Here, typically, women are often compelled into accepting a harmful, dehumanization technology in a no choice situation, where it seems to offer a viable solution, at least to their immediate problems. To a woman who is not allowed to use contraception and who is unwilling to shoulder the burden of repeated pregnancies, deliveries, miscarriages and abortions, an invisible injection/implant can be a solution: to a woman who has been branded barren. IVF can be a solution: to a woman whose only recognition is as a producer of sons, sex determination and sex pre selection become solutions. All of these are important also because they give the illusion of bringing about a change in one's situation.

At the Forum Against Sex Determination and Sex Pre Selection, while continuing

with our single-issue campaign, we are broadening out to include specific action against other reproductive technology. In a sense, this is an attempt to evolve other methods of campaigning, which may be more effective than the one chosen earlier. Today, we are at the stage when we are aware of the achievements and limitations of the earlier part of our campaign, yet unsure of where to turn next. What keeps us going is the commitment to persevere and move on, and to do so individually and collectively.

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2

Amniocentesis and Sex Selection

Vina Mazumdar

Introduction

How does one analytically locate the social phenomenon manifested in India during the last few years since the advent of sex-selection technology in the mid-70s? We must seek to contextualise it within several value debates (which aspire to become systems) - of gender equality, reproductive freedom, the role of state control over private lives (ostensibly for the public good), medical responsibility and social justice. Other elements in this contextual canvas, to increase its complexity, are certain dynamic social institutions - the family, law, culture, religion, the social construction of gender, public policies and the social role or use of technology. Three other broader issues that help determine the texture and shape of the canvas are the widely differing perspectives in the global debates on the population-development relationship, the past and future roles of science and rationalism per se, and the problems of management of power - economic, political, technological (or knowledge-based) - in a period of dissolving political entities that had provided a resemblance of balance and shape of global power relations.

Can we really say that the issues emerging from developments in reproductive technology affect only women in poor countries? Is there no panic against genetic engineering among women in the western industrialised world? Has the ideologically loaded terminology in the literature of sex-selection sciences, using words like "valuable/non-valuable", "superior/inferior", "breeder", "incubator" to rationalise the selection process and its implementation come out of the "underdeveloped" third world? Or have third world intellectuals criticised the UNICEF's child survival strategy for having promoted the "population trap"? A dichotomised approach between the "developed" and "the developing" world assumes that their problem and debates are basically different. We in the developing world are also warned that "in some countries, the social position of women will make the issues particularly urgent. Sex selection may be used to ensure the birth of many more boys than girls." And yet, the news we get from Dr. Ronald Ericsson from California[2] is that nearly 94 per cent of couples seeking the services of his selection techniques wanted a male child. By his own admission his technique is better adapted to the selection of male offspring. The method of selecting females "is complicated", and is "still being developed"[3].

I am not trying to be polemical - but we need to be clear as to whether the issues of control, use or impact of these technologies are to be addressed as universal ones, to be debated at the ideological level of human or civilisational values, or to be dealt with in the relativist framework of culture, religion or stage of "development" - with the possibility of their absorption into the politics of hegemonism versus group identity. The international move for human rights and gender equality is already threatened by these developments.

This paper examines the introduction, spread and impact of amniocentesis (and more recently other sex-selection technologies) in India roughly since the mid-70s, to isolate the key actors, the driving forces of propulsion, and the historical context for the phenomenon of female foeticide following such tests. An attempt is made to demystify the runaway spread of the practice by comparing it with the emergence of female infanticide, also within the last

two decades, in a region and a community with no previous history of such a practice. The two stories are presented as manifestations of the same process - though some of the actors are widely different - in terms of class, culture, ethnic traditions, gender role history, population, geography and exposure to debates on reproductive rights, freedom and the autonomy of choice. In the last section, some questions are raised on these philosophical concepts and their social implications.

I) Boy or Girl?

Technology can Help you Choose!

Amniocentesis and sex-selection in India has a very short history. Reproductive biology was identified as a major thrust area for R & D by the Government of India, as well as the medical research establishments from the 1960s,as the hysteria about the population crisis began to affect perceptions of the Indian intelligentsia. The All India Institute of Medical Sciences (AHMS) was one of the major centres of research in this field, and received substantial financial support for this purpose from national and international sources. The Institute also had a Department of Human Cytogenetics which found it possible to acquire access to some of the new sex selection technology by riding the band-wagon of the population panic. In 1974, the Department started a sample survey with the aid of amniocentesis to detect foetal abnormalities. By 1975, the AIIMS knew that the tests were being followed by abortion of female foetuses. An article In Indian Pediatrics (5th May 1975) commented that such abortion of female foetuses

> *may not be acceptable to persons in the West but in our patients this plan was followed in 7 out of 8 persons, who had the test carried out primarily for determining the sex of the foetus. The parents elected for abortion without any undue anxiety*[4].

Abortion was legalised by the Medical Termination of Pregnancy (MTP) Act (1971). Though the statement of objectives projected the legislation as an attempt to reduce criminal abortions in unsafe conditions, and maintained that the primary objective of the law was to protect the physical and mental health of women seeking abortion, there was little doubt that in the perception of the medical establishment and of the majority of the general public, it was viewed primarily as an instrument of population control[5]. One of the conditions under which abortion services could be provided by authorised hospitals and health centres was 'failure of contraception'. Studies on abortion under-taken by various scholars indicate that most abortions were performed on this ground in such institutions. Abortions for other reasons continue to be performed mostly by unauthorised doctors and clinics and/or unqualified practitioners[6].

The AIIMS tests were eventually stopped by the Indian Council of Medical Research (ICMR). But the advent of the new reproductive technology (NRT) and its fall-out had been noted by some medical entrepreneurs. By 1979,a group of such entrepreneurs set up the New Bhandaris' Antenatal Sex Determination Clinic in Amritsar, Punjab. It began to advertise its services openly through the press and handbills distributed in public places, railway compartments, etc. One copy of the handbill reached the Centre for Women's Development Studies (CWDS) in the summer of 1982. The advertisement referred to daughters as a "liability" to the family and a "threat to the nation," and exhorted expectant parents to avail of the services of the clinic to rid themselves of this danger. We informed seven national organisations of women which had their headquarters in Delhi, and with whom the CWDS had developed a close association since 1980.[7] In July 1982 a joint meeting convened by these organisations condemned this misuse of scientific technology. After a heated debate, the meeting recommended three lines of action:

(a) the government was requested to restrict the use of amniocentesis only to teaching and research establishments and to ban its use in private practice;

(b) the Indian Medical Council was requested to take severe action against

members of the medical profession who indulged in such unethical practices; and

(c) women's organisations and civil rights groups were requested to be vigilant against the spread of this practice for commercial purposes.

Present at this meeting was a young woman reporter (Ritambara Shastri) from the United News of India, who had already brought out an excellent investigative report of the conditions in the New Bhandaris' Clinic, the attitude of the staff and the reactions among several patients who had undergone the test as well as abortion. The title of her long report, which came out on the morning of the meeting was "Amniocentesis: A Money Spinner". Virtually everyone at the meeting had read her story. Revolted by the account of the brutal display of aborted foetuses in the clinic, several of the speakers demanded a total ban on amniocentesis. A few, however, pleaded that the women's movement should not declare itself opposed to scientific research per se, since it was possible for amniocentesis to play a positive role in the detection of certain sex-specific genetic disorders in unborn children. The real culprits in this crime, in their view, were the medical personnel who misused science and women's powerlessness to increase their profits.

I had the unfortunate responsibility of chairing this meeting. In my summing-up, however, I could not help pointing to the language of the advertisement and raising the question whether amniocentesis was going to be used as "a 'final solution' to the population question." [8]

Also present at this meeting was Mr. Ved Marwah, Joint Secretary to the Government of India, in-charge of the Women's Bureau within the Ministry of Social Welfare. Ritambara Shastri's story and the information provided by some of the speakers at the meeting shocked him greatly. He obtained copies of the resolutions adopted at the meeting and promptly sought the intervention of the Union Health Minister. A Conference of State Ministers of Health took place shortly afterwards. The Union Minister made a strong statement expressing his deep concern over the "highly unethical, unjust and immoral practice." [9] He exhorted the State Ministers to take appropriate preventive action. The District Medical Officer, Amritsar, interpreted this statement at its face value and threatened the management of the New Bhandaris' Clinic with legal action. In reply, he received a cool question, asking what law had the clinic violated? At a later stage, a local unit of one of the women's organisations filed a suit against the proprietor for negligence.

It is reported that prior to 1985, the Government of India had Issued three circulars to the States and to concerned departments at the Central level, making the use of the technology of prenatal sex determination (SD) for the purpose of abortion a penal offence.[10] In his statement to the Lok Sabha, however, the Health Minister ruled out a ban on amniocentesis, saying that "it was for the people to change their attitude to female children." [11]

The man who had assisted the Bhandaris to set up the first sex-determination clinic in the private sector was Dr. K.K. Loomba, a chemical pathologist. In 1984 Loomba decided to quit Amritsar and set up shop in Delhi. The Loomba Clinical Laboratory and Genetic Centre at Patel Nagar is the largest Centre of its kind in the capital, and his charges are among the highest in the country. He now says,

> *My investment in this sophisticated laboratory in Delhi is around Rs.6 lakhs, but I am presently earning over Rs.50,000 every month. To those who repudiate my work, I can only say that this is one of the ways in which the population explosion in the country can be controlled and a safe method adopted by which couples can plan a balanced family ...How can you say that we are doing something illegal when abortion itself is legalised in India and is not being done in the clinic.*[12]

The argument given by Loomba is repeated at every clinic practising sex scanning. The ostensible reason for getting the tests done is to identify genetic disorders in the foetus, but all the evidence indicates that 95 per cent of the clientele is anxious only to know the sex of the unborn child. "The second cover-up is a plea that after the results of the test are given,

the clinic does not take the responsibility for performing the abortion ... The other detail missed out by those visiting the clinic is the deletion of the word sex-determination from the application form. Advertisements have been released ... in daily papers with the headline - 'Healthy Boy or Girl - Know the Sex of the Unborn Child' in bold type."[13]

Dr. Loomba goes on to argue that any attempt by the government to impose a ban on sex determination will force the clinics to go underground : "Those who are willing to pay Rs.1,000 to me today will also pay Rs.5,000 if the tests are carried out clandestinely." A gynaecologist at the Marie Stopes Clinic stated that the proliferation of sex determination clinics in the capital has encouraged many couples to go in for a scan after the birth of one daughter. In her view, both causes: (a) sexist bias in the minds of Indians, and (b) unscrupulous doctors performing the tests, are responsible for female foeticide.[14]

The debate and the heat generated by the 1982 meeting subsided after a few months. The New Bhandari Clinic toned down its aggressive advertisements and despite the statements made by the Health Minister and the circulars, no concrete action was taken by the Central Government.

The State Governments, having realised that there was no legal provision to back such action, also remained inactive. Instead, "the Government of India's circular banning the misuse of medical technology for sex determination in all government institutions, marked the beginning of privatisation and commercialisation of the technology. The 1982 debate further accelerated this process all over India, specially in northern western India. The SD 'epidemic' spread rapidly in Maharashtra, Gujarat. UP, Punjab. Haryana, Delhi, Bihar and even to Goa and West Bengal. Gujarat topped the list with SD clinics spreading even to small towns. After the initial phase of cautious 'lull', the 'clinics' started advertising aggressively. Within six years, the SD 'business' came to stay."[15]

The Forum Against Sex Determination and Sex Pre-Selection (FASDSP) was formed in Bombay in October 1985, its members were from varied backgrounds — feminists, health and human rights activists, persons involved in the people's science movement, etc. Wiser after the failure of the 1982 protest in Delhi, the Forum decided not to confine its opposition only to amniocentesis, but to the entire spectrum of new reproductive technologies. The Forum also decided not to treat amniocentesis purely as a women's issue but to seek wider alliances by emphasising technical, social, demographic, legal, ethical and policy dimensions of SD. Thirdly, the Forum decided to avoid trivialisation of issues in the media debate (this had been one tendency after the 1982 protest). It drew on campaign techniques to generate public support developed by other social action groups, such as street theatre, posters, marches, social awareness advertising, etc. It filed public interest litigations[16] to sensitise the judiciary in favour of their campaign objectives and support for a new law. It drafted a private member's Bill with the help of a Senior Officer from the State Assembly and had it introduced in the State Assembly by three members.[17] "The Introduction of the Bill added an entirely different dimension to the campaign and forced the State Government to give serious consideration to the Issue. This Bill laid the foundation of the entire legislative exercise at the State and Central Government levels."[18]

The Bill also forced the State Department of Public Health to commission a survey of SD Clinics in Bombay. Dr. Sanjeev Kulkarni of the Foundation for Research in Community Health, who undertook this study, reported that 42 out of 50 gynaecologists whom he contacted admitted to performing SD tests. 37 had begun this practice since 1982. Between them, they were performing over 270 tests per month. An examination of their replies to Dr. Kulkarni's questionnaire made it clear that cases of genetic defects were marginal, and that the overwhelming majority came merely to obtain information about the sex of the foetus. A majority of the patients came from the upper and middle classes. Six doctors, however, reported that they had a few cases from the lower class also.

Costs of these tests vary. Two doctors

charged between Rs. 70 and 150, 33 between Rs. 200 and 400, and 7 between Rs. 400 and 600. 37 of them also admitted that they performed abortions after the tests. Five, however, declared that they did not perform mid-trimester abortions. A majority of the doctors also stated that very few of the patients coming to them had only daughters and no sons.

Kulkarni tried to obtain the doctors' assessment as to whether the women were pressurised to come for the tests. 27 answered in the negative, but 15 believed that many of their patients were under pressure. Some women had admitted as much to the doctors in confidence. Two of the doctors admitted their awareness that at least 30-50 per cent of their patients were under pressure from their families.

As for the doctors' views on the SD tests - eight (nearly 20 per cent) considered it to be an effective method for family planning. 19 considered the practice to be wrong, but 'unavoidable' in the current social set-up. 31 tried to salve their consciences by claiming that they were offering a humane service to women who do not want daughters. Kulkarni's report quotes a pediatrician, who supported SD tests for "a balanced and small family. ... Thus, the SD tests can help family planning programmes also."[19] Four doctors categorically stated that they were not bothered if the tests were followed by abortions of female foetuses: "that is not my problem." Kulkarni did, however, find one doctor who had given up performing SD tests after the debate started In the press, undertaking them only for detection of genetic deformities. This doctor even wrote articles in Marathi papers condemning the tests. Having informed Kulkarni that virtually every gynaecologist these days performs these tests, he went on to say:

> *It is the doctors ... sitting in the chairs of authority who should use their judgement. It is not correct to say that doctors are helpless, they are forced to do the tests. After all who made it known to the public that such tests can be used in such a way? Who put up the advertisements in the local trains?*

He strongly supported the legislation to ban the tests and abortion of female foetuses.

Kulkarni's report quotes books on obstetrics which condemned the use of amniocentesis or other SD tests "for such trivial reasons as choosing the sex of the offspring." He also argues that in the absence of the government's failure to take necessary legal or administrative measures, the public debate had only resulted in the spread of the practice. It was no longer confined to big cities, but had spread to many smaller towns as well.

An analysis of abortions performed during 1984-85 by one abortion centre in Bombay revealed that nearly 100 per cent of 15,914 abortions had followed SD tests. However, the new President of the Obstetrical and Gynaecological Society called it "a social problem like dowry and child marriage," and argued that there was no point in blaming the doctors or asking them to discipline themselves. A woman Head of the Obstetrical and Gynaecological Department (Bokaro General Hospital, Bihar) said, "Our priority is population control by any means. Amniocentesis should be used as a method for family planning and made available to everyone at a minimum cost or even free."

Kulkarni's report exposes the hollowness of much of the rationalisation put forward by doctors to justify their conduct. He points to the falseness of the propaganda that most of their patients had several daughters, to the advertisements which focus on the *expenses* involved in rearing daughters including the expenditure on dowry in the future. "Gynaecologists have tried to convince people of all classes that spending Rs.70 to 500 is a pittance as compared to the cost of bringing up a daughter and marrying her." He concludes his report by raising several questions. The most important of them, in my opinion, are the following:

1. Is there any relation between the drive for population control and the emergence of such a practice?

2. In what way has the liberalisation of abortions contributed to the emergence of this practice, and how does one see this practice in relation to women's right to abortion?

3. Is this practice an effect of the adverse

sex ratio, or will it further worsen the sex ratio or are both true?[20]

An important outcome of Kulkarni's study and the efforts of the FASDSP was the formation of Doctors Against Sex Determination (DASD), an independent forum of conscientious doctors to support the campaign. The DASD publicly asked the Indian Medical Association (IMA), the Indian Medical Council (IMC) and the Federation of Organisations of Gynaecologists' Societies of India (FOGSI) to take a stand on this matter. The IMA and the IMC never responded, just as they had not responded to the appeals of the women's organisations in 1982.

The introduction of the private members' Bill in Maharashtra led to the constitution of an Expert Committee on Sex Determination and Female Foeticide which included some members of the FASDSP. The report submitted in May 1987 contained the following recommendations:

1. The misuse of prenatal diagnostic techniques for SD should be totally banned;

2. These techniques should be allowed only for the detection of congenital anomalies; and their use restricted to Government and public institutions, (like municipal laboratories; private laboratories should be, if required, channelised through Government institutions licensed for the purpose);

3. The State Government should enact a special law for this purpose, and pressurise the Central Government to enact a similar legislation at the national level;

4. The MTP Act, if required, may be amended so as to include in it a clause explicitly stating that sex-selective abortion (except where it is therapeutically justified) is a legal offence;

5. The law can succeed only if it is supported by a well-planned. long-term movement for health education and consciousness raising. The Government should take suitable measures to that effect.[22]

On 31st December 1987, the Chief Minister of Maharashtra announced that the Cabinet had accepted all the Committee's recommendations and an official Bill would be introduced in the legislature. However, the Bill that was presented in April 1988 included many clauses in contravention of the Committee's views:

a. The Committee (like the women's organisations in 1982) had recommended that sex determination tests should be restricted to Government and public institutions. The Bill provided for granting licences to private centres/laboratories.

b.The Committee had argued against punishing the women patients on the ground that the majority were pressurised by their families. The Bill, however, provided for the punishment of the women rather than the family members who pressurised them.

c. The Committee was in favour of public pressure and Intervention to strengthen the enforcement of the law. The Bill restricted the right to move the court only to official organs of the implementing machinery i.e. the State Appropriate Authority(SAA) and the State and Local Vigilance Committee (SLVC). Others could move the court only if the SAA or SLVC failed to act within 60 days after receiving a complaint. The official Committees could also refuse to divulge documents to such public groups in the 'public interest'.

d. The Bill gave blanket powers to State Governments to exempt any institutions under its control from the requirements prescribed in the Act.

e. No time limit was fixed for the constitution of the SAA and the SLVC. In fact, these bodies were constituted after more than a year, and did not include any of the FASDSP members, or reputed professionals who had taken a firm position on the female foeticide issue. A year after the Committees were formed, a government officer stated "that the major reason for the non-implementation of this Act Is the inability of busy members to attend meetings.[23]

f. The Bill prescribed conditions under which the use of prenatal diagnostic techniques could be allowed. The Committee had recommended "exposure to potentially teratogenic drugs/radiation/ infections/hazardous chemicals" as one of the conditions.[24] The Bill dropped the words

'potentially teratogente' altogether, thus allowing the tests on the pretext of even minor infections.

The FASDSP, while pressing for amendments, did not want the Bill to be shelved. Two amendments were finally accepted. The words 'potentially teratogenic' were restored to Clause 4, and the clause giving blanket exemption powers to the government was totally dropped. The Bill was unanimously passed by the Maharashtra Legislature in April 1988.

The enactment of this law produced many spin-off effects. A Forum Against Sex Determination was formed in Gujarat, and after a long-drawn-out struggle, an Improved version of the Maharashtra Act was passed in Gujarat. A similar campaign was started in Goa and an official bill was introduced, though it could not be enacted because the State Assembly was dissolved. In Karnataka, a scandal about an SD clinic run by a private practitioner within a University Department was exposed by the Press. The clinic had to close and the findings of an Enquiry Committee led to a number of resignations.

The number of SD Clinics in Maharashtra declined significantly after the passage of the Bill, and aggressive advertisements ceased. However, some doctors in Bombay continued the practice at exorbitant rates. Since legal actions have been virtually absent, one may assume that the practice is on the increase again. Both the SD clinics and the government have found various means of refusing information to bodies like the FASDSP. Ravindra reports a novel method adopted by one gynaecologist in Bombay. He asks for an advance of Rs.5,000. The charges for the test are Rs.3000. If the foetus is found to be male, then Rs.2,000 is refunded. However, surprisingly, all reports turn out to be 'daughters'. This is because the amniotic fluid is not sent to the laboratory for analysis. There is little or no record of all these activities.[25]

According to Ravindra's estimates while "SD business" continues to expand in the northern states of India, it has not made much headway in the south and the east. Some Census analysts are however not so sure.[26]

In December 1986 the Union Minister for Health and Family Welfare convened a National Conference on SD. This was followed in 1987 by the constitution of an Expert Committee. The Committee finalised a draft legislation which was circulated to State Governments for their comments. A final draft of the Bill was introduced in Parliament in 1991 and is being currently reviewed by a Joint Select Committee which has called for reactions and memoranda from various bodies, including women's organisations.

Ravindra's report on the Campaign Against Sex Determination, like Kulkarni's study, concludes with a question about the relationship between SD tests, high female mortality and the sex ratio in India's population. Other important views of Ravindra also need to be recorded here:

a. organised public opinion from broad-based groups can bring about desirable changes in social biases, the government's attitudes, and the priorities of political parties;[27]

b. the increasing market orientation of the medical profession now requires checks and balances on the use of medical technologies from outside the profession:

c. a successful campaign against SD requires a combination of research and activism.

'If we succeed in getting a law against SD on the grounds of the Constitutional Right to Equality, and on Society's right to intervene for restoration of sex ratio balance, we can challenge sex pre-selection on the same grounds. It can also pave the way for a better understanding of issues relating to NRTs as a whole".[28]

II) Female Infanticide Among the Pramalai Kallars of Madurai, Tamil Nadu

While there is a history of female infanticide in the Indian sub-continent, the South has been in the main free of this tradition. It, therefore, came as a great shock when *India Today* (15 June, 1986) published a report on the existence of female Infanticide in Usilampatti Taluk in Madurai district of Tamil Nadu. The author cited interviews with doctors and common people, and painted a horrifying picture of

poverty- stricken parents killing their new-born daughters out of fear of the expenses of rearing a daughter including the eventual dowry. According to one doctor's estimate, over 95 per cent of women giving birth to daughters absconded immediately after the birth. "We can come to our own conclusion about the motive of absconding". The Usilampatti Government Hospital recorded an average of 600 female births in the Kallar group every year, out of which 570 babies vanish with their mothers. Hospital sources estimated that nearly 80 per cent of these become victims of infanticide. The article suggested that the practice was rampant in all the 300 villages of Usilampatti Taluk, that nearly 6000 female babies had been killed in the Taluk in the last decade (though very few had been recorded), that this was being practiced only amongst the poorer members of the community, and that the practice was essentially related to the dowry evil. "Family planning is yet to catch up with the Kallars".[29]

The press played a very supportive role in the campaign against dowry violence since the late 70s. However, it did not question why the practice of dowry had expanded and spread to communities which had never practiced it before, or had in fact practiced the opposite form of bride wealth or bride price. A study undertaken by the Census of India in 1961 had concluded that the majority of the Indian population still practiced bride price rather than dowry.[30]

As for the Kallars or the Pramalai Kallars - the particular sub-caste concentrated in the Usilampatti Taluk-I shall depend on professional anthropologists and historians. Louis Dumont, who undertook a detailed study of this group in the mid-50s described them as mercenary soldiers, guardians of fields, houses and cattle in the employ of higher caste landowners, and traditionally believed to be *shudras.* A seventeenth century king had granted them some land. Over the next 200 years, some of them also acquired land 'deserted' by their employers. Dumont described them as traditional cattle lifters and burglars, whose thieving activities were reduced under British rule.[31] A recent study by a Tamil historian, however, presents a somewhat different perspective.[32] According to this account, Kallars were categorised as a tribe in the 20s under the Criminal Tribes Act which came into effect after the Kallars suffered their final defeat at the hands of the British in 1919 at Perungamanallur.

Despite this basic difference in perspective there are many common elements in the two studies. On the status of women, Dumont had recorded that the Pramalat Kallars prefer matri-lateral, cross-cousin marriages, that there was nuclearisation of families on marriage and a lack of a parilineage solidarity - manifested in the lack of dependence on patri-kin. In fact, husbands depended far more upon their wives and their wives' families for occasional loans. All these are characteristic features that have been described as remnants of a matriarchal culture System'.[33]

Dumont as well as Pauline Kolenda comment on the great freedom enjoyed by women in this community. 'Patrilineages are important in the rural political domain, especially in connection with the traditional Organisation of courts and councils, but are not very powerful in controlling their members or resources in their domain".[34] The community practiced bride price. The right of divorce was enjoyed by both men and women with considerable weight-age in favour of women. Divorce initiated by the woman without the husband's permission involved the return of the bride price as in many other communities which follow this custom. But if the groom initiated divorce proceedings, he lost all the gifts given by his family to the bride's family. He also had to return all that he had received from the bride's family and still pay Rs.25 as compensations. Divorce rates as well as the rates of subsequent marriages were high. Such changes were especially high in the early years of a marriage, before the wife's jewellery became the husband's property and before the wife's family provided the household pots. Kolenda comments that in the combined dowry-bride-wealth system, husbands stood to lose hopes of future resources from the bride's family in case of divorce.[36]

Between Dumont's study in the 50s and Kolenda's in the 60s, we note the beginning of a change from bride price to a bride price-cum-dowry system. V. Vasanthi's study was undertaken in 1987, in direct response to

the reports on female infanticide. She throws some additional light on the position of women in this community, and the manner in which it has been changing over the last few decades. Two of the eight clans (Nadus) were founded by women, 'who have been deified and occupy a position of great importance among Kallar gods".[37] The community still retains tales of women's martial valour including their participation in the final Kallar resistance against the British.

Rapid agrarian changes, with the groups' "integration into the modernising economy" of Tamil Nadu, accelerated after the completion of the Vaigal Canal system towards the end of the 50s. Irrigation and the green revolution technology brought great prosperity to a section of the community which had land near the Canal. Before the opening of the Canal "the entire Taluk was a vast arid tract. Agriculture hardly sustained the population which took to petty thieving and highway robbery as a way of life, an easy transition from the traditional role played by the Kallars as the mercenary hordes of feudatories. There were no big landowners and a near equal distribution of land existed".[38]

The Canal system created "a degree of differentiation of the agricultural community" with the "rise of a middle peasantry' and simultaneously the 'impoverishment of the lower levels of the peasantry'. Very high levels of land transfers and dispossession of the small peasantry are reflected in 'a big landless population among the originally land-owning community' joining the ranks of the scheduled castes who were until then the only landless groups. With the near total absence of any industrialisation in the area, the proportion of agricultural labourers in the rural population as a whole had almost trebled between 1961 and 1981. In the irrigated villages, the newly wealthy Kallar farmers, have also successfully entered other businesses(liquor and other contracts, cinema houses, transport etc.) despite the prevalent popular belief that this community is incapable of success in trading ventures; A sizeable section has also migrated to urban centres(mainly Madurai), taken to education and acquired considerable political influence. This was facilitated by the geographic concentration of the group.

Vasanthi traces two processes that have rapidly destroyed the traditional high and near equal status of women in this community - their economic devaluation and the new values adopted by the upwardly mobile section. These have consequently had an impact on the community's social institutions and practices. Reduction from cultivator to wage labour status among women has been accompanied by wide wage disparities-in agriculture women earn Rs. 6 per day, while men get Rs 10-12, in quarrying, women may get between Rs. 10 and 12, while men earn Rs 25-35, in brick kilns, women's wages range between Rs. 6 and 8 but men's between Rs. 13 and 40.

"When a preponderant proportion of the peasantry were owner-cultivators women's contribution to labour on the family farm could not be quantified and ensured her a measure of respect, dignity and status in society. When they are reduced to wage earning, the considerably lower wage that woman earns *leads to her devaluation and underlines her inferiority.*[39]

New avenues in the tertiary sector involve mobility, and are outside the reach of most rural women. At the same time, the newly enriched section of the community in agriculture or commerce have adopted values that are 'inimical to women's dignity and lead to her devaluation'. Domestication is followed by the adoption of dowry, initially "considered shameful and unworthy of the proud traditions of the community. It used to be compared to the selling of cattle to Kerala in the West. In such a community today, marriage of women of any class without dowry has become an impossibility'. Demands may range from Rs. 5,000 and 5 sovereigns of gold for a poor labourer to Rs.2 lakhs and 50 sovereigns for a doctor. Villagers are able to point out the first families that started the practice-the ones that prospered from contracts, money-lending illicit liquor trade etc. They were followed by the educated professionals.[40]

The killing of baby girls, according to Vasanthi's investigations, began in 'villages well served by transport and communication networks, with canal irrigation and with a growing neo-rich class.

Remote and arid villages were, till a few years ago, not affected by the horror, though in the past two or three years even they are succumbing to a daughter- rejecting ethos'. While dowry is cited by everyone as the cause, Vasanthi has found a correlation between the rise of this practice and women's loss of traditional rights in land, their displacement and discrimination in the labour market, the destruction of traditional handicrafts that employed women, and their marginalisation in the new economy.

Her arguments are substantiated by a comparison of the sex ratio of villages in the prosperous areas with those in the interior, arid, poverty-stricken region, which are poorly connected by road and transport systems, but still retain some resemblance of the old semi- tribal values. Of the 8 villages in the first category, the sex ratio in 1951 was alarming (965 per 1000 males) in only one (Kalluthn), 3 of the 8 villages had more women than men (sex ratios were 1022, 1021, 1051). By 1971, a sharp decline was noted in all except two villages. By 1981, the sex ratio in these 8 villages had come down to 773, 862, 868, 877, 895, 890, 891, and 892 - all way below the ratio for the Usilampatti Taluk as a whole (961). The Kallars constitute about 80 per cent of the population of the Taluk.

All the ten villages from the arid interior area, however, had a high sex ratio in 1981, (1147, 1094, 1080, 1075, 1075, 1059 1049, 1046, 1040,1032) - higher not only than the Taluk or the district (989), but of the State (987) and the nation (933).

Vasanthi's study is still not complete. But her initial findings indicate that In the prosperous region "there is eagerness to reject the past and to claim comparability with upper caste culture'. Divorce and remarriage of widows have become rare - the process of Sanskritisation has apparently caught on. In the interior villages, however, traditional culture survives to a greater extent, with "the complete sway of caste panchayats,[41] of the old instability of marriages, with frequent divorce and remarriage of women, the assertiveness, and inhibited ways of women and their 'social equality'."[42]

What is it that unites the two sections of a community that are so different in terms of economic 'development', cultural values, life-styles and behaviour patterns? The answer lies in the role of caste in marriages and political bargaining power. Caste endogamy was always rigidly followed by the group. Dumont noted that the few settlements of the Kallars outside the eight original Nadus were started by persons who were either illegitimate offspring of inter-caste unions or persons "Ex-communicated from the caste for some offence or other.

In terms of political socialisation the dominant, well-to-do members are followers of the Forward Bloc[43] which does not enjoy much support in the State. Solidarity is therefore vital to ensure some access to the political bosses, to obtain lucrative contracts. Routing of the Canal through that particular part of the Taluk was itself a political victory.

The political tightness of the community makes it react to the adverse publicity brought on by national exposure of the ignored in assessing the validity of the findings of journalistic studies like that of India Today. Some of the sources that provided much of the information in 1986 needed to be checked more closely: this was apparently not done. For example, how could 570 out of 600 female babies and their mothers keep disappearing from a Government Hospital without the knowledge or connivance of the Hospital staff? Or how did, the Hospital records indicate that these children died of 'social causes'? -What happened to professional responsibility or Government service conduct rules that prescribe accountability to higher authorities?

Some answers and insights for a number of my doubts were provided by a creative writer of Tamil literature who undertook an in-depth socio-psychological study of the people of different class of Usilampatti to understand what made mothers kill their own daughters.[44] Her first finding casts doubt on the glib statistics, since "there is no proper record of births and deaths and as the entire community is united in its silent approval of the practice". The sex ratio is the only damning objective evidence. She did however get several statements saying that "there is hardly a house in Usilampatti which has not killed

a female child". Some of the doctors in the hospital are from the guilty community. Their statements are illuminating. "The female babies inevitably die, and we know how they die. It is very sad, but it keeps happening". No records are maintained in health centres or nursing homes where many deliveries take place although the law requires this. The majority of the births however still take place in households which "Keep the information to themselves". Social workers trying to prevent the practice say they are most of the time "too late". The principal of the local college, also a Kallar, admits to knowledge of the practice, but has "never felt it to be an issue". Of late, the community "tried to keep it as its private business and wants no interference from the press and the police".

Contrary to the general belief that female Infanticide is taking place only among the Poor, a nurse in a Primary Health Centre gave out that 'Even educated people and reasonably well-to-do people have no qualms about killing[infant girls]'. and gave instances of educated men forcing their wives to kill their babies, under threat of being "rejected". Several women told her (the nurse) of such pressure from their husbands. Some had complained to the police but had received no support. Often the men commit the crime themselves, if they cannot force the women to do so.

Though virtually everyone mentions 'the dowry menace', Vasanthi found one academic, Kothandapani (in Gandhigram Institute) who dismissed it as a "flimsy' reason. The system of giving presents on many occasions (Seimurai)- the birth of a child, ear-boring, circumcision, puberty and marriage- certainly places a financial burden on a woman's natal family, but Kothandapani claims that the system helps to rotate money. The Kallars are "a formidable lot": the community owns common property worth Rs. 5 crores and is politically very influential. He went on to say that there is no history of human sacrifice and the community rejects atheism (that was why they opposed E.V.R. Naicker and the Dravida Kazhagam). But killing is not considered a sin either by men or women. Principal Bose, who never felt disturbed by the practice, is very ready to offer reasons such as modernisation, money culture, decline of moral values, insecurity that young women -face, the coming of cinema, T.V., video etc.

Ordinary Kallar women, on the other hand, bemoan the disappearance of certain customs that protected their security (e.g. obligatory cross-cousin marriages - Murai Palyan). They are also very conscious of the community's emphasis on 'honour' - if a girl gets into any trouble, she will be killed anyway. Some voluntary agencies tried to arrange for baby girls to be 'given away' to orphanages but came up against the feeling that this would be a shameless thing" to do.

Vasanthi's search for a meaningful explanation for the beginning and spread of female infanticide in this area led her eventually to relate it to 'the period of intensification of the Family Planning Programme in that area. Family Planning was propagated at a time when their social structure was already getting disrupted ... there was poverty... and affluence. As a people they are terribly prestige conscious and highly sensitive'. Contraception and abortion both appear to be out of reach of the poor-'Besides money, they are afraid to lose their time and health". Many told her :'Well-to-do people go for family planning methods, We limit our families in our own indigenous way. What is the difference? It if is legal killing of child in the foetus (which will harm the health of the mother) should be wrong killing of new born baby? In this way you save the child from future hardship, and also the mother's health. And also you have the choice to keep the baby". Vasanthi blames the doctors for emphasising only sterilisation as a method of contraception, one that the people, especially women, are afraid of. It involves hospitalisation and post-operative care which they cannot afford, and they fear losing their health, or being 'rejected' by the husbands afterwards. For both men and women, in her view, the legalisation of abortion has provided a rationale for what they feel compelled to do for other reasons.

III) Conclusion

A comparison of these two social phenomena poses some obvious difficulties. Unlike the Infanticide story, our data on sex-selective abortions from Punjab, Delhi, Maharashtra or Gujarat tell us practically

nothing about the communities indulging in this practice. We only know that the majority come from the upper and middle classes though reduction in costs in Bombay and Gujarat have now brought this practice within the reach of even the poorer sections. In the case of the Kallars, community approval and connivance are being, provided not by the traditional community institutions (which retain some authority only in the interior areas), but by the new leaders of the community in the prosperous areas the well-to-do, the educated professionals, and the political leadership. In both cases, it is clear that the medical professionals are particularly guilty. Investigators in Usilampatti have not enquired whether any of the health professionals there have as yet recognised the commercial possibilities of the technology of amniocentesis. The indifferent role of the law enforcement agencies and governmental ambivalence as a whole at the local, State and national levels are also common actors in the two stories.

Both prosecution and defence in the two cases identify (a) the policy of population control and (b) the social perception of legalised abortion as primarily an instrument for population control as major causes of the two phenomena. Other reasons mentioned by the groups involved are : dowry, the expense of rearing daughters, and the age-old cultural culprit-son preference.

It is a pity that the foeticide studies do not provide us with more information on the caste/community/ culture background, or the life styles of the families taking recourse to sex-selection. We do not really know how many of them actually need to pay dowry - according to the customs of their community or 'necessity'. Nor do we know how many of these families would have continued to defy the law[46] in spending lakhs or more on the weddings of their daughters so that they could justify even higher demands in the case of their sons. Nor can we estimate how many would have spent more than they could afford on the education of those daughters had they lived - to be faced thereafter with self-chosen marriages, often outside the caste/ community prescribed norms - for which, theoretically at least, no dowry would be called for. The fear is more real and concrete in the case of the Kallars, because they are a small group, and want to maintain their communal solidarity for political survival.

In the melting pots of the metropolitan cities, with Increasing education and employment among middle class women, and the mushrooming of women's organisations fighting against the violation of women's rights, I have found it increasingly difficult to sympathise with the moans of middle-class families about "social pressure" to get their daughters married at all costs, even by paying dowry. Urban life styles these days leave little scope for such 'social pressure' to operate effectively. The proliferation of matrimonial advertisements, the contribution of the NRIs (non-resident Indians) to the marriage mart, and the speed with which marriage transactions are settled, often without any real enquiry into the antecedents or character of the two individuals involved, suggest far greater influence of market forces and a fear among parents - of losing control over their sons and daughters, than the upholding of any traditional' values or institutions. Projecting dowry as an abstract social menace has prevented critical exposure of its role in the circulation of capital, sealing business or political alliances, and in promoting competition in consumerist culture. The operation of a considerable degree of choice or voluntarism in the escalation of dowry has definitely been underestimated, even underplayed by analysts and activists alike.

To my mind, similar market forces are at work in the SD test-abortion front also, The high pressure sales promotion of the doctors is not intrinsically different from the sales campaigns for consumer durables, new fashions in clothes etc. The one difference is that it utilises the language of population control, and provides a touch of patriotic idealism to salve people's conscience. To draw an analogy from the high pressured promotion, and acceptance of baby formula in preference to breast-feeding, and the propagation of caesarian sections for perfectly normal cases of confinement, one may even expect a certain element of status competition operating among the patients and their families.

These are untested and unpleasant hypotheses, but testing them out with more painstaking research would be more advisable than turning dowry, son-preference and that ubiquitous culprit, cultural or religious values, into abstract bogeys that are beyond our control or correction. A similar defence on the education front has provided the educational bureaucracy with a perfect cover to hide their acts of emission and commission.

Societies have always practiced demographic stimulation or control-designing values as their instruments. Religious and legal sanctions added weight to such values. But at the individual level, pragmatic reasons often pushed women and men into actions utterly in contravention of such values. Abortion was regarded as a sin in most South Asian cultures, and perhaps in others as well. Despite that, many women took recourse to abortion by indigenous or other methods at great risk to themselves. What the anti-natalist population policy and the marketing of the population - development debate, essentially from the perspective of the industrialised, powerful, rich nations of the world and their counterparts in the third world, has done is to provide a scientific rationale for investment in new reproductive technologies which are controlled by the providers, and not by the recipients. In many cases the women are not even informed about the possible side-effects on their general health and productive capacities. There is little doubt that there are inducements with offers of aid from donor agencies. It is also certain that the current policy of import liberalisation dictated by the IMF and World Bank will increase the import of sex-selection technology and that the propulsion of market forces can very easily defeat the objectives of the law now on the anvil. This would not be the first time that laws with humanitarian objectives are defeated by macro-policies in the economic or social sectors that result from other compulsions.

Safety of abortions, sterilisation and maternity care depends on the general state of the health services. The declining quality of public health services in India has been the subject of considerable debate. There is a growing feeling among many health scientists, and even bureaucrats, that placing the responsibility for restricting population growth on the health infrastructure has only brought about the degeneration of the infrastructure and the profession, without attaining the national objectives.[47] The present financial crisis and the pressures of SAP have already resulted in the slashing of the health budget: this trend is likely to persist for sometime.

The Report of the Eighth Plan Working Group, however, states that women's status issues, and the improvement of the quality of life of the people are central in attempts to achieve demographic transition or population control. Similar views have been expressed by many, but little attempt has been made to probe the nature of this relationship, Approaches to the question have been fragmented and so have the slogans-women's education/literacy: women's employment, their integration in mainstream development; participation in decision- making-, women's autonomy, options, choice, legal rights to equality in social, economic and political spheres in order to enhance women's capacity to influence development decisions that affect their lives. WID literature is replete with such concepts or policy approaches - often dealing with more than one issue.

The time has come to ask whether these approaches are all complementary, or are there contradictions between some? Is theinsistence on autonomy or choice at the individual level possible or consistent with the goal of influencing collective, community, even national decisions? Going by the political experience of many, the answer is no. Research on empowerment actions at the grassroots, focussing on poor women, also indicates that collectively they display a higher sense of social responsibility, and a rationale for their familial and community roles that provide a basis for tremendous confidence, courage and strength of character. Mahatma Gandhi had intuitively grasped this strength and tried to harness it for nation-building.[48]

But social and economic organisations, the dominant construction of gender, the development of a market-oriented society, and technological advance, are all inimical to this notion of women's equality. After so

many years of debate, development literature has not gone beyond viewing women as beneficiaries or victims of change, women are still not regarded as active partners and agents.

A basic point of difference between various brands of western and third world feminism has been in the importance they assign to sexual and reproductive freedom for the individual in the quest for equality. Third world women have a historic awareness that individually their struggle would not get them very far. Such powerful systems cannot be changed by individual protests- though they have a historic role.

If the protest has to be collective, social and constructive - then we have to rethink the importance of sexual and reproductive freedom or rights at the individual level as the foundation and core of women's equality. Rights have to be interpreted within a historic, social context. Women's quest for equality today faces two challenges - a) reinforcement of hierarchic, unequal order from the global to the national level - the original destroyer of women's rights to equality: and b) the upsurge of various revivalist' fundamentalist' movements, projecting a group identity, based on religion, ethnicity, language, culture etc. By their very nature, they need to control women's reproductive capacity to preserve the 'purity' of the group.

Reproductive technology in the control of either or both these forces would destroy all hopes of women's equality. But fighting them by defending individual freedom may not receive full support even from all groups of women. The counter ideology to motivate and mobilise women also needs asocial goal which provides them with a higher sense of self-worth and moral courage. Justice, dignity, the rights of child, the good of the community, and women's collective empowerment - along with participation to a achieve all these - may provide a stronger base for struggle today than the notions of sexual or reproductive freedom. Reproductive health needs to receive far greater priority than it has done so far and control of reproductive technology needs to be rescued from theclutches of market forces. But theories and instruments like intellectual property rights are no going to make the task easy.

In the Indian context, we have to resolve a debate among our allies. The FASDSP wants the national law against sex-selective abortions to exempt to concerned women from any punishment. The CWDS has already opposed this idea. We propose instead a campaign to inform women that they will have to stand trial for foeticide or child murder, (in case like the Kallars),whatever their class or economic status. If this is followed up by forcing the legal authorities to enforce the law, we anticipate that such measures would be an empowering effect on women, helping them to resist or community pressure.[49]

Notes and References

1. Ravindra Pathak, *The Scarcer Half,* counter fact No., Centre for Education and Documentation, Bombay, 1986, cites various Western Feminist authors especially papers presented at the II nd International Interdiciplinary Congress o Women, Graningen, the Netherlands.

2. Inventor of sex selection technique and founder of the Gametrics ltd. co. which has 46 clinics all over the world to propagate and universalize the patented technique.

3. In a press conference in India, reported by Manisha Gupte and Ravi Duggal in papers dated 29 June 1986 - Voluntary Health Association of India (VHAI) Information Service.

4. Cited in VHAI information service, 7 September 1982, A world without Women?

5. Committee on the status of women in India (CSWI). Towards Equality, Government of India, Ministry of Education and Social Welfare, 1974, chapter 8 ; VHAI, op, cit.

6. Jodi Jacobson, Worldwatch Paper 102 - Women's reproductive Health: The Salient Emergency, 1991, also CWDS, Changes in Womens Health Status - 1975-85 (mimeo).

7. The joint action was to pressurize the Government of India to initiate some changes in the Sixth Five Year Plan in favor of Women - see Indian women in the eighties: Development imperatives. The joint front includes some politically oriented organizations (All India Democratic Women's Association, National Federation Of Indian Women Mahila

Dakshata Samiti): one trade union group (All India co-ordination Committee of Women workers); some explicitly non-political groups (YWCA) of India. All India women's conference, joint women's programme; and one research institute (CWDS).

8. This phrase was quoted as a headline in several press reports of the meeting. Looking back after ten years. I question the wisdom of making the statement, though the experience of the last decade has proved its validity.

9. The Times of India, 8 August 1982.

10. EPW, Editorial, 25 October 1986.

11. Indian Express, 7 July 1982. This statement was made prior to the meeting of the women's organizations and Mr. Marwah's request.

12. Several issues of The Pioneer from Chandigrah: Sunday 8-14 June 1986.

13. *Ibid*

14. *Ibid*

15. R. P. Ravindra, "Campaign against sex determination Tests", Lokayan Bulletin, 8 March 1990.

16. Types of complaints that can be filed by any concerned citizen against the violation of fundamental rights of a group. The Supreme Court permitted such writs to provide legal remedy to persons who would normally be deprived of the option of coming to court because of poverty, ignorance or other social handicaps. This opening created by the Supreme Court in the 1970s has permitted under trial prisoner, women in state - run protective homes, children in prison etc., to move the court through such concerned citizens. Prior to this, the concept of 'locus standi' prevented such actions.

17. Mrinal Gore, Janata Party; Shyam Wankhede and Sharayu Thakkar from Congress(I).

18. Ravindra, op, cit.

19. This person was not one of the 42 respondents in the study, but one of the many doctors consulted by Kulkarni.

20. Dr. Sanjeev Kulkarni, Pre-Natal Sex Determination Tests And Female Foeticide in Bombay City. The Foundation for Research in Community Health, Bombay, 1986.

21. The resolution of the 1982 meeting had suggested teaching and research institutions, which do not engage in commercial transactions. The majority of such institutions at that time were believed to be in the public sector. That is not the case today.

22. Unfortunately, the report of this committee was never published by the Government.

23. Ravindra, op, cit.

24. This was suggested by the experience of the Bhopal gas disaster, which affected many pregnant women.

25. Ravindra, op, cit.

26. Ashish Bose, in personal conversation with me, after looking at the district level sex ratio of the 1991 Census.

27. Two of the major national parties - the BJP and the CPI(M) - included a an on SD tests in their 1990 manifestos. Even the Janata Dal and the Congress(I) are not opposed to it.

28. Ravindra, op, cit.

29. S. H. Venkataraman, "Born to Die"' in India Today, 15 June 1986.

30. CSWI, op, cit., Chaper 3.

31. Louis Dumont, Une Sous Caste de L'inde Du Sud, Paris, 1957.

32. V. Vasanthi Devi, Socio-economic Context of female infanticide, A study of Usilampatti Taluk in Tamil Nadu. Paper presented at Vth National Conference in Women's Studies Jadavpur, Calcutta, 1991 (mimeo).

33. Omar Rolf Ehrenfels, Mother Right in India, London, 1941.

34. Pauline Kolenda, "Regional Difference in Indian Family Structure", in R Crane (ed.), Regions and Regionalism in South Asian Studies, Duke University, 1967.

35. Dumont, op, cit.

36. Kolenda, op, cit.

37. According to D. D. Kosambi, the mathemathecian turned aechaeoligist / historian / indologist, the predominance of local female deities in rural India is a remnant of matrilineal communities trying to maintain memories of clan ancestresses, See Kosambi, Culture and Civilization of Ancient India in Historical Outline, Delhi, 1974. N. N. Bhattacharya identified the costal areas of the Bay Of Bengal as the region where women-dominated pre-aryan communites survived longest before the onslaught of Aryan partriarchy submerged their social institutions and knowledge systems as 'magic', 'evil' etc. See Bhattacharya, History of the Tantric Religion (a Hisorical, Ritualistic and Philosophical study), New Delhi, 1987.

38. V. Vasanthi Devi, op, cit.

39. *Ibid.* Other on gender based wage disparities in Tamil Nadu - especially in the nearby Coiambatore region - suggest that under the older system of attached labour in family farms, wages were paid in kind, with no gender - based difference. On the other hand, pregnant and nursing women were entitled to some additional privileges - some extra nutrition, clothes and a small amount of cash at the time of confinement to meet expenses (kharchi) incurred for the services of the midwife. See Kumaresh Chakrabarty and G C Tewary, Women's employment in Agriculture, Tamil Nadu, Bihar and west Bengal (mimeo). ICSSR Programme of Women's Studies, 1979. The entry of gender based disparities in wages with the appearance of cash wages has been reported from the other parts of the subcontinent also, though it is difficult to put a precise date to this change. What is, however, tangible is the indirect impact of such disparities on the social perception of women's role and contribution in agriculture and other sectors of the economy, Prof. Meenakshi Malya, one of the designers of the farm Management Surveys in the 1960s told me that she had assessed women's labour as 2/3 of men's because of the wage difference. The third Regional Workshop of the UNU sponsored Project, Women's Work and Family Strategies in South and South East Asia (Kathmandu 1987) concluded that gender based wage disparities in agriculture etc. did not reflect labour market realities but social perceptions and prejudices. For a positive connection between the 'invisibility' of women's labour and differentiation within the peasantry, see Smita Tiwari Jassal, Women's access to land and Other Productive Resources. An Historical Exploration, CWDS, 1989 (mimeo),

40. This transition from bride-price to dowry - concomitant with upward mobility has been discussed and documented ad nauseam. It is considered to be one of the modern aspects of the Sanskritisation process. See M. N. Srinivas. Changing Position od Indian Women, Delhi, OUP, 1979; and social change in modern India, Delhi 1972. Also Scarlett Epstein, South India: Yesterday, Today, Tomorrow, London, 1973.

41. Caste councils, not to be confused with statutory elective bodies for local Government.

42. V. Vasanthi Devi, op, cit

43. Group founded by Netaji Subhash Chandra Bose in the late 1930s, prior to his escape to Germany and Japan during World War II.

44. Vasanthi Sundaram, Female infanticide in Usilampatti 1991, (mimeo).

45.Her interviews were mostly concentrated in the prosperous areas well served by transport and communication networks.

46. Dowry is now cognizable offence, since the amendments introduced in the 80s in both state and national laws.

47. Ashok Mitra and Ashish Bose (eds.). Population in India's Development 1947-2000. Delhi, 1947: Vasant Gowarikar (ed.), Science, population and Development, Delhi, 1992. S. K. Alok (JT. Secy., Ministry of Health and family Welfare, Government of India) "Population Policy and Strategy: Issues and Future Developments", paper prepared for the working group planning commission on population projection and Family Planning for the Eigth Five Year Plan, 1990-95 (mimeo).

48. See Pushpa Joshi (compiled by), Gandhi on Women, Navajivan Press, Ahmedabed and Delhi, CWDS, 1988.

49. A similar trend, though slow, has been visible in cases of dowry violence. Earlier, it was virtually impossible to get the victims to indict their husbands or in-laws. Now such statements are recorded by several dying women - "to save others from suffering (a similar) fate". It is a mistaken policy to protect women from succumbing to pressures from husbands, parents etc., to the point of committing a crime. Appropriate support in order to help them to resist would, in the long run, be welcomed by most such women.

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3

Sex Determination Tests and Female Foeticide in the City of Bombay

Sanjeev Kulkarni

Introduction

Over the last one year, there has been a steadily growing debate both among the public as well as in the media over the issue of prenatal sex determination and sex selective abortion. Most of the national level English and regional newspapers and magazines have carried editorials, articles and letters from the readers on this issue. The opinion of some of the participants in the debate has been that this practice is highly discriminatory against women, that it will have highly undesirable effects in the long run and that proper steps should be taken without delay to check it. Others have said that in the existing Indian culture where the woman is discriminated against for having borne a female child, this practice is beneficial and that concern over this issue is unfounded.

The Central Government too has time and again made its stand clear on this issue. Between 1977 and 1985, three government circulars have been issued to various concerned departments in the Centre, and in the states making the use of prenatal sex determination for the purpose of abortion a penal offence (1). Taking into cognizance the growing debate on the issue, the Public Health Department of the government of Maharashtra formed a committee under the chairmanship of Mr. Bhai Sawant, the Minister for Public Health and Family Welfare (Resolution No. MTP - 1086/2544/CR-354/FW.III dated 19.9.1986) to study the problem of Sex Determination and female foeticide. The present study was designed with the idea of collecting relevant information, which would be useful to this committee. An interim report of the study comprising only the salient findings was prepared and submitted to Mr. D.T.Joseph, Secretary to the Government of Maharashtra, Department of Public Health and Family Welfare on 22.11.86.

Objectives

The debate on this issue had in fact begun some years ago but petered out by itself. And, ironically enough, the attention focused on the issue only helped many more centres offering such services to come into existence and hence increasing the magnitude of the problem. It has been estimated that about 78,000 cases of post amniocentesis female foeticide have occurred in the country between 1978-82 (Notes for the First State Level Committee on Sex Determination: Chamber of Minister (PH & FW): dated 8.10.1986).

Yet, notwithstanding the concern, expressed by Women's groups, people's health groups, a few concerned doctors and others, as far as is known, no systematic study has so far been done to assess the magnitude of the problems and other related factors. Therefore, it was with the idea of filling this lacuna, the present study was undertaken. The main objectives of the study were: -

1. To study the extent of spread of Sex Determination tests and female foeticide in the city of Bombay.

2. To study other aspects related to Sex Determination and female foeticide, and

3. To know the views of the doctors on the issue.

Methodology

A questionnaire was prepared covering various aspects of the issue. As prenatal sex determination tests are not carried out in Government and Municipal Hospitals, they were not included in the study.

With the plan of collecting information from 50 private gynaecologists, a list of 70 private gynaecologists selected at random

was drawn up. From this list, 50 gynaecologists were approached with the questionnaire and information was collected. Quite a few times, it was not possible to meet the doctors. When a particular doctor whose name figured in the first 50 of the list could not be met, a doctor from the reserve 20 was included. Apart from getting their replies to the questionnaire, wherever possible, additional information was also collected from some doctors. But as there was no set pattern in collecting this extra information, this has to be seen differently.

The second part of the study, i.e. collection of information from genetic laboratories, could not be undertaken. This was not possible because out of the 5 laboratories approached, four refused to give any information.

Because of the time constraint, the questionnaire could not be pre-tested and improvised. As a result, there was some difficulty in collecting information. For example, while answering the question regarding the class wise grouping of women coming for SD tests, many doctors clubbed the upper and lower middle classes together. Because of this, while analyzing the dates only three classes viz high, middle and low, were considered instead of four as was designed in the questionnaire.

First of all I should thank the 50 gynaecologists who willingly provided the information and made the study possible. Their identity has of necessity been kept secret. I thank Mr. D.T.Joseph, secretary to the Government of Maharashtra, Department of Public Health and Family Welfare and his colleagues who offered excellent cooperation to me in conducting this study.

I thank Dr. N.H.Antia, Director, Foundation for Research in community Health for his advice an guidance. My thanks to the Research staff and Secretarial staff of F.R.C.H. for the help they gave me at all stages of the study.

Case Studies:

1. For small and balanced families

Through a friend of mine, I met a doctor who is in his early thirties and is a practicing pediatrician in a western suburb of Bombay.

He told me: I got married 8 yrs ago. After one year a daughter was born to us. We had decided to have not more than two children. I know about the prenatal sex determination methods. So when my wife was carrying for the second time, about 4 years ago, after the fourth month of pregnancy, we went to a gynaecologist in Worli and got SD test done by amniocentesis. Fortunately for us it turned out to be a male foetus. My wife had no problems either during the pregnancy or during the childbirth. But surprisingly enough we noticed a small puncture mark on the right ear lobe of the baby soon after it was born. I think it was caused by the needle prick during the amniocentesis procedure. But anyway, now my son is absolutely healthy.

In fact this gynaecologist in Worli is practicing SD methods for many years now. I know this because about 8 years back, I had taken my aunt to that maternity home. My aunt already had four daughters and did not want to have another daughter but was very much anxious to have a son. She got SD test done. Luckily it was a male foetus in her case too. Now that boy is about 8 years old and the whole family is very happy, thanks to that SD.

In the last five years two more relatives of mine who first had daughter and did not want to have more than two children came to Bombay and got SD tests done. Both of them had sons.

But a couple who live in my housing society itself, had very bad experience. After the first daughter, the wife underwent SD tests during her second pregnancy. But unfortunately before the results could be known, she had profuse bleeding and had to undergo MTP.

On the whole I feel that SD tests are very beneficial. Of course there are some risks involved but then every medical procedure has some risks with it.

When I asked him how the SD tests are beneficial he replied, " Today people do not want to have many children. If SD test facilities are available, a couple can have a balanced and small family. Thus SD tests

can help in family planning programme also.

When asked whether there could be any long term effects, he said, "No, SD test help in having balanced families. But If people decide to have only sons and no daughters then there may be problems. I don't think that will happen.

2. Preplanning of sex - A method

A gynaecologist in Dadar area after giving information as required in the questionnaire told me this -

"Actually I don't suggest the SD tests to the couple myself. But I tell them about 'Pre-planning of sex' if they want to have another child.

This is a method, which I have evolved myself, and I have been advocating this for nearly 6 years now. I don't advertise or tell in the public about this method though a few of my friends want me do so. Moreover this method requires a lot of patience and understanding on the part of the couple. So I carefully choose the candidates.

The idea first came to me, about 8 years ago when an American doctor gave a lecture on reproductive physiology in Wadia Hospital. He dealt in detail on the characteristics of spermatozoa, their size weigh and life span etc. I thought over what he had said carefully and it occurred to me that this knowledge can be used for preplanning of the sex of the child. So far I have advised this method to more than 60 couples. But because of my busy working schedules I have not been able to collect more literature on this topic from the libraries or to analyze and assess the data, which I have. So I have not published any paper on this though I want to.

Because this is a planning method and requires time and understanding I first ask the couple to practices contraception for some months. This helps in avoiding an unplanned pregnancy. During this period I teach and ask the woman to prepare her menstrual chart. It may take 4-5 months to do this properly. But once a reliable menstrual chart is available the date of ovulation also can be predicted with great certainty. When this is possible I advise them to try the method.

The method is as follows: The couple should have sexual intercourse only once in a month and that should be on the predicted day of ovulation. Apart from this one act, the husband should not loose his semen in other way i.e. by intercourse on other days or by masturbation etc. The idea is that there should be very good storage of semen i.e. spermatozoa. Thus when the couple has intercourse only on the day of ovulation then the conception that will result will be of a male foetus.

The basis of this method is that the x-bearing sperms are heavier than the y-bearing sperms. Consequently the life span of x-bearing sperms is smaller than that of the y-bearing sperms. So, if the couple has intercourse only on the day of ovulation, then the husband's semen will contain mainly y-bearing sperms and hence the chances of conceiving a son are very high.

This method demands great patience and understanding from the couple. In a way they are the demerits of this method. But the merits are many. Firstly no investigations or medical procedures are involved which are often so embarrassing and trouble some for the couples. Secondly the couples are in total control of what they are doing. Finally there is no expenditure of money at all.

The success rate of this method is almost 80% i.e. in 80% cases the couple succeed in getting a son. Even the so-called modern sex pre selection methods also have the same success rate. Thus in comparison this method is better than them.

3. Sex determination - Another method

I met a senior gynecologist from South Bombay and he told about a method of Sex Determination, which he has evolved himself. He explained in detail about this method. Here are the salient features:

"This is neither allopathic nor ayurvedic. You can call it spiritual. I have been practicising this method for more than 5 years now and so far I must have done SD by this method in more than 5 thousand method on most of the women who come to me for antenatal checkups. So far I have done more than 5000 sex determinations by this method. By this method sex of the fetus can be found out at any period after 8

weeks of pregnancy, even just before delivery also.

Prenatal sex determination is not the only use of this method. Pregnancy can also be detected, because soon after conception, the fetus starts exhibiting its charge. Thus pregnancy can be detected as early as 5th week after missed periods. By this method one can also judge the well being of the fetus within the womb. And after birth, as the haemoglobin content is changing from fetal type to adult type, one can predict the chances of neonatal jaundice also. There are many other applications.

Many times after getting to know the sex of the fetus by this method people go and confirm it by amniocentesis, but invariably my prediction turns out to be right.

I asked, "don't you think the couple might go in for abortion if they come to know it is a female fetus and if they don't want a daughter?"

He replied, 'that is not my problem. If they don't want a daughter they can go for abortion why should I bother about it?"

"But will not such sex selective abortions have adverse impact?"

"No. These people in the press are unnecessarily exaggerating the whole issue". After all it is the choice of the parents. If they don't want to have daughters how can anybody else force them?"

3. Changed views and changed practices

I started performing amniocentesis nearly 10 years ago and CVB about 3 years ago. At that time I had not given a serious thought to this issue of female foeticide. My practice is fairly good and I used to perform about 5 SD tests every month. About 2-3 years ago when this debate started in the press and when I saw that many centres had started performing this test, I started thinking. Finally I realised that it is wrong
to do a sex selective abortion. I stopped doing amniocentesis and CVB for SD 2 years ago. Now I perform them strictly for detection of genetic deformities.

This practice cannot be defended in any way. These SD tests and female fetus abortions should be banned. "legally, medically and morally". How can one make any discrimination between sons and daughters? In this regard, I feel the couples or the women are not to be blamed. After all, living in a society like ours they have certain ideas and opinions and hence they come to the doctors. It is the doctors, who are sitting in the chairs of authority should use their judgment. It is not correct to say that doctors are helpless; they are forced to do the tests. After all who made it know to the public that such tests can be used in this way? Who put up the advertisements in local trains?. These days practically every cases. It is nearly 98% accurate.

But I have not published any paper on this in any of the so-called scientific journals. That is because these doctors who claim themselves to be modern and scientific never look beyond the framework of what is given in the books. Hence any novel method like this is branded as irrational and trash by them. Anyway many articles about this method have appeared in the press especially Marathi press.

The basic principles of this method are like this:

All human beings have a kind of electromagnetic charge in their bodies. This charge is either positive negative or neutral in case of children and adults. But during intra-uterine life the fetus had either positive or negative charge and neutrality means intra-uterine death. This difference in the bodily electromagnetic charge in foetuses and adults is due to their hemoglobin content. Foetuses have mainly foetal haemoglobin and adults have adult hamemoglobin.

The instrument itself is very simple and consists of a panchamukhi Rudraksha (the right one has to be chosen after evaluating it properly) tied to the end of a 9 inches long silk thread.

The pregnant woman is made to lie down on her back. Then this Rudraksha is suspended with the help of the thread from between the index and thumb fingers of the right hand on the woman's abdomen. Whenever there is a pregnancy, it is the foetus which reacts to the Rudraksh and

not the mother's body. Everybody cannot do this method. One has to train and prepare oneself for it. When the Rudraksh is correctly suspended then the electromagnetic power of his whole body passes through his arm and fingers and through the thread to the Rudraksh. Now the Rudraksh reacts. If the suspended Rudraksh simply moves sideward over the abdomen then it is a female fetus. If the Rudraksh moves in a circular fashion then the foetus is male. If the Rudraksh does not show any movements that signifies fetal death.

Thus for a trained person this is a very simple method to perform. I perform thisprivate gynecologist performs these tests. They don't think seriously about the consequence and they are not bothered about the moral or ethical aspects of the issue. They do the test purely for the sake of money in it and in the process strengthen the ideas of discrimination in the society.

I admit I was also doing them once. But now I realize how wrong it is. I have even written an article in a Marathi paper condemning these tests. I feel the government should definitely bring in legislation. But ultimately the responsibility lies with us doctors. We should know what to do and what not to do.

Comments:

Nature is very reluctant in giving away her secrets. The 20th century has witnessed great discoveries and tremendous advancements in all fields of knowledge including medical sciences. But even today we do not know how nature decides upon and brings about, a particular sex ratio in case of living beings. For example in case of the human species, the sex ration 'naturally' ought to be 1:1. Though the sex ratio at birth is 106:100 in favour of males, it may be because the male is biologically the weaker of the two sexes. Only in a small proportion of families are equal number of sons and daughters born and, yet, when we study the population as a whole we see a remarkable balance of sexes at birth.

But as the human beings got 'civilized' this sex ratio has become impaired, at least in some societies. Today India is one of the only four countries in the world with an adverse female to male sex ratio. Moreover, in the case of India the sex ratio is consistently worsening from 1901 onwards and now it stands at 935:1000 (2). It should be noted here that India with 685 million people is the second most populous country in the world today. The causes and effects of this adverse sex ratio have been appeared on the scene is the phenomenon of prenatal sex determination and selective female foetus abortion.

In the West, Amniocentesis as a test or the detection of genetic defects has been in use for nearly 25 years now. And yet there are hardly any reports of it being used for solely for sex determination. Infact, while discussing the indications and uses of amniocentesis, popular text book of Obstetrics, denounces it categorically; .... Amniocentesis.. should not be offered for such trivial reasons as choosing the sex of the offspring. (3).

In India, however, amniocentesis is being used for SD with the idea of aborting the female foetus for more than a decade now. According to the findings of this study, one doctor has been performing SD for the last 10 years and another for the last 12 years!

In 1975 the All India Institute of Medical Sciences (AIIMS) initiated experiments through amniocentesis for the detection of foetal abnormalities and unintentional fallout of this study was that, most of the couples who came to know that the foetus was female went in for abortion. The issue was raised in Parliament and subsequently, through an order of the ICMR, SD tests were banned in AIIMS (4)

In 1982, the advertisements of the 'Dr. Bhandari's Clinic, in Amritsar triggered a public outcry. The issue also came up for discussion in Parliament. In spite of the outcry and the debate, private gynecologists in more and more cities and towns continued to do the tests. Infact, the debate, having failed to force the government to take necessary legal and administrative measures, only resulted in the opening of more centres of SD. As the findings of this study also show, most of the gynecologists performing SD tests have started it in the last 5 years. According to one doctor, today

'there are as many clinics for amniocentesis as there are gynecologists in the study'. (5) And the practice is no more confined to big cities like Bombay and Delhi only. According to Mr. R.P.Ravindra, in the last 3 years, SD clinics have proliferated all over Maharashtra, in places like Dhule, Jalgaon, Amrawati, Nasik and Nagpur (6).

Thus on the one hand SD tests and female foeticide are fast spreading to smaller cities and on the other, in big cities like Bombay are becoming so rampant as to be accepted as a common practice. That the magnitude of this practice is increasing is also evidenced by the emergence of a well-coordinated protest movement especially in Bombay. The Forum against Sex Determination and Sex Pre-selection comprising of people from various walks of life has been carrying on a campaign against this practice for well over a year now. Recently a group of doctors - Doctors against Sex Determination & Sex Pre selection has also come into existence. Mr. Shankar M.K. has made a short documentary 'Samadhaan' dealing with this issue. This film, which was reviewed by many newspapers is being screened in Colleges, Mahila Mandals etc. Certainly this campaign is a direct response to the magnitude of the practices in Bombay. Again, indicative of the magnitude of the practice in Bombay and the protest campaign is the fact that two bills were recently presented, one in the Maharashtra Assembly and the other in the Parliament, both with the intent of bringing in effective legislations against this practice of SD tests and female foeticide.

Most of the gynaecologists perform amniocentesis solely for SD and even where they are done for detection of genetic defects they form a very small percentage of the total number of the tests. Almost 100 percent of 15,914 abortions during 1984-85 carried out by a well known abortion centre in Bombay were undertaken after SD tests (7).

According to the study, the cost of the amniocentesis test including the analysis of the amniotic fluid varies from Rs. 70 to 600. Also most of the doctors say that they don't get any cases for SD from the lower classes. But it is likely that with more number of SD centres and more competition, the test will cost less and thus enabling more people from the poorer class of the society to avail of the facility..... given more widespread and safe amniocentesis cum abortions facilities, and a fall in their price, many (Bijnor) women without living sons could become clients (8). In fact using appropriate advertisements 'pay Rs.500 now than Rs.5000/- later (9). Gynaecologists have already tried to convince people of all classes that spending Rs.70 or Rs.500/- is a pittance as compared to the cost of bringing up a daughter and marrying her off.

In the currently raging debate, quite notable by its absence has been the defence of their conduct by the doctors carrying out these tests. One of the widely held beliefs is that it is mostly those who have four or five daughters and no sons who go in for these tests. But the findings of this study are contrary to this. Firstly a small but significant proportion of women have only one daughter when they go in for SD tests. Secondly in majority of the cases the women have 2 or 3 daughters and thirdly the percentage of women coming for SD tests when they have four or more than four daughters is relatively small.

Another significant finding of this study is doctors do get quite a few cases where the woman already has one or more sons when she comes for the SD test.

These findings not only go against the popularly held beliefs but also show the trend as to how and by whom the tests will be used in future.

As far as SD is concerned, according to most of the doctors the tests are 96 to 98% accurate. Now with a big increase in the number of amniocentesis carried out and the consequent increase in the workload of the laboratories, may be the accuracy will decrease. But again with the introduction of improvised techniques the accuracy may increase. Anyway the accuracy of the tests has never been or should not be a point of argument because even 100% accuracy does not in any way justify the use of SD tests.

Another common assumption is that

women themselves volunteer to undergo SD tests and that they choose not to have more daughters. Many have questioned how truly voluntary can a woman's decision be and how real her choice is. Not withstanding these arguments in this study nearly 35% of the doctors stated that they do get cases where the woman is forced to undergo the test by her husband or in-laws. In fact, one woman gynaecologist said that when asked confidentially as many as 50% of the women admit to being forced to undergo the test.

Just as in case of amniocentesis, the method of chorion villus biopsy too was quickly used for SD in our country. In this study as many as six doctors said they perform CVB. CVB can be done in the first trimester itself unlike amniocentesis and many doctors say it is soon going to push amniocentesis out of the scene. But this seems quite unlikely, as CVB requires much more skill and added to that ultrasound guidance thus rendering the test quite costly as compared to amniocentesis. Nevertheless, CVB offers yet another example of how medical advancements are put to quick use in our setup.

What is the opinion of the doctors about SD and female foeticide? Many of them admit that it is a wrong practice but all the same it cannot be helped at least by the doctors because it is the couple who come on their own and demand such a facility from the doctors. Putting it this way an effort is made to place the blame chiefly on the society. Dr. D.K.Tank the new President of the Bombay Obstetrical and Gynaecological Society is reported to have stated recently that sex determination is a social problem like dowry and child marriage and that there is no point in blaming the doctors alone asking to discipline themselves and refuse to do amniocentesis tests for those who intend aborting a female child (10). Apart from this many gynaecologists see the SD tests as a humane service to those women who don't want to have any more daughters. According to them in many families when a daughter is born she becomes an 'unwanted child' and thereby is at a disadvantage – right from birth onwards – both economically and emotionally. The woman too is made to undergo further pregnancies in the hope of getting a son, endangering her own health in the process. From this they i.e. many gynaecologists logically conclude that it is much better to abort a female foetus than to allow a daughter to be born and made to suffer. It is not that it is only the gynaecologists who hold this view. There are others too. When there was a debate on this issue in Economic and Political Weekly, Dharma Kumar once wrote,... "It seems to me that amongst certain groups at least it is preferable for unwanted girls not to be born than to live and be so badly treated. .... I am only making the value judgement that female foeticide is better than female infanticide or severe ill treatment and it seems to me that the case is particularly strong when one is not against abortion itself'. (11). Going a step further many say that female foeticide will even help in elevating the women's status in the society by reducing their number. One gynaecologist from Bombay has put it succinctly:' Emancipate the woman! Make her important. I for one hope their number decreases so their status in society enhances. After all, it is universal law that when demand escalates and supply dwindles, value automatically rises' (12).

How far this 'universal' law of demand – supply – value is applicable in the case of human beings in a society where there are many other mechanisms operational is anybody's guess. In fact many women activists and social scientists, citing ample evidence, argue that it is exactly the opposite. They say that with a worsening sex ratio the oppression of women will only increase. For example, in their view, any further reduction in the sex ratio in Northern India would signify a continuing decline in the relative status of women there, and would be highly unlikely to offer any benefits to women who survive (13).

Another view held by only some doctors but nevertheless an important one is that SD test and female foeticide are a good method of family planning in our country. In this study too many doctors have expressed this view. They ask 'When planning then why not sex selective abortion which is all the more to the satisfaction of the couples?' As long as 1974, an Indian doctor speaking in an

international forum is reported to have advocated abortion of female fetuses after sex determination by amniocentesis as a solution to India's population problem.

Dr. Sudha Limaye, the head of the Obstetric and Gynecology department at the Bokaro General Hospital in Bihar is reported to have said, 'Our priority is population control by any means. Amniocentesis should be used as a method for family planning and made available to every one at a minimum cost or even free' (15). Many also say that SD tests are particularly helpful to the couples in achieving small and balanced families. Again numerous women activists, social scientists and others have contradicted these views quite strongly.

In our country there is indeed a sizeable section of people who question the very theory of population control. According to them what we have in our country is not a problem of population but a problem of distribution of resources. That apart we have to take into consideration the realities of the society in which technologies like SD tests are introduced and used in the way they are being, now. It is widely accepted that (adequate) socio economic development coupled with proper education and social reforms would not only result in the reduction of the growth rate of the population but also in elevation of the status of women in our society. We have to realize that people have their own perceptions about the desired family size and also the desired number of sons and daughters.

Thus in the absence of the above stated measures if a small family norm is forced upon then it is more likely that people would have desired number of sons and this if necessary at the cost of daughters. This is exactly where the SD test will come to their help. To put it in other words, people will have smaller families all right but not by having fewer children as such but by having fewer daughters than sons. If this is allowed to continue or worse still is encouraged then it would certainly lead to undesirable effects. Without adequate social mechanism operating for the elevation of women's status, a small family norm and sex selective abortions may prove to be a dangerous combination in the long run.

The issue of prenatal sex determination and female foeticide raises many important questions like:

1. Is this practice an effect of adverse sex ratio or will it further worsen the sex ratio? Or are both true?

2. Is there any relation between the population control drive and emergences of such a practice?

3. In what way has the liberalisation of abortion (MTP Act 1971) contributed to the emergence of this practice and how does one see this practice in relation to a women's right to abortion?

4. Was it possible for the medical profession to avoid such a situation or seeing the way our medical profession has developed over the decades was it inevitable that such a practice should have been ushered in?

5. What can and should the medical profession do?

6. What can and should the government do? and

7. What role can women's groups, health groups, groups of doctors and others play in such a situation?

I have tried to briefly touch upon the various aspects of this issue. I realize that each of these questions deserves a detailed examination but it is obviously not possible to do that exercise here. That will require another effort

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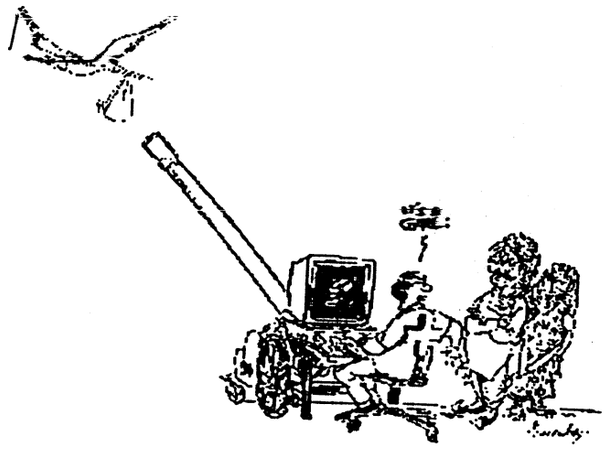


Findings

1. Whether performing amniocentesis:

Reply	No of Doctors	%
Yes	No	42
8	84	16

Of the 8 who replied in the negative, one doctor said he is performing a different method of sex determination (details later).

2. Number of years the doctors have been performing amniocentesis.

No of Doctors (%age)	Years
20 (47.6%)	2
17 (40.5%)	5
3 (7.1%)	7
1 (2.4%)	10
1 (2.4%)	12

Mean = 4 years
= 2.33
Sex = 0.36

a) From this it is seen that as many as 37 doctors (87%) have started performing SD tests in the last (5) years.

b) One doctor has been performing SD tests for the last 12 years and another doctor has been performing SD test in the last 10 years.

c) One doctor said that he was performing SD tests but has stopped for the last 3 months because of the present controversy about the tests and added that he will not restart until the government settles the issue.

3. Average No. of tests done per month:

No of Doctors	Tests/month
6	1-2
9	3-4
11	5-6
4	7-8
6	9-10
3	10-12
1	13-15
2	16-20

X = 6.45
= 4.01
Sex = 0.62

a. The average number of SD tests performed per month by the doctors varies from 1 to 20 tests per month.
b. On analysis, it is seen that these 42 doctors among themselves perform on average 271 SD tests per month.

4. Percentage of amniocentesis tests done for detection of genetic defects.

No. of Doctors	% of tests for Gen. Purposes
27 (64.3%)	Nil
6 (14.3%)	1-3%
7 (16.7%)	4-5%
2 (4.8%)	5+ %

X = 1.393
= 2.19
Sex = .338

a. 27 out of 42 doctors (i.e. 64.3%) said they carry out amniocentesis tests solely for Sex Determination.
b. The rest 15 doctors (35.7%) said between 1-10% of the amniocentesis tests they perform are for detection of genetic defects.

5. Classwise breakup of women who come for sd tests:

Class	Percentage of Women (NIL)	1-20%	21-50%	51-75%	76-100%
Upper Class	3 (7.1%)	11 (26.2%)	28(66.7%)		
Middle Class			11 (26.2%)	19(45.2%)	12(28.6%)
Lower Class	36(85.7%)	1(2.4%)	5(11.9%)		

a. On first glance, one may find it difficult to read this table. One should read it e.g. 11 out of 42 doctors (i.e. 26.2%) said that upto 20% of the women coming to them for SD tests belong to upper class of the society.
b. 31 out of 42 doctors (73.8%) said between 51-100% of the women coming to them for SD tests belong to middle class.
c. As many as 36 (85.7%) doctors said they do not get any women from the lower class for SD tests.

6. Break up of women according to the number of daughters they have, when they come for SD tests.

No.of daughters	Percentage of Women (NIL)	1-20%	21-50%	51-75%	76-100%
One	32 (76.2%)	10 (23.8%)			
Two		7(16.7%)	35 (83.3%)		
Three		3(7.1%)	37(88.1%)		2 (4.8%)
Four	1(2.4%)	29(69.0%)	12(28.6%)		
More Than Four	3 (7.2%)	30(71.4%)	9(21.4%)		

a. 32 out of 42 (76.2%) doctors said they don't get any cases where the woman has only one daughter.
b. 10(23.8%) doctors said upto 20% of their cases the woman has only one daughter when she comes for the SD tests.
c. Most of the doctors said that in majority of the cases they get for SD, the women have 2 or 3 daughters.
d. According to most of the doctors, the percentage of women coming for SD tests when they have 4 or more than 4 daughters is relatively small.

7. Break up of women according to whether they already have one or more sons when they come for sd tests.

Nil	1-5%	6-10%
30(71.4%)	7(16.6%)	5(12%)

a. 30 out 42 (71.4%) doctors said they do not get any cases where the woman who already have one or more sons comes for SD tests.
b. 12 (28.6%) doctors said that upto 10% of the women who come to them for SD tests already have one or more sons.

8. Cost of the test: (Including analysis of amniotic fluid)

No. of Doctors	Cost (Rs)
2(4.93)	Upto 200
33(78.6%)	200-400
7(16.6%)	400-600

X = Rs.323.81
= 90.55
Sex = 13.97

a. The cost of the amniocentesis test for SD including the analysis of the amniotic fluid varies from Rs.70/- to Rs. 600/-
b. According to 33 (78.6%) doctors, the test costs between Rs. 200-400
c. Of the two doctors in the first group according to one the test costs Rs.70/- and according to another it costs Rs. 150/-

9. Accuracy of the SD tests:

No.of Doctors	Accuracy (%)
2	Upto 95%
2	95-96%
30	96-98%
7	99%
1	100%

a. Two doctors said in their experience, the tests are accurate or correct in only upto 95% of the cases.
b. According to a big majority of the doctors, the tests are accurate in 95-100% cases.

10.a. 27 out of 42 doctors (64.3%) said they do not get any cases where the woman is forced to undergo the SD test.
b. 15 doctors said they do get cases where the woman is forced by her husband or the in-laws to undergo the test.
c. Of these 15 doctors, 2 said in upto 30% of their cases, the woman is forced to undergo the test and one doctor said in her experience, when asked confidentially in as many as 50% of the cases the women reveal that they are forced to undergo the test.

11.a. 37 out of 42 (88.1%) doctors said they perform abortion also following SD tests, if desired by the couples.

b. The reason given by 5 doctors who do not perform abortions following SD tests is that even in their routine practice they do not perform midtrimester abortions, because of the complications.

12. Performing other methods of SD

a. 6 doctors out of 42 said they perform other methods of SD
b. Of these 6 doctors one said he is performing both Chorion Villus Biopsy & Ultrasound methods for SD.
c. One doctor who is not performing amniocentesis for SD said he perform another method of SD - Rudraksha Method. (see case studies).

Details of CVB

	Since when doing CVB	No.of tests per month (average)	For SD	For Genetic purposes	Cost (Rs)
1	6 months	5 - 6	90%	10%	1000
2	1 year	1 - 2	100%		1000-1200
3	3 years	10 - 15	85%	15%	1200
4	1 year	5 - 6	90%	10%	1000-1500
5	6 months	1 - 2	90%	10%	1200-1500
6	performing both CVB & USG - No details.				

13. Views of the doctors on the SD tests:

SD tests are:-

A. a human service to the women who do not want any more daughters.
B. an effective method of family planning
C. a wrong but unavoidable practice in our social set up.

No. of Doctors	Views
18	A
10	C
4	A & B
5	A & C
4	A, B & C
1	None of these

a. According to as many as 31 (73.8) doctors, Sex Determination tests are a humane service to the women who don't want to have any more daughters.
b. 8 doctors opined that SD tests are also an effective method of family planning in our country.
c. 19 doctors said SD tests are wrong but unavoidable in our social set up.

14. a. 31 out of 42 doctors (73.8%) said they perform SD tests only when asked for by the couples.
b. 11 (26.2%) doctors said they do SD tests when asked for as well as suggesting the tests themselves to the couples.

Note: It was not possible to get the exact number of Gynaecologists doing private practice in Bombay. Totally there are about 1000 gynaecologists in Bombay. So, it may not be too off the mark if one says 70% of them i.e. 700 gynaecologists are doing private practice.

S.D. Tests & Female Foeticide - A Questionnaire

1. Do you perform amniocentesis?
   Yes / No

2. How long have been performing amniocentesis?
   2 yrs/5 yrs/ 7 yrs / 10 yrs

3. How many tests do you perform every month on average?

4. Approximately what percentage of these texts are detection of genetic deformities

5. To which class do the women coming for SD tests belong to?

Class	% of women
High	
Upper middle class	
Lower middle class	
Low	

6. Rough breakup of the women coming for SD tests according to the number of daughters they have

No. of daughters	% age
1	
2	
3	
4	
more than 4	

7. What percentage of women coming for SD tests already have one or more sons?

8. What is the approximate cost of the SD Test? (including amniotic fluid analysis)

9. How sure is the test in your experience?

10. Do you come across many cases where the woman though herself unwilling is forced to undergo the SD test by her husband or in-laws?

11. Do you perform abortions following SD tests or do you refer the woman to some other centre?

12. Do you perform any other method of SD?
    a. CVB b. USG

13. You see SD tests as -

a. a humane service to women who want no more daughters?
b. an effective method of FP in our country
c. a wrong practice but unavoidable within the given setup of our country.

14. Do you offer this test yourself or you do it only when the couple asks for it

(Reproduced from Foundation for Research in Community Health Bombay, 1986)

Section II

Role of the State and the Law

4

Fighting Female Foeticide - A Long Way to Go

Ravindra R.P

The blatant misuse of amniocentesis for sex selective abortions continues unabated. State laws enacted to curb the problem have helped little, partly due to inherent defects in the law itself and an implementation machinery that leaves much to be desired. In a scathing critique Ravindra Rukmini Pandharinath analyses the existing legislation on prenatal diagnostic and the central government expert committee draft bill which is pending before parliament.

In 1975, amniocentesis arrived in India as a method for the detection of genetic abnormalities. Soon it came to be used more commonly for sex determination (S.D.), actually a misnomer for sex prediction leading to sex selective abortions. In response to an official directive, government hospitals stopped the misuse of this technique for S.D. but it resulted in opening the floodgates for large-scale commercialization in the private sector. S.D soon becomes a booming business in Delhi, Maharashtra, Punjab, Haryana, U.P., and spread like an epidemic in north and west India. This was the region which had shown a much sharper skewing of the sex ratio (adverse to females) in the past decades, thanks to a pronounced sexist bias and prejudice leading to discrimination against females in all walks of life. Young daughters, in lakhs, died silent deaths as their health and well being received low priority in the family and society. In fact, amniocentesis came as a gift of modern technology to 'Mother India' who has always been cruel to her daughters.

The 1991 census has further highlighted the trend of a declining sex ratio prevalent throughout this century. The sex ratio of more than half of the rural districts in north and west India are dangerously low. If the S.D. 'epidemic' is allowed to proliferate further in this demographically sensitive area, it would spell disaster for our society. Yet a demographic catastrophe or unprecedented dimensions, an almost irretrievable breakdown of the sex ratio balance is an avoidable tragedy, provided we act in time.

While S.D. techniques have already made India their home, there are other, more sophisticated reproductive techniques crossing the threshold or waiting at the door. *Regulation of prenatal diagnostic techniques would initiate the long overdue process of regulation and debate over medical technology in India.*

Allied Issues

The blatant misuse of amniocentesis has thrown up allied issues as well. While S.D. techniques have already made India their home, there are other, more sophisticated reproductive techniques crossing the threshold or waiting at the door. Regulation of prenatal diagnostic techniques would initiate the long overdue process of regulation and debate over medical technology in India. The laws relating to medical products are extremely weak, however those relating to medical technology are totally absent. In the absence of such regulation, India might in the near future became a dumping and testing ground for all types of hazardous medical technology. Further advances in sex pre selection techniques and the growing clout of the population control lobby are bound to pose newer problems and more complex issues.

Curbing sex pre selection is possible only if a law against S.D., symbolizing the state's commitment to intervene in medical technology on grounds of 'right to equality'

and 'preserving the sex ratio balance', is brought into effect and implemented.

Self-regulation would have been preferable to state intervention. However, the medical establishment has consistently refused to take stand on the issue of S.D. or for that matter on any issue raised by S.D. techniques are too important to be left on technodoes alone.

But ultimately, progressive legislation is not a substitute for cultural changes and consciousness raising. However, the former is at least in the Indian context a prerequisite for social action. Female infanticide and sati could not have been curbed (if not eliminated) without the aid of suitable legislations.

Initiation of a Campaign

For many years, while the message of sex pre selection was taken down to even far flung villages and bastis in the form of roadside slogans and pamphlets that read 'spend Rs. 500/- now, save Rs. 50,000 later", virtually no action was taken. Then in 1982, an error in S.D. 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. However with in six months the issue died a natural death. The government had ruled out a legal ban. Although it, had promised 'appropriate action' against the New Bhandari hospital, the latter rather improved its business, so much so that its geneticist, Dr. Loomba shifted to Delhi to start his own laboratory to enter to the needs of his ever-growing clientele which include top government officials and ministers - the very people who enact laws and are responsible for their implementation.

It is almost a decade now since the first public debate on this issue. In the meantime, the clientele for S.D. tests has grown and so has the influence of the Loomba's and New Bhandari's who are found almost all over India (except the south). They have found for themselves influential spokesperson and supporters - ministers, bureaucrats, sociologists and population experts. S.D. is being flouted as a 'woman's democratic right' and 'an answer to India's population problem.' Opposition to it on ground of equality and gender justice is labeled as 'feminist distortions.' Newspapers which sermonize on the dangers of S.D. routinely continue to carry the advertisements of S.D. clinics and laboratories. Eternal vigilance, it seems is the price of equality and justice. However, even among vigilant activist there is a growing, skepticism bordering on cynicism. Many feel that S.D. is as yet not a very widely known technology and they are afraid that campaigning against it would make people aware of its existence. (It is like opposing demonstrations against dowry murderers lest it gives ideas to as yet innocent in-laws.)

In 1986, Forum Against Sex Determination and Sex Pre selection (FASDSP) Bombay made a systematic attempt to revive the campaign on this issue. It put S.D. back on the national agenda. It pressurised the government of Maharashtra to enact the first ever legislation on the issue - The Maharashtra Regulation of Prenatal Diagnostic Techniques Act, 1988. It also catalyzed a socio cultural movement on this issue. Today, although most people even in the remotest corners know about the existence of a S.D. service,' they are also aware of the campaign against it.

FASDSP has as an issue based campaign group performed a versatile role - researching, disseminating information and ideas, lobbying, having protest actions, helping in drafting legislation, and coordinating and networking. Similar groups have emerged in other parts as well - Forum Against Sex Determination (FASD), Gujarat Voluntary Health Association (GVHA), Gram Gujarat and Baailancho Saad in Goa, to name a few. Their campaigns have prompted the introduction of Bills in their respective state legislative assemblies.

History of Legislation

The nationwide support and international coverage received by the campaign has also resulted in the appointment by the union government of an expert committee on S.D. and female foeticide. The committee has after detailed dialogue and debate drafted a central bill and submitted it to the union government

along with a detailed report. The Janata Dal government fell before it could take any decision on this issue. The Chandrashekhar government had, in its short tenure, attempted to introduce the Bill in parliament. The Bill actually was an attempt to nip the campaign in the bud. But it had very serious lapses. It could not see the light of day due to timely protests by activist groups.

The Congress (I) in its 1991 election manifesto has promised to enact nationwide legislation on the subject. Other political parties, too, have indicated a willingness to have a law to S.D. tests. Meanwhile, the Maharashtra Act has remained on paper primarily due to basic defects in the Act (see table), as well as the total lack of political will of the government in implementing the Act.

It has been observed that governments which enact certain progressive legislation under popular pressure drag their feet at the time of their implementation. A common gimmick is to delay the notification of the Act in the Official Gazette or to maintain ambiguity about the mechanism of implementation of the Act.

Before the comparative merits and demerits of various legal options on this issue are discussed, it becomes necessary to indicate a growing trend among activists and the public. The euphoria of public interest litigation has evaporated. With it has vanished much of the magic of progressive legislation. Indeed, among women groups, there is growing disillusionment about any effective role of the law. For many, the laws specifically related to women's issues, are too inadequate to bring about any effective change. They feel that such laws would never be implemented. The non-implementation of the law on sati, the Muslim women's (protection of Rights on Divorce) act and the Maharashtra Regulation of Prenatal Diagnostic Techniques Act are glaring examples of this phenomenon.

Comparison of various Acts / Bills

The various Legislative options on this issue offered by different authorities have much in common, mainly because all the bills are basically amended or improved versions of the Maharashtra Act. This commonality is reflected in matters like functions of implementing bodies, indications for carrying out prenatal diagnosis registration of centres/clinics/ laboratories and the basic objectives viz. regulation of prenatal diagnostic techniques and banning of their misuse for sex determination for non medical reasons (see annexure 1). However, they do differ in their approach on various important matters, which we will now proceed to examine.

A) Implementation of Act

a) Setting up of a time frame for enforcement of the Act and appointment of implementing bodies.

It has been observed that governments, which enact certain progressive legislation under popular pressure, drag their feet at the time of their implementation. A common gimmick is to delay the notification of the Act in the official Gazette or to maintain ambiguity about the mechanism of implementation of the Act. If the Act itself suggests the formation of an independent implementing machinery, the government puts off its constitution. In order to overcome these problems, activist groups have suggested incorporating within the Act specific time frames for these matters. While the Maharashtra and Gujarat Act and the Chandrasekhar government draft Bill ignored their suggestion, the same has been accepted in the central committee draft Bill and the Goa Bill. Interestingly, the former has come up with a novel suggestion that the Act should come into force on the day of receipt of the President's assent (irrespective of publication in the Official Gazette). However, constitutional validity and practical difficulties need to be considered before accepting this suggestion. The inordinate delay of the government of Maharashtra in setting up implementing bodies (see table) inspite of persistent pressure from activist groups underscores the need for such a time frame.

b) Constitution of Implementing Bodies

These bodies are vitally important in the actual implementation of the Act, as they are entrusted with matters like deciding /

revising of policies, granting/cancellation of licenses and maintaining vigilance. The lack of initiative, flexibility and political will of the government machinery along with rampant corruption, have been the major handicaps in the implementation of several progressive legislations in the past. The recent trend exemplified by the Consumer Protection Act and amendments to the Dowry Prevention Act reflect the need to set up committees (instead of vesting the power in the hands of an individual) and encourage the growing participation of voluntary agencies in these committees. It is of paramount importance for this Act too. Because almost the entire task of research, analysis, debating and suggesting alternatives on the issue has been single handedly carried out by voluntary activist groups.

The government has chosen to act only in response to the sustained pressure of public opinion, while the medical establishment has consciously evaded the issue. It is clear that this act cannot succeed without voluntary organisations playing a meaningful role in its implementation. In this context, it is important to note that neither the Goa Bill nor the central committee draft Bill provides any role for non-government organisations/ persons. In fact, so much power has been concentrated in the hands of a few bureaucrats that implementation would be 'impossible' and misuse of power inevitable. In the central committee draft bill, the entire implementation machinery, viz, the State Appropriate Authority (SAA), State Vigilance Committee (SVC) and Local Vigilance Committee (LVC), is proposed to be replaced by a single officer. In all other legislations, the proportion of representation for voluntary agencies is between 1/4 and 1/3 of the total strength of the committee.

While the appropriate authority is vested with the powers of a civil court in several relevant matters, the powers of vigilance committees, which form the backbone of the implementing machinery, have not been specified. This could serve as a major impediment in the enforcement of the Act.

B) Regulation of Prenatal Diagnostic Techniques

All the legislations provide for allowing the use of techniques like amniocentesis for specific purposes by specific persons at specified (licensed) places.

The indications allowing the use of prenatal diagnosis are uniform throughout except the clause relating to 'two or more abortions or foetal loss'. The rationale for including such a clause is supplied by the growing medical evidence, which indicates that spontaneous abortions (miscarriages) are often nature's way of eliminating malformed embryos/fetuses. However, the important qualifying word spontaneous abortion is not used in the Maharashtra and Gujarat documents. This can serve as a loophole for allowing the use of prenatal diagnosis for non-medical reasons. A statement by the woman (or the concerned gynecologists) that the woman has undergone two or more MTP's could make her eligible for prenatal diagnosis.

While all the Acts provide easy access for needy women to prenatal diagnosis (see table), they are not vigilant enough to prevent its likely misuse for S.D. The Goa bill is an exception. It specifies that a woman would be allowed to undergo the prenatal diagnostic procedure only after she provides documentary evidence to support her claim of eligibility for prenatal diagnosis. As an additional safeguard the written opinion of three medical experts is also required.

Yet another example of how the Maharashtra Act has consciously attempted to nullify attempts by activists groups to enforce the Act is seen in Section 21 of the Act. Under this section, voluntary groups or individuals, (or rather anybody except the implementing bodies) cannot move the courts to bring to its notice the alleged contravention of the Act. Sub section (b) stipulates that the court shall take cognizance of an offence by any person only after issuing a notice of not less than 60 days to SAA/SVC/LVC or an authorized officer in the prescribed manner. The implementation of this Act was held up primarily because these bodies were not constituted and later because these bodies after constitution did not make any serious effort to prevent the contravention of the Act. The manner in which the notice is to be served has not yet been specified. No action has been taken on complaints filed

by activists groups nor are they informed of how they should proceed to take legal action against those who violate the provisions of the Act.

The proviso clause of section 21(2) makes the issue more complex. It ensures the implementing bodies a right to refuse to make any record available to a person moving the court after issuing 60 days notice on the grounds of it being 'against', public interest'. How can anybody prove contravention of an act more than 2 months after commitment of the crime without any records is anybody's guess! Fortunately, the entire section 21 of the Maharashtra Act has been deleted from all the remaining Bills/Acts.

Activist groups have always been asserting that a woman rarely makes a conscious choice to undergo an S. D. test. Hence she should be 'presented' as innocent in all circumstance. It is unjust to equate the victim (the woman) and the criminal (the doctor and family members).

Granting Licenses to Private Institutions

It has been observed that even in the absence of a nationwide law, misuse of prenatal diagnostic techniques has not been reported from any government hospital or laboratory in the last decade. However, in this very period, private centres/labs/ clinics have proliferated across the country and turned these techniques into a shady business. In Maharashtra, contravention of the Act by private clinics has been reported. Moreover the infrastructure in the government sector (e.g. municipal teaching hospitals) is sufficient to cater to the needs of prenatal diagnosis and counselling for most parts of the country. Hence here is no reason why private institutions, over which no effective control can be exercised, should be issued licenses for carrying out prenatal diagnostic procedures and techniques. Yet, only the Gujarat and Goa Bill seem to support this plea.

C) Offences and Penalties

All the Bills/Acts are unanimous in punishing doctors (for misusing the technique) and in-laws (for abetting the crime) although the degree of punishment might vary to some extent. Although they are unanimous in referring to the medical council the name of defaulting doctors for purposes of taking suitable action, no medical council is yet known to have taken any action against any erring doctor. An amendment in the Medical Council Act to provide for such action is the need of the hour. The expert committee's comments about the lack of sensitivity of established medical institutions (like medical councils) and its suggestion for revamping them by including non-medical members is worth a follow up.

There is also a provision for punishment of doctors/their assistants for advertising sex determination. The Gujarat Bill ha specified different punishments for doctors carrying out tests at unauthorized places, by unauthorized persons, for unspecified grounds, etc.

The only bone of contention in this section relates to punishment to women undergoing S.D. tests. Activist groups have always been asserting that a woman rarely makes a conscious choice to undergo an S.D. test. Hence she should be 'presented' as innocent in all circumstances. It is unjust to equate the victim (the woman) and the criminal (the doctor and family members). While the Goa Bill seems to uphold this view, the Gujarat Bill and central committee draft bill reflect exactly opposite views. The Maharashtra Bill and the central government expert committee draft bill are a compromise on this issue would render the Act non implementable. Punishing a helpless woman would make her more vulnerable to pressures and would leave her with still fewer options. It would also discourage courageous women from coming out to expose guilty doctors and family members.

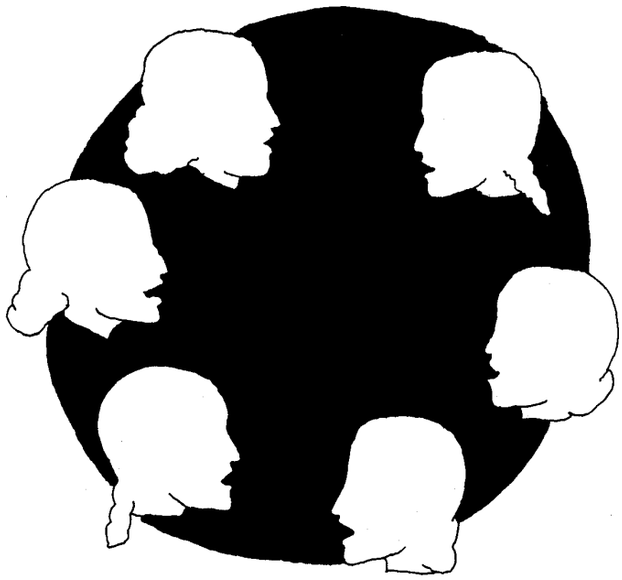
Conclusion

Whatever may be the constraints of the present legal system and the broader social system within which it operates, a comprehensive nationwide law on S.D. tests is urgently needed despite the fact that the law is by no mean an end in itself, nor will it be sufficient to deal with the problem.

A seriousness on the part of the government to implement its laws is vital. As the initial experience of the

Maharashtra Act shows, doctors prefer to close down their clandestine businesses if they are convinced that the law would be implemented. The fact that the S.D. business has slowly revived once doctors and the public become convinced that the law would remain on paper is just a corollary of the earlier statement. Keeping vigilance over thousands of S.D. clinics spread over three -fourths of India is an impossible task. But bringing to book 1 or 2 culprits is sure to send the right signal everywhere.

Finally, a nationwide law would be the beginning of a process. Activist groups and legal experts would have to be ready for intervention - right from the stage of identifying legislation to the stage of struggling its implementation, which shall be more difficult. But the journey of a thousand miles always begins with a small step.



Excerpts From Resolutions Passed
By the Geneva Conference

"The Conference"

- HOLDING that Amniocentesis sets a precedent which may apply to other medical developments, specially in the field of genetics, and to ways in which society may be called upon to deal with such developments;
- RECALLING that in case of drugs, vaccines and other therapeutical agents, extensive evaluation mechanisms have been and are being developed for protection of society, but that no mechanisms exist as yet for the evaluation of new biomedical procedures;
- CONCLUDES that only if new medical procedures and interventions are subject to such critical assessments can mankind progress towards the determination of its fate rather than submitting blindly to technological developments."

-VIII Council for International Organisation of Medical Sciences

The International Opinion

- "New technology should not be used to provide parents with children of desired sex, except for the purpose of sex linked disorders."

-Working party for council for science & society, UK

- The medical Council of U.K has prohibited the use of prenatal diagnostic solely for sex prediction
- In S. Korea, the gynecologists themselves have taken the initiative to curb sex selection.
- The Chinese government has prohibited the use of Chronic Villi Biopsy (CVB) for S.D. and subsequent sex selective abortions.

Excerpts From The Report Of The Central Committee
On Sex Determination

- It is absolutely essential not to accept medical technologies blindly: **decisions related to social development, and the choice of application of technology are too important and value laden to be left to experts to technology above.** (Emphasis added)
- Suitable provisions my be made in the code of medical ethics to prohibit the medical practitioners resorting to the unethical practice of sex determination and female foeticide.
- Government may initiate action to provide in the Medical Council Act, for suspension of the name of a medical practitioner from the register in the event of repeat offence.
- The acceptance of female foeticide as a family planning method is not merely derogatory to the women's status, harmful to maternal health but is repulsive to human nature.
  Where the practices of any profession tend to reinforce social prejudices, cultural backwardness or communal disharmony, the professionals will have to accept the suzerainty of the state to regulate those practices.
- The absence of a self regulating mechanism within the medical community has left no option but to think of legislation for S.D. tests.
- There is no report anywhere of the members of any medical council trying to take note of this problem and evolve principles and guidelines for the benefit of medical community. The society spends huge amounts on producing qualified medical personnel and has a right to expect that the profession and its apex body function in a socially modern, equitable and development oriented manner.
- It is time to consider whether the medical councils need to be geared up or restructured in such that they are more responsive to social problems. **The government may consider whether restructuring the medical councils and nominating a few non-medical social thinkers and public representatives on these committees could sensitize them to social problems,** (emphasis added). The relevant Acts may also be reviewed to make provisions for government or members of public to refer specific problems and cases to the Council for its opinion within a reasonable period of time and specific and effective action in the case of an erring medical practitioner.
- It is possible to enact and implement the law, provided government shows the necessary political will and sensitivity to women's problems and seeks the help of committed voluntary organisation in addition to government machinery for implementation.

Annexure 1

		Maharashtra Act	Gujarat Bill	Central Committee Draft Bill	Chandrasekhar Govt. Draft bill	Goa Bill
A	**Implementation**					
a)	Time frame specified for					
(i)	Enforcement of Act	-	-	On the day of receipt of assent of president of India	-	1 month within date of enactment
(ii)	Setting up of implementing bodies	-	-	3 months	3 months	3 months
(b)	Implementing bodies					
(i)	Bodies/persons entrusted with implementation of Act	SAA SVC LVC	Only govt offices chief inspector for state and inspector for specified area	CSB CAA CVC SSB SAA SVC LVC	Govt. offers not below the rank of Joint Director of Health and family welfare to serve a CAA and SAA	SAA SVC LVC
(ii)	Representation to voluntary Agencies in CAA CSB CVC SAA SSB SVC LVC	 2/8 2/7 2/8		 4/12 4/17 2/5 generally on patterns on CAA, CSB & CVC	 2/15	 2/8 2/7 2/8
(iii)	Powers to implementing bodies	SAA-possesses powers of a civilcourt under code of civil procedurein matters like proof of facts by affidavit summoning and enforcing attendance of any person and examining him on oath or affirmation compelling the production of documents and issuing commission for the examination of witness.	Chief inspector & Inspector's power to enter and search premises	CAA,SAA-powers of civil court under cod of civil procedure in matters like proof of facts by affidavit summoning and enforcing attendance of any person examining him on oath or affirmation compelling production of documents issuing commission for examination of witnesses.	The appropriate authority shall have all the powers of inspection, search and seizure necessary for discharge of its functions.	SAA-processes powers of a civil court under the code of civil procedure in matters like proof of facts by affidavit summoning and enforcing attendance of any person; examining him an oath or affirmation compelling production of documents issuing commissions for examination of witnesses.

B	**Regulation of prenatal diagnosis**					
(a)	Indications for prenatal diagnosis Apart from others	2 or more abortions or foetal loss	2 or more abortions or foetal loss	2 or more spontaneous abortions or foetal loss	2 or more spontaneous abortions or	2 or more spontaneous abortions or foetal loss
(b)	Need for documentary evidence for carrying out prenatal diagnosis	No	No	No	No	Yes
(c)	Written opinion of 3 specialists - gynecologist, pediatrician, geneticist/pathologist	No	No	No	No	Yes
(d)	Cognizance of offence by court complaint field by individuals / organisation	No free acces to court notice of not less than sixty days to SAA/SVC/ LVC authorized officer in prescribed manner necessary	-	Free access to court	-	Free access to court
(e)	Institutes eligible for obtaining licences	Private & Govt	Only Govt	Private & Govt	Private & Govt	Only Govt
C	**Offences & Penalties**					
(a)	To woman for submitting to test for non medical reasons	Presumed to be innocent still fined Rs. 50/-	Fine of Rs. 5000/- to woman who submits to test (whether willingly or unwillingly)	Presumed to be innocent still fine Rs. 500/- punishment, on conviction	Onus of proof (to prove innocence placed on the woman) 1 year imprison-ment + fine of Rs.1000/- for 1st offence. Subsequently 2 yrs + Rs. 5000/- fine subseq-uent offence	Assumed to be completely and absolutely innocent. Hence, no punish-ment
(b)	To Doctor (or owner of institute)	Rigorous imprisonment RI (upto 3 yrs) + fine (upto Rs. 5000/-) (not less than 1 yr and Rs. 1000/-)	RI (upto 3 yrs) + fine (upto Rs. 500/-) not less than 1 yr + Rs. 1000/- cite reasons if less punishment is given)	RI (upto 3 yrs) + fine (upto Rs. 500/-) not less than 1 yr + Rs. 1000/-	For owner simple imprisonment (2 yrs) + fine (Rs.10,000/-) subsequently 5 yrs + Rs. 50,000 same for doctor working at unrecognized place	RI (upto 5 yrs) + fine (upto Rs.5000/-) (not less than 3 yrs +Rs. 3000)
	Suggested action by Medical Council Suspension of name from Register	For 2 years (for first offence) permanent removal on subsequent offence	2 years (first offence) permanent subsequent offence	2 years (first offence) permanent (subsequent offence)	Not Specified	2 years (first offence) permanent (subsequent offence)

c)	To family members an others for abetment of crime (forcing woman to undergo test)	RI upto 3 yrs + fine upto Rs. 3000/- (not less than 1 yr + Rs. 1000/-	Imprison-ment upto 1 yr + fine upto Rs. 5000/- (not less than 3 months + Rs. 1000/- cite reasons if less punishment is given	RI upto 3 yrs + fine upto Rs. 3000/- (5 yrs + Rs. 10000/- for subsequent offnce)	Simple imprisonment upto 1 yr + fine upto Rs.1000/- (2 yrs + Rs. 5000/- for every subsequent offence)	

- The expert committee has suggested a review of the decision to grant licenses to private institution after 5 yrs.

SAA - State Appropriate Authority, SVC - State Vigilance Committee, LVC - Local Vigilance Committee, CAA - Central Appropriate Authority, CSB - Central Supervisory Board, CVC - Central Vigilance Committee, SSB - State Supervisory Board.

(Reproduced from From the Lawyers Collective, Vol. VI, No 8, Aug 1991, pgs 4-11.)

5

Banning Pre -Natal Sex Determination Scope And Limits Of Maharashtra Legislation

Dr. Amar Jesani

The Maharashtra Government's bill regulating the use of the prenatal diagnostic techniques is a concession to the demands of the five year long campaign. It is also an indictment of the Medical Council for its open disregard of its own code of professional ethics. On the other hand, it carefully avoids touching the private sector, makes a mockery of people's participation and offers many concessions to the medical lobby.

The government of Maharashtra has recently introduced a much awaited and talked about bill in the state assembly, "Maharashtra Regulation of Use of Prenatal Diagnostic Techniques Act, 1988". The bill has come in response to a campaign mounted mainly by the Bombay based Forum Against Sex- Determination and Sex-Preselection and supported by organizations of women, doctors, health activists and even a research institution. These groups organized demonstrations, marches, *dharanas*, exhibitions, seminars and workshops. They also used all available media to draw people's attention to the rampant misuse of medical techniques like amniocentesis, chorion villi biopsy, and sonography leading to female foeticide. Many sensitive journalists and other media people helped focus the campaign not only on the issue of misuse of medical techniques but also on the status of women in our society. Several members of these organizations also accepted the government's invitation to participate in a committee which did some necessary groundwork to identify the technical and legal issues involved in stopping this misuse. The bill presented in the assembly was, however, drafted by the Government on its own.

Medical Council Indicated

Although the statement of 'Objects and reasons' given by the minister of State in the bill, does not explicitly criticize the Medical Council, states that "In breach of professional ethics, unscrupulous medical practitioners do not hesitate to perform abortions even when the sole or one of the reasons for doing so is female foeticide". It also laments that "there seems to be a misconception about the objectives of the existing laws in the minds of many medical practitioners". It seems naïve to enact a full-fledged legislation if the issue involved is only a simple misconcept about the existing laws. But to expect the Government to be forthright in its assessment of the medical profession is asking for the moon.

Nevertheless, this statement brings out that sex determination practices involved in breach of medical ethics. Therefore, it squarely indicts the Medical Council. The MC in our country has scarcely made any attempt to regulate the medical profession according to the code of medical ethics formulated by it. It has not only allowed the violation of ethics to go unpunished but also at times attempted to provide justification legal cover to such violation. This attitude was very glaring in the specific case of sex determination. Where it refused to shed its lethargy despite a very hot debate in the media for last seven years. Not only that, in a private conversation, the president of Maharashtra MC defended sex determination practices of the doctors saying that the medical profession must grant full autonomy to the patients. It was also argued that it is difficult to prove in individual cases that sex determination was done to get female foetus aborted

There are enough provisions in the code of medical ethics of the MC to take stringent action against the profession on the issue. Some individual cases also came

to notice but the MC did not move. For instance, Dr. Datta Pai, who runs an abortion clinic (Pearl Center) in Dadar, Bombay and who was a member of the government's committee on this issue, has publicly admitted that his abortion centre has provided facilities for amniocentesis till he was invited to join the government committee, though he never admitted that amniocentesis was used for female foeticide in his centre. Yet this was a fit case for the MC to seize his records of amniocentesis and the MTPs in this period and scrutinize whether in the same centre women who under went amniocentesis were offered MTP when the foetus was found to be female. And if it were found to be so, the MC would have used two clauses of its code, namely, first no discrimination in medical practice and second, the social responsibility of doctors, in addition to the violation of the MTP act, to punish the guilty persons.

Thus though this bill is a concession to the Forum's demand, it is also an indictment of the Medical Council for its open disregard of its own code of professional ethics.

In our country only drugs and pharmaceuticals are regulated under a full-fledged law (albeit, a very ineffective law). The rest of what constitutes medical technology and techniques are not regulated under any comprehensive law. This bill restricts itself to the regulation of prenatal technologies and techniques. Again, it does not regulate the introduction of new technologies and techniques even in prenatal diagnosis. Infact it regulates only their use. Nevertheless, it is an admission of the fact that medical technologies are being misused in prenatal diagnosis to such an extent that an independent law is need to deal with them. By logical extension, it would be said that it gives room for health activists to push the idea that all medical technologies and techniques could be widely misused and they are being misused, therefore stringent regulations on all medical technologies in particular is urgently needed.

Secondly, it explicitly bans the use of medical techniques and technologies for the purpose of prenatal sex determination leading to female foeticide. Thirdly, it declares illegal the giving of any advertisement in any manner regarding facilities available for the prenatal prediction of sex at the centre, laboratories or clinics. Thirdly it makes it illegal of seeking of such facility, by the woman or by any other person for her for the prenatal determination of sex. Fourthly it prohibits the indication of "the sex of a foetus with or without the possible object of female foeticide". And lastly, it prescribes rigorous punishment to those who indulge in prenatal sex determination activities.

Thus, the pressures generated by the Forum's and other individuals and organisation efforts has helped make some break through in the persons situation. But the gains are quite inadequate in many respect and this bill is a big compromise solution worked out by the government and the medical authorities – both private and public. These inadequacies make the bill, if not weaker, than at least as weak as the present drugs and the cosmetics Act. In many ways it is a defeat of the victory for the Forum.

Sacrosanct Private Sector

The Forum has, from the very beginning, demanded the abolition of prenatal sex determination techniques in the private medical sector. For it is the private Medical Sector which is primarily guilty of their misuse and not the public sector. In government institutions the government has issued a directive almost a decade back to stop their usage for sex determination.

However, the government with talks of inefficiency and corruption in the public sector is building a case for privatisation (which is already underway). It has failed to even pay lip service to the nationalization of the private medical sector despite such revelation of gross malpractices. It even fails to acknowledge that the 'liberalization' that is prevailing in the private medical sector, has brought only ills for the people and for the women in particular.

Instead of abolishing all genetic laboratories and genetic ethics in the private sector the bill only wants to regulate them. As we know that such a regulation of the pharmaceutical industry under the Drugs and Cosmetics Act has not radically

changed the drug scene and its misuse continues in legal as well as illegal manner. The regulations of genetic laboratories, genetic centres, genetic clinics, gynaecologists, medical geneticists and so on while ultimately entail the creation of an administrative set-up which will look like a mini – FDA. The expenditure that government will incur and what people will pay for these services in these centres, in the name of registration fees will far set in a few years the total expenditure the government would have made as a compensation in taking overall genetic laboratories in the state. As a bonus this would have made the implementation of the ban easier and effective without depriving those women who medically need prenatal diagnosis.

The story of regulation does not end here. The body (called Appropriate Authority (AA) in the bill) which will grant licenses and enforce the law is full of those health bureaucrats who are already overloaded and proven to be inefficient regulating their own departments. The Director and the Joint Director of Health Services, who will become ex-office chairman and secretary of the Appropriate Authority respectively; have never made any serious attempt to curb private practice by the doctors in our rural health services. Further they are in charge of an ever- expanding rural health infrastructure which includes over 1500 primary health centres and about 200 rural hospitals. In addition they also manage cottage hospitals, district hospitals etc. They are hardly able to efficiently regulate these establishments. One can only manage with what efficiency they will be able to regulate private medical profession and its ever-increasing number of laboratories.

The composition of the Appropriate Authority (AA) is: Two ex-officio government bureaucrats from the public health department, one bureaucrat from the medical education department, one bureaucrat from the Indian Council of Medical Research, two doctors: one gynaecologist and one geneticist (no other qualification mentioned) and two representatives of voluntary organisations (in the field of health, women and human rights). Except ex-officio members, the rest in the eight-member team will be nominated by the government. Thus, the participation of voluntary organisations will be per the needs of the governments and since the AA will take decisions on simple majority, the voluntary organisations will not have much decisive say in most matters.

Mockery of People's Participation

The bill is a classical example of what the government means by the people's participation. As stated above, the selection of the voluntary agency to be represented in the AA will be made by the government and not the people. Further, there will be another agency called the State Vigilance Committee (SVC) to oversee the implementation of the act. Here also, in the seven-member committee, two representatives of voluntary organisations will be appointed by the government. In its supervisory functions, the SVC will pay periodic visits to the recognized centres, but it will not have authority to take action against those violating the act. For this the SVC will have to approach the AA.

Further, on the one hand representation to the voluntary agencies in the implementing bodies is given under the guise of people's participation on the other hand common citizens are forbidden to directly prosecute erring doctors, centres and laboratories. Such citizens will have to first approach the SVC and the AA with their complaints. There is, however a provision for such citizens to go out to court after giving two months notice to the AA about their complaint. But to counterweigh such action, the AA and SVC, which will be in possession of all information needed to prosecute doctors, centres and laboratories, are given the power to refuse to make information available to such citizens if the same is, in its opinion, against the public interest. Thus, in the last analysis, while talking aloud about people's participation and extending an olive branch to the voluntary organisations, the government has made clever provisions in the bill to see that even those people who want to participate to stop the misuse of prenatal diagnostic techniques cannot do so or are effectively frustrated in their efforts.

Concessions to the Medical Lobby

The pressures exerted by the medical

lobby while the bill was being drafted is clearly visible at several places. This is not surprising. The medical bureaucracy has time and again on various issues (recently on the issue of charging for services) expressed its sympathy for the values of the private sector. Further, people like the president of Maharashtra MC and Dr. Datta Pai are close advisors of the government health department.

In the defining indications and conditions for which prenatal diagnostic techniques should be used, they have seen to it that the Forum's proposal of getting written opinion of three concerned specialists has been completely excluded in the bill. In the absence of such a provision, the private gynaecologists will be the sole decision-maker whether to offer prenatal diagnostic facilities to the woman or not. However, vague indications like the history of two or more abortions or foetal loss could be misused in the same way as the failure of contraception as an indication is used for the MTP. Just as the failure of contraception as indication for the MTP has *rightly* made abortion facilities legally available to women, the indications like foetal loss will *wrongly* make available sex test to women who want to go for female foeticide.

The medical lobby has scored the most in the chapter on 'Offences and Penalties'. This chapter identifies three types of offenders. Type one: Doctors, centres and laboratories. Type two: the woman who seeks the test, her husband and in-laws. Type three: all those who contravene any of the provisions of the act.

The penalty prescribed for type one offenders is rigorous punishment upto three years and fine upto Rs.5000. To demonstrate that the government is going to be very strict with offending doctors, centres and laboratories, the bill has a clause here saying that the minimum penalty to these people should be at least one year imprisonment and fine of Rs.1000. But the hollowness of this provision becomes evident as we read the last clause of this chapter. This clause empowers the 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 leading to female foeticide can, with the help of powerful lawyers persuade the court to award minor punishment.

The second type of offenders include the woman, her husband and her in-laws. The bill says that the woman should be assumed to be innocent and thus charged Rs. 50 as a token taken and no imprisonment. The bill also says that it should be assumed that she was compelled by the husband or the in-laws to under go the sex test. The husband or her in-laws will be punished for abettment of the offence, with rigorous imprisonment upto three years and fine upto Rs. 3000. The bill says, "The court shall always assume, unless otherwise proved, that a woman who seeks such and of prenatal diagnostic procedures on herself has been compelled to do so by her husband or members of his family". Here the catch is provided with the addition of words "unless otherwise proved". It is easy to prove that the victim woman will be caught and not the husband or in-laws. Who will prove it otherwise that the husband is arrested, he will simply say that he did not force his wife to undergo the test. Now in our society, what is the wife going to say? Of course, she herself will come forward to prove that she was not under compulsion. Feminists and their supporters were fighting against the government to save the woman who is a victim of the patriarchal system. This bill makes the victim a criminal who will have to serve upto three years in prison. This is an outright anti-women provision. The earlier everybody starts raising their voice against it the better.

We know that there is inequality in our society. But our constitution says that everybody is equal before the law. We all call it formal equality. But not so in this bill. There is no equality between the doctors, centres and laboratories on one hand and the victim woman and her husband or in-laws on the other hand. The bill says that the offence committed by the type two and the type three offenders shall be cognisable, non-bailable and non-compoundable". This means, when a complaint is made to the police against the victim woman, her husband or her in-laws, the police has to act to arrest them. Once arrested, only the court can give bail. The non-compoundability makes it difficult to

get any compromise settlement.

But the type of offenders (doctors, centres and laboratories) are excluded from the above provisions by making their offences, non-cognisable (the police is not required to act when the complaint is filed), bailable (if arrested at all, can get out immediately on personal bond, i.e. the police itself can grant bail) and compoundable (can hammer out an out-of-court settlement).

This shows that our government considers the offences committed by the doctors less criminal than those committed by the victims (who paid that doctor exorbitant amounts). In our society the person who actually commits female foeticide by doing a sex test and selective abortion is less of a criminal than victims of patriarchal ideology and physical and socio-economic compulsions.

Some Lessons And Future Plan

This bill has once again emphasized that only good intentions of some individuals, groups and the "goodness" of some bureaucrats do not add upto desired change. This is not to question intentions, but the methodology of affecting change and the ultimate gains. The system does not like to have gross irregularities in its functioning. The current system permits irregularities outside its rules only upto the time it needs them. Thus the government will also be found responding to certain demands for establishing the rules of game in the fields where such irregularities are rampant. Only such an approach can keep up the credible face of the system before the masses.

But these rules of game, under the pressure of small groups and media, are not framed while punishing the guilty. The Environment Act came without punishing Union Carbide. The industry was not punished before brining the Consumer Protection Act. In the same way the builders are not going to be disciplined before the housing act is brought in. And no doctor is so far penalized for committing female foeticide. This shows the light-mindedness of the government and the feebleness of the efforts made by the group concerned, as a result all laws are passed but they are toothless laws.

Therefore, the groups who campaigned against female foeticide cannot remain complacent. They must continue their campaign raising their original demands like abolishing prenatal diagnosis in the private sector, absolute protection to the victim woman and so on. They must, while going to the masses with those demands, also demand amendments in the bill. If the bill is made a law without demanded changes, the campaign must be continued. At the same time the groups should utilize the avenues available to participate in the implementation process, in order to expose the hollowness of the bill.

The medical establishment had earlier argued that a law would force female foeticide underground. Now they have a collaboration with the government, brought a law which can practically keep female foeticide above ground within the purview of law. There is no alternative but to continue the struggle against the medical practice of female foeticide

This bill has been passed by the Maharashtra Assembly without significant amendment in April 1988.

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6

Sex Selection and the Law

Qudsiya Contractor

As far as women go, society stands as it always did. Violence against women continues to be an all-pervasive phenomenon; technology though has advanced at a tremendous rate. On one hand there have been a growing number of dowry deaths, rape and the revival of the ancient customs of sati and female infanticide. On the other hand, technology has become an aid to perpetuate discrimination against women in its most sophisticated forms. Widely popular tests such as amniocentesis[1], chorion villi biopsy[2] and sonography[3] for sex-determination of foetuses lead to female foeticide. The use of advanced medical science for pre-implantation sex-selection technology for selecting the 'right' sex even before implantation of the foetus has made sexual discrimination and the elimination of female babies even before birth an invisible and bloodless deed.

Protest Against Female Foeticide

The journey against sex determination dates back to the late 70s beginning with a partial ban on sex determination test brought about by the Government of India to the formulation of the Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994 (or the PNDT Act for short); which was brought into force from 1996.

The PNDT Act aims at providing regulation of the use of pre-natal diagnostic techniques for the purpose of detecting genetic abnormalities or certain congenital malformations or sex-linked disorders and for the prevention of misuse of such techniques for the purpose of pre-natal sex determination leading to female foeticide. Despite this Act being around for over five years, female foeticide continues rampantly in many states. The 2001 Census shows an even greater decline in sex ratios, especially in states like Haryana, Punjab, Himachal Pradesh, Maharashtra, Gujarat and Tamil Nadu. Implementation is what the Act lacks like most laws concerning women's rights do. Sex ratio in the 0-6 years age group is alarmingly low. This clearly points towards increasing incidences of female foeticide and infanticide[4]. While it was brought in as a secular initiative of health and women's activists and the governments, there was no effort in pushing for implementation of the Act. There has been a general disinterest on the part of various regulatory bodies to take this Act seriously.

A Need for Amendments

Implementation apart, it is high time one considers the possibility for the amendments in the existing Act. To begin with, there is a need to emphasize the prohibitory nature of the Act rather than its regulatory nature. The intent of the Act should emphasise more strongly on the fact that it provides for the prohibition of sex selection, before or after conception before the regulation of pre- natal diagnostic techniques. The machinery required enforcing this Act at the state and district level needs to be put into place along with provisions for access to judicial recourse to enable people at large including voluntary agencies to move the Court to report violation of law. The onus of guilt needs to be put on the real perpetrators of crime- the doctors and family members and not the woman who is the victim of societal pressures. One needs to keep in mind that choices such as these are not made in a social vacuum; they are shaped by the social, economic and cultural context, by value systems and other forces that would try to reinforce the existing lopsided power structure. Given the pressures of

socialization and fears of censure or exclusion, it is doubtful that women from a culture like ours that encourages or demands these practices participate in them with genuine or full autonomy, even if they contend to do so. A medical professional violating the Act should be held most responsible as she/he has a choice of not doing the test. There is a need for them to realize that their actions have an effect on society as clearly evident from the alarming demographic scenario. They should also remind themselves of the medical ethics that they need to abide by as professionals and not just capitalise on such technologies. The Court needs to take a tough stand against the civil and medical bureaucracies entrusted with the implementation of the law and not let them off the hook with just a rap on their knuckles. Despite the issue being in debate since the last 15 years bodies such as the Medical Council in the country seems to have taken on no business to regulate the medical profession according to the code of medical ethics. Unfortunately in the past, it has not only allowed the violation of ethics to go unpunished but also at times attempted to provide justification and legal cover to such violation (Jesani, 1988).

The Act should be updated in order to be at par with the technological advancements to include techniques such as the Ericsson method[5] (X and Y chromosome sperm separation) and the Pre-implantation Genetic Diagnosis[6] (PGD) as these techniques enable the selection of a desired sex even before conception. A very recent example of this is the series of advertisements that have appeared in the Times of India, Mumbai (14th and 16th November 2001), Delhi and many other parts of the country promoting a pre-conception sex selection kit called Gen-Select. This kit claims to be a "fully integrated programme for parents who desire to choose the sex of their child"[7]. With such technologies on the rise there is an urgent need for the existing Act to be prepared with provisions that include these within its purview.

The most common device such as an ultrasound machine that is more accessible than basic antenatal care in the country is the most widely used technology for the determination of sex of a foetus. Provisions need to be made within the Act to regulate and monitor the use of ultrasound machines as it is being used rampantly to carry out pre-natal diagnosis.

It is high time that health activists, women's organizations, legal bodies and the Indian Medical Association take stern action to stop the menace by building strong public opinion against the abuse of sex-determination and sex pre-selection methods for discrimination against women.

Notes:

[1]Amniocentesis (*Amnion*: membrane, *Kentesis*: pricking) refers to the removal of about 15cc of amniotic fluid from inside the amniotic sac covering the foetus through a long needle inserted into the abdomen. The amniotic fluid contains foetal cells that are separated from the amniotic fluid. These cells are either directly observed or are allowed to multiply and taken for chromosomal analysis that determines the sex of the foetus. The former method is less reliable, is usually followed, as it is a quicker method.

[2]Chorionic villi biopsy involves the removal of the elongated cells (villi) of the chorion (tissue surrounding the foetus), through the cervix. This tissue is then tested for determination of sex. This new biotechnology enables sex determination between the 6th and the 13th week. Abortion, if desired, can be carried out in the first trimester itself, with greater ease. Claimed to be less painful than amniocentesis and 100% accurate, this technique carries a 3 to 5% risk of bleeding, pain and spontaneous abortion.

[3]Sonography also known as ultrasonics; uses inaudible sound waves to get a visual image of the foetus on a screen. Normally employed to determine the foetal position or abnormalities, the technique can be used to determine sex if external genitalia of a male foetus is seen on the screen.

[4]On the decline in sex ratio, the census commissioner also observes that the alarming down slide could be attributed to the "recent medical support in terms of sex determination tests" to "social cultural bias against the girl child".

[5]Ericsson Method involves the separation

of X chromosome bearing sperms and Y chromosome bearing sperms through a filtration process. The ovum is then fertilized with a high concentration of the sperm bearing the desired chromosome.

[6]This is one of the latest technologies available that has the potential to be used for sex selection. Pre-implantation Genetic Diagnosis involves the removal of a few early divided cells from a test tube embryo that are then tested directly by chromosomal analysis and determines the sex.

[7]For more on Gen-Select one can visit their website www.genselectKIT.com

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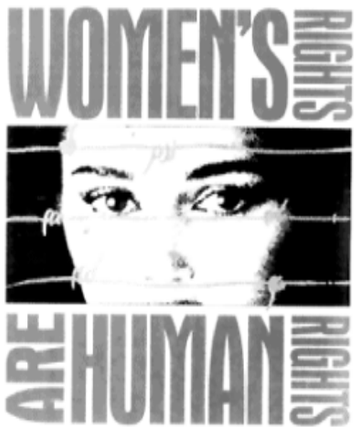

7

Against Gender Bias

T.K. Rajalakshmi

The Supreme Court raps nine State governments for failure to conform to its order of May 2001 relating to the implementation of the Pre-Natal Diagnostic Techniques Act.

DECEMBER 10 turned out to be a somewhat unusual day for the District Collector of Salem, Tamil Nadu. A Monday as any other and a "Grievances Day", it proved to be different in that two couples, in full view of the public, handed over their new-born female infants to Collector J. Radhakrishnan, to be looked after under the "cradle baby" scheme of the State government, a scheme that involves the government taking up responsibility for bringing up any unwanted girl child. The district, known for the practice of female infanticide, was witnessing a transformation of sorts, although the act only sought to reinforce the "unwanted girl child" phenomenon.

Coincidentally, the same day, a three-Judge Bench of the Supreme Court hauled up nine States - Punjab, Haryana, Uttar Pradesh, West Bengal, Rajasthan, Gujarat, Maharashtra, Delhi and Bihar - for not complying with its May 2001 order directing all States and Union Territories to implement the provisions of the Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act and report to it on the action taken. It ordered the Health Secretaries of these States to be present on January 29 to explain any measures taken to implement the Act. The court also asked nine companies to supply information on the number of ultrasound scanning machines delivered to clinics and other medical facilities in the last five years. The Central government was directed to frame appropriate rules with regard to the sale of ultrasound scanning systems and check their sale to unregistered clinics. The State governments were directed to publish the names of the members of the district-level Advisory Committees in order to enable any citizen to approach them with a complaint.

It is unlikely that the particular acts of giving away the girl children were the result of any campaign against female infanticide since the State governments have made little real headway in implementing the law as it exists. While Tamil Nadu, like most other States, has an adverse child sex ratio (in the age group of 0-6), it fares better than Punjab, Haryana, Uttaranchal, Himachal Pradesh, Maharashtra, Rajasthan and Gujarat. The districts in Tamil Nadu that reflect a huge gap in the child sex ratio - with less than 900 female babies for every thousand male babies - are Salem, Theni, Madurai and Namakkal. This, according to the affidavit submitted by the State government, was mainly owing to the incidence of female foeticide and female infanticide.

The fact that the Supreme Court directive was necessitated brought to the fore the lack of political will, indeed reluctance, to correct the prevailing gender imbalances and biases. Despite the court directives in May 2001, several State governments have moved rather slowly in the matter of implementing the PNDT Act. If anything, the provisional Census figures of 2001 should have shaken them out of their complacency.

The PNDT Act was enacted by the Union government in 1994 and came into force in individual States thereafter, as and when each of them framed the relevant rules. It provides that no genetic counselling centre, laboratory or clinic shall

employ pre-natal diagnostic techniques, including ultra-sonography, for the purpose of determining the sex of the foetus. It effectively debars the use of any such technique for the purpose of determining the sex of the foetus and prohibits any advertisement relating to pre-natal sex determination. Any violation of the provisions of the Act is punishable with imprisonment of a term which may extend to five years, and a fine. A report of the Ministry of Health and Family Welfare shows that only a few cases of violation have been reported, whereas Census 2001 figures indicate that the practice could be rampant at least in Punjab, Haryana, Himachal Pradesh, Chandigarh and Delhi.

Taking a serious view of the decline in the sex ratio and the connection it may have with the use of pre-natal sex determination, the Supreme Court had, in its May order, directed the Centre to implement the PNDT Act in all its aspects. The order came following a public interest petition filed by three petitioners, the Centre for the Enquiry of Health and Allied Themes (CEHAT), the Mahila Sarvangeen Utkarsh Mandal (MASUM) and Dr. Sabu George, who had done extensive research in this area. In its wide-ranging directive, the court pointed to several features contained in the Act that include bi-annual meetings of the Central Supervisory Board (CSB) and the creation of public awareness by the Central and State governments against pre-natal sex determination and female foeticide. The CSB, the reviewing and monitoring authority, was to receive quarterly returns from Appropriate Authorities in the States and Union Territories containing information about the survey of genetic and other clinics, registration of bodies as laid down in Section 3 of the Act, action taken against non-registered bodies as specified under Section 3, complaints received by the authorities and lastly, the number and nature of awareness campaigns conducted and the results flowing therefrom.

Directions to the State government included the setting up of empowered Appropriate Authorities at the district and sub-district levels and Advisory Committees comprising three medical experts and one legal expert, three social workers and one government functionary, to aid and advise the authorities in the discharge of their functions. The authorities were directed to take prompt action against any person or body who issued or caused to be issued any advertisement in violation of the Act. However, neither have the names of the members of the committee been made public nor have details been submitted about the number of meetings it has held. The Act had laid down that the committee should meet at least once in two months. But it appears that the authorities and committees in the majority of States, barring West Bengal, Tamil Nadu, Bihar and Chhattisgarh, have not had such meetings. Punjab and Chandigarh conducted surveys to collect data on the clinics but did not provide any figures.

Tamil Nadu stated in its affidavit that there were 1,541 clinics in the State, of which 1,489 had been registered under the Act. While Tamil Nadu reported two prosecutions, Bihar reported four, Chandigarh two, Delhi three, West Bengal 11 and Haryana four, Punjab and Uttar Pradesh did not report any. Practically no action had been taken against bodies found not registered under the Act.

One State which has registered a significant drop in the child sex ratio is Haryana - 820:1,000 compared to 879:1,000 in 1991.

IRONICALLY, B.S. Dahiya, a Civil Surgeon of Faridabad district in Haryana, who exposed two clinics found violating the PNDT Act, faced the threat of transfer. His zealousness in booking the violators had perhaps ruffled some feathers in the political establishment of the State.

Appreciating Dahiya's role, Union Health Secretary A.R. Nanda wrote to Secretary (Family Welfare), Haryana government, G. Madhavan, on December 6, saying that the "excellent initiative taken by the Civil Surgeon, Faridabad Dr. Dahiya and his team has made the district Faridabad as an exemplary district in successful implementation of the PNDT Act. The campaign both in terms of legal enforcements and social awareness campaign in the district has to be sustained for about six months more if any significant impact is to be expected. The transfer of Dr. Dahiya at this crucial stage will slow

the pace of implementation." Nanda suggested that Dahiya be retained in his post for another six months.

When counsel for the petitioners, represented by Supreme Court advocate Indira Jaising and others, pointed out the case of Dahiya's transfer, the Bench on December 10 observed that the action of the State government was unjustified if the officer was being transferred because he was taking action against defaulting clinics.

While it is heartening to note that the implementation of the Act has become an issue, much needs to be done by the Central and State governments to ensure that the medical fraternity does not use technology that ultimately goes against the girl child. While the ambit of the Act is sought to be broadened through amendments, it is the strict enforcement of it in its present form that will serve as a deterrent against gender bias.

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Section III

Social Impact of Sex-Selection Practice

8

A Paddy Grain In The Mouth Of An Infant

Pamela Philipose

Census 2001 is expected to answer many intriguing queries about who we, as a people, are. Undoubtedly, one of the more significant among these would be the female-male sex ratio. The 1991 census had registered a decline in this figure — 929:1,000 as against 934 in 1981 — and there are anxieties that the next census would reveal an even sharper drop. According to the 1991 census, some 1.2 million girls have mysteriously vanished between 1981 and 1991 and the sex ratio of children under five in a state like Punjab, for instance, dropped from 925 to 874 during this decade.

Demographers have cited several reasons, including biological factors, for this. But there seems no getting away from the most obvious explanation: the social devaluation of women. The promise of modernity bringing about a change in attitudes has been belied. Instead, modern medical technology has made easy compact with ageless prejudices as the phenomenon of "femicide", which includes female infanticide and female foeticide, grows apace.

Administrators have generally tended to dodge the issue when confronted with it. This is why the example of what was achieved at Dharmapuri, Tamil Nadu, needs reiteration. Not only is Dharmapuri one of Tamil Nadu's poorest districts — while Chennai's capita annual income of Rs 18,682, Dharmapuri's is only Rs 8,475 — it had the highest prevalence levels of female infanticide. The burden of dowry and fear of fragmentation of land holdings were some reasons for this trend, according to local opinion. Yet political will and some dedicated work has wrought significant changes here. In 1996, there were an estimated 1,081 incidents of female infanticide in Dharmapuri. In 1999, the figure came down to 659.

How did Dharmapuri change course? The experience has been extensively documented but, all the same, it was interesting to meet up with Sheela Rani Chunkath, one of the key figures behind the turnaround, at a recent symposium in Chennai. Chunkath, presently the chairperson of the Tamil Nadu Pollution Control Board, was commissioner, Mother and Child Health and Welfare for the Tamil Nadu government, and project director of the Danida Tamil Nadu Area Health Care Project in the mid-1990s.

As a health administrator, the first thing that struck Chunkath about Dharmapuri was the obvious link between the high infant mortality in the region and female mortality. "We asked ourselves how we could use healthcare initiatives to address the issue of female infanticide," says Chunkath, who along with economist Dr Venkatesh Athreya started studying the problem around 1995. The challenge really was to enthuse both the state government and the local community to change Dharmapuri's grim reality.

In 1995, an awareness programme in the district was put into action, with considerable help from young social activists. "Through *kalaipayanam* (street theatre) we hoped to take our message to the community. Young activists, trained in theatre, initially put together a production that probed the root cause for female infanticide, without talking down to the community, or accusing them of such a crime," recalls Chunkath. The idea was to interact with the community and get them to explain why female infanticide takes place. Simultaneously, attempts were made to break social stereotypes by portraying girls lighting funeral pyres, and

so on. "Never did we directly say, 'Don't commit infanticide'. Instead we broadened the discussion by raising questions like, 'who should use contraception?' or 'why can't a father live in his daughter's house?"' Chunkath explains.

This was followed by a 40-day campaign in 1997, when a whole block at a time was saturated with programmes built on the theme."Significantly," says Chunkath, "we received an excellent response from the local people, who even provided food and other facilities for our troupes. By this time, these villages had already become a part of our health network, linked through primary health centres. Something significant happened in the process — a social delegitimising of female infanticide took place. Slowly, other departments like social welfare and education came in."

Today, Chunkath regards the latest figures of infanticides in Dharmapuri with some satisfaction. "The reduction is pretty marked, especially when you compare it with neighbouring Salem. Here no intervention has been made and the numbers of female infanticides are only growing," she says. "Two cardinal rules were followed in the campaign: We never put pressure on the mother but on the father. And we kept the police out of it."

But how sustainable is the Dharmapuri model and can it be replicated elsewhere? Dr Venkatesh Athreya is cautious in his reply. "One thing that emerges is that the state has an extremely important proactive role to play. Remember, street theatre was used not only to inform and communicate, but as a mobilising strategy. But after that, it was for the government to ensure that other long-term inputs, like education and health, were made available," he says.

He also points out that the state must adopt a community-based approach in such initiatives and not look at it as an easy way to gain quick popularity. "Look what happened to the famous 'Cradle Babies Scheme' that the Jayalalitha government began in 1992. It was an utter failure," he remarks.

Says Sabu M.George, who has for the last 15 years been working on child survival issues, "The biggest problem lies in keeping these prevention programmes going — it takes at least a couple of years to win the trust of the local community and without trust the subject cannot even be broached."

George, one of the petitioners in a writ petition to the Supreme Court on female foeticide, believes that female infanticide is practised over a far wider area than has been acknowledged. "I know for a fact that there are incidents of female infanticide taking place in pockets of Andhra and northern Karnataka," he says. "If you look at the traditional methods of killing a child in this entire region, they are identical — whether it is by feeding the baby milk in which paddy is soaked, or through the poisonous sap of the calotropis plant."

This traditional knowledge, according to George, could only have been acquired over the generations. In fact, there is a saying in places like Vellore, that to keep a crying child quiet put some paddy into its throat.

Stopping a baby's cry is just a heartbeat away from snuffing out the life of a baby girl, it seems.

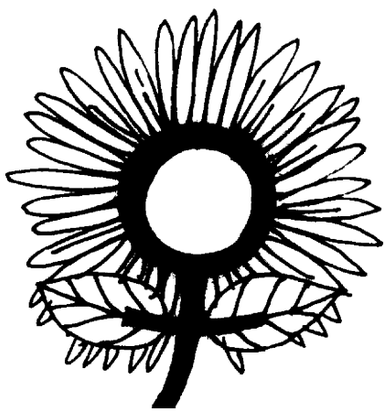
What use is this law?

Female foeticide, by its very nature, spreads much faster than infanticide. The law passed to check it — the Pre-natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act — has been around since 1994 but to little avail. Recently, the ministry of Health and Family Welfare even clarified that the Act applies only to pregnant women and does not cover "pre-conceptual sex planning". However, health activists are quick to point out that the word "pre-natal" in the Act necessarily includes all pre-pregnancy procedures.

Two health organisations, the Mumbai-based CEHAT and the Pune-based Masum, have now filed a writ petition before the Supreme Court on the issue. Says Sabu M. George, one of the petitioners, "There are two aspects of our petition. One, we want a declaration that all pre-natal (including pre-pregnancy) sex selection falls within the purview of the Act. Two, we want directions issued to the Union government and the various state governments to set up appropriate bodies at various district levels to monitor the working of the Act as laid down by it."

According to George, after a great deal of goading, the Tamil Nadu government has now begun registering ultra-sound machines — some 300 had been registered up to April this year. "This is just a start. We are trying to mount similar pressure on Karnataka. The first step is to form district level authorities, that meet at least once in six months," he says.

(Reproduced from the Indian Express, dated October 4, 2000)



9

On The Road To Extinction

T.F.Thekkekara

The so-called 'gender selection' kits being advertised in the market has once again brought to the fore the issue of gender bias in the country. In fact, the UNICEF has been propagating the first right of the girl child in India as the right to be born. The abuse of technology to selectively abort the female fetus in India, has been brought out in the adverse male-female ratio published in Census 2001. In Maharashtra, for instance, the ratio was 976 females per thousand males in 1900 when medical facilities were poor and today despite vast improvements in the status of public health, the sex ratio is steadily declining — it was 934 in 1991 and is 922 in 2001, for the under six age group it is 917. It is clear that there is no choice being exercised here but only a prejudice against the female child.

Those advocating gender pre-selection as a parental right appear to be misinformed about the ethics of the issue. The world over, the voice of sanity has prevailed and countries as diverse as Norway and China have laws that prohibit gender determination which includes selection. The Concise Oxford Dictionary indicates that the word 'determine' means 'to settle, decide,... or fix'.

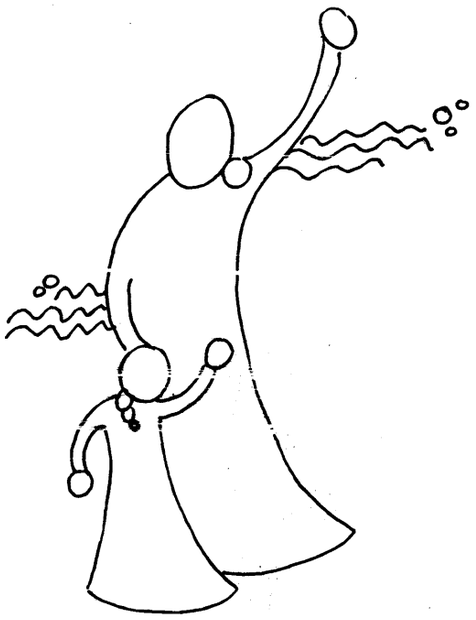
Sex selection techniques seek to fix or decide the sex of the fetus. Section 32 of the Chinese Presidential decree of 1944 on the protection of maternal and child health, strictly prohibits the application of techniques aimed at 'determining the sex of the fetus except in cases of medical necessity'. In Austria, the Federal law of 1994 regulating the use of gene therapy in humans (the gene technology law) prescribes under Section 74 that somatic gene therapy in humans may be carried out only "for the purpose of therapy or the prevention of serious diseases in humans" and that "such therapy should only be used on persons who are definitely unable to have descendants". In Norway, law No 56 of 1994 on the medical use of biotechnology prohibits sex selection under Section 4(3), except in cases of sex-linked diseases. In a study in the United States (Assessing Genetic Risks, L. B. Andrews, National Academy Press, Washington DC, 1994) made by the Institute of Medicine's Committee on Assessing Genetic Risks, the issue of promoting 'genetic literacy' of the lay and medical communities has been stressed. The report condemns the use of gene technology for sex selection.

Despite this consensus internationally, gynecologists with questionable ethical standards, find the vast market for sex pre-selection (in favour of male offspring) in the country irresistible. Despite the Pre-natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act 1994, passed by Parliament, they seek the proverbial foot in the door, in the shape of attempts to distinguish sex 'selection' from determining the sex of a fertilised egg, arguing that the former does not lead to abortion. Many doctors even hold that girl children should not be born to parents who do not welcome their birth — the lives of unwanted girl children are so miserable, that it is kinder to them that they are not born. This is a dangerous argument since it succumbs to the prejudice of the prejudiced. Prejudice can only be overcome by facing it frontally and never by capitulating to it. The law of the land is very clear in its intentions. The Supreme Court has also made it abundantly clear that gender testing of any kind which has the effect of adversely affecting the sex ratio, should not be permitted to be carried out in the country. Advertisements promoting sex selection or sex determination kits are against the law and can be banned under

Section 22 of the PNDT Act.

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 costs. If advertisements promoting brands of liquor can be banned because of the perceived harmful effects on human beings, advertisements promoting gender selection need to be condemned, because they transgress the law and violate the fundamental human rights of women as a class, to be born and to embrace life.

(Reproduced from the Indian Express, dated December 05, 2001)



10

Intensifying Masculinity Of Sex Ratios In India: *New Evidence 1981-1991*

S. Sudha and S.Irudaya Raja

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 drawn attention to the unfavourable life chances of females versus males in various parts of East and South Asia. This female disadvantage is particularly concentrated in infancy and childhood years, and is rooted in longstanding social patterns of preference for male children. Practices regulating the numbers of female children in a family included female infanticide, abandonment or out-adoption of girls, under-reporting of female births, and selective neglect of girl children leading to higher death rates among them. Lately in China and South Korea, pre-natal sex determination techniques and selective abortion of female foetuses are increasingly implicated (Asia-pacific Population Report, 1995; Johansen and Nygren, 1991; Park and Cho, 1995; Zeng 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. Pre-natal 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 along-standing tradition of son-preference. In India, the issue has mostly been examined in terms of the masculinity of the observed population sex ratios, which however are sensitive to sex-specific migration patterns of adults (Kundu and Sahu, 1991; Rajan, Mishra and Navaneetham, 1991, 1992; Raju and Premi, 1992; Srinivasan, 1997; Visaria 1969). However, the persistent preference for male children and disfavour against females, leading to excess female mortality particularly at young ages, has also been discussed as a key factor (Agnihotri, 1996; Kishor 1993; Miller 1981). In India, juvenile sex ratios, (ages 0 to 4 or 0 to 9), largely shaped by child mortality sex differentials, indicate anomalous masculinity. That is, counter to the global norm of sex ratios at young ages being moderately masculine and mortality sex differentials favouring females, in many parts of India, juvenile sex ratios are highly masculine and female infants and children have higher death rates than males, a phenomenon termed 'excess female child mortality'.

An important dimension of inquiry into changes in the relative pattern of birth 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. 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; Rajan, 1996; and Visaria and Rajan, 1996 for Kerala). Therefore, it is not clear whether parents in India as in East Asia are substituting pre-natal for post-natal discrimination against girl children, or whether bias against females is lessening-overtime. One all-India study has examined changes in juvenile sex ratios

(ages 0-4) between 1981 - 1991, alongside trends in mortality sex ratios and fertility rates, and concluded that during, fertility decline in India, parents are not substituting prenatal for post-natal discrimination against girls, but are adding these two strategies. Male bias thus appears to be intensifying (Das Gupta and Bhat, 1997).

Our study further explores this issue, with more 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 (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 are taking place over the decade. We summarize what is currently known about the incidence of female infanticide and prenatal sex selection in India. We 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 SRB's

Sex ratios at birth (henceforward SRB's) 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 marked preference for male children however, a different pattern is seen. In South Asia, population sex ratios are persistently male dominant. In East Asia, SRB's appear highly masculine especially in recent years. This trend clearly cannot be attributed to migration. In South Korea and China respectively, both of which have good coverage of vital registration, SRB's 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 104-105 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 No. 34, 1995). Clearly therefore, biological patterns of SRB's are in these regions being overwhelmed by behavioural factors rooted in parents' preference for at least one male child (Coale and Banister 1990; Johansen and Nygren 1991; Hull 1990). These skewed sex ratios at birth combined with masculine sex specific survival rates have generated the problem of millions of "missing" females in East and South Asia (Coate 1991; Sen 1992).

Several mechanisms are advanced to explain the phenomenon of excessively masculine SRB's. In China, mechanisms include non- reporting of female births (leading to omission of girl children in any and all subsequent official records, and is 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 as underlying the phenomenally masculine higher birth order sex ratios observed there (Asia-Pacific Population and Policy Report No. 34, 1995; Park and Cho, 1995, Zeng Yi et al. 1993).

Regional trends in juvenile sex ratios in India

In India, analyses focus on juvenile sex ratios rather than sex ratios at birth. This is firstly due to concern with excess female child mortality, which arises from the selective neglect of girl children compared to boys, manifest in childhood years rather than around the time of birth (Das Gupta, 1987; Dyson, 1988). Second, data on period sex ratios at birth are difficult to get in India. The Census of India does not publish this statistics. Such data are only occasionally published by the Sample Registration System (SRS) of certain states, and thus nation- wide 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 SRB's are difficult, though some intrastate analyses are emerging (Visaria and Rajan, 1996, for Kerala). For the present analysis too, special arrangements had to be made with the office of the Registrar General of India to get the necessary data.

Extensive national and 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; Das Gupta 1987; Das Gupta and Bhatt 1997, Clark and Shreeniwas 1995; 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 North- Western parts of India, including the states of Punjab, Haryana, Rajasthan, Western UP, etc., are the areas most unfavourable to the life chances of female children. Other areas of the country, including the East, Central area and the South, exhibit more balanced rates.

A broad generalization has been made: the Northern/North-Western regions of India fall within the so-called Northern cultural and demographic zone, characterized by higher fertility, higher mortality, more masculine sex ratios, and lower status of women. The Northern zone traditionally had a wheat-based agrarian economy (where women are less involved), and social systems marked by dowry, exogamous marriage and the seclusion of women. In contrast, the South is broadly characterized by rice-based agrarian systems (with a much greater role for women), endogamous marriage systems, marriage payments that are more egalitarian between bride's and groom's 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 stress that the simplistic dichotomization of India into "Northern" vs. "Southern" zones is inadequate. The rice-cultivating Eastern regions could never be fitted into either pattern. Within-region variations have been ignored in this 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 5 to 19 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. In these alternative groupings too, however, juvenile sex ratios appear most masculine in the Northern/ North-Western region of India: a so-called 'Bermuda Triangle' for the female child exists in a zone of 24 districts including parts of Haryana, Western Uttar Pradesh, some of Rajasthan, and the ravine areas of Madhya Pradesh (Agnihotri, 1996).

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 "under-development", such that poorer nations have more female disadvantage. African, Latin American and Caribbean nations, all with varying 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 type 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 was 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.

The trend since then has not been positive either. 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 has thus been 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, though 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 (Sen, 1982; Kapadia, 1992; Nayyar, 1989; Nigam, 1988). Though the initial impact of Green Revolution technology was to increase the demand for labour to fertilize, weed, and harvest the new High Yielding Varieties (HYV's), this trend was short-lived, and did not much involve women. For example, in Gujarat, farmers 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 fulfill demands for group labour. Though women received lower wages than men even 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 was substantially lower 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 they are highly concentrated (approximately 80% of female workers) in the agricultural labour and unpaid family worker sectors. The increased casualization of female labour is accompanied by consistently greater unemployment rates among women than men. He thus 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 (1993) 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 1/3 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% of the total female workforce) 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 the few who are educated and skilled. 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 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 trade unions in India have usually downplayed the needs of women workers, who have had to set up parallel organizations as a result. Ramaswamy concludes that in India, "developmental processes have only pushed women to states of survival" (1993: p 323).

But development has marginalized women in other developing nations too, which nonetheless continue to exhibit gender-balanced demographic measures. The fact that economic development devalues women is alone not sufficient 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 birth, wantedness, care and survival of male and female children (Kishor, 1993). Socio-cultural trends in India do place women at an increased disadvantage. Scholars note the spread of dowry nationwide to communities and castes where it had never been the custom. Insufficient research attention has been paid to analyzing the reasons for this phenomenon. The bulk of sociological 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 attribute the spread of dowry to the process of 'Sanskritization', whereby lower castes achieve upward class and caste mobility by emulating the customs of the upper castes, particularly dowry and female seclusion. Others attribute the changes to the young age structure of the country, such that there is a greater ratio of young marriageable girls to potential mates in the higher age group; this increases the 'price' of the 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 land acquisition strategies for family class enhancement, has led to the concentration of wealth in families where the ratio of male children is greater, and female children are increasingly seen as liabilities (Clark, 1987; Heyer, 1992).

The relation between such economic and sociocultural patterns and female mortality disadvantage has been investigated with all-India level and smaller-scale, localized analyses. All-India studies indicate that districts with higher indicators of conventional development, such as urbanization, industrial production, and agricultural productivity had significantly lower female vs. male survivorship, while girls in areas with a greater concentration of Scheduled Caste/Scheduled Tribe populations (who are said to have 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 thus identify a constellation of economic and socio-cultural factors jointly affecting female disadvantage, improving on earlier and simpler models of female agrarian labour force participation alone (Bardhan, 1974).

The findings of smaller-scale studies however do not 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 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 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 (Das Gupta, 1987; Clark and Shreeniwas, 1995).

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 also are more secluded and have lower rates of work participation (Harriss-White, forthcoming; Heyer. 1992). In rural Gujarat, however, lower caste and landless groups are the ones where daughters appear in greater jeopardy (Clark and Shreeniwas, 1995). 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 marriage 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 come to be seen as liabilities. 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 mortality (reviews in Agarwal, 1994, Kishor, 1995). While selective neglect of daughters has been more extensively researched in the Indian context, the related issues of female infanticide and foeticide have been less examined 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 NGO's active in these fields rather than from academic writings.

Female infanticide in India

Infanticide is an age-old practice among human populations, to regulate the numbers of children and eliminate the less wanted off spring 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 North-Western India.

Historically, the main reasons for this practice in India included the system of hypergamy, whereby women must marry into a social group above their own. Among the uppermost castes, this was impossible. Equally unthinkable were notions that the rules of hypergamy could be transgressed or that girls could remain unmarried, thus girls in these groups were killed, and boys married females from sub-castes slightly lower than their own. Nineteenth century records indicate 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 household socioeconomic status. This was achieved through manipulating the marriage of sons and acquiring dowry from daughters-in-law; daughters clearly, as dowry-takers, were a liability in this scheme of things (Clark, 1983)

Similar reasons are suggested to explain the resurgence of female infanticide in modern India. Female infanticide has been recently noted among some castes in remote village clusters in rural South India, in Tamil Nadu state, a region where this

practice was historically unknown. Increasing landlessness and poverty, accompanied by an escalating custom of dowry, high gender differentials in wages, low education among women and few economic opportunities for them are suggested reasons for the rise of female infanticide here (George et al, 1992; Chunkath and Athreya, 1997).

In rural North India, the practice apparently never died out. Jeffery et al (1984) state that up to the 1900's, female infanticide was practiced among Rajput castes in Bijnor, UP state. Their study in the 1980's in villages around Bijnor town then 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 practiced.

A 1995 investigation by Adithi, an NGO working in rural Bihar state, revealed that female infanticide, foeticide, and excess female child mortality due to selective neglect were widespread in the 8 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, and lack of alternative occupation 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 newly born girl child. 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 report also describes how the traditional skill of 'dais' in identifying the sex of a foetus in the 7th or 8th month of pregnancy is used to avert the birth of a daughter. Estimating - a count of 68,000 'dais' in 7 contiguous and culturally similar districts of Bihar, and that each 'dai' killed about 2 infants a month according to the interviews, Adithi estimates that the number of female infanticides each year in these districts could total as many as 16,32,000.

The Adithi report also noted that earlier, only upper castes such as Rajputs and Brahmins practiced female infanticide, but it had now spread to all other groups, including Scheduled Tribes, Christians and Muslims. The main reasons indicated were the spread of dowry with exorbitant demands; due to marginalized 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 female infanticide. Violence against women is growing, within and outside the home. Bihar has extremely low female literacy: 23.1% (Adithi, 1995).

Prenatal sex determination and sex selective abortion in India

Abortion was legalized in India in 1971 after a 1965 UN mission to India recommended this step to strengthen the population policy, and the Shantilal Shah Committee Report of 1966 also advocated it to reduce the numbers of illegal and unsafe abortions that were prevalent. Although the stated reasons for passing the Medical Termination of Pregnancy (M.T.P.) 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 began to be developed in India, at the All India Institute of Medical Sciences, New Delhi. It was soon known that these tests could detect the sex of the foetus also, 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 not 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, 1982).

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). A campaign against prenatal sex determination and female foeticide (termed "femicide") was also launched by women's groups, civil liberties groups and health movements. In 1984, a broad-based coalition, the "Forum Against Sex Determination and Sex Pre-selection" (FASDSP) was formed, headquartered in Bombay, that monitors all aspects of the situation, documents the spread of the technique, its growing, use, and 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 those women who meet certain medical criteria, such as being over age 35, having, a family history of genetic disorders, etc.

However, these acts are full of loopholes. Most of the restrictions pertain to Government facilities. Private laboratories and clinics are not banned from carrying out sex determination tests: they are only required to be registered. Second, the government can overrule the decisions of the body set up to monitor facilities, which is empowered to suspend or cancel the licenses of offending clinics or laboratories. The Government can also exempt any facility from the Act. While in Maharashtra the monitoring committee included representatives of NGO'S, 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. Furthermore, 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 much lesser extent, and this technique is also being widely used for sex determination. The possibility that newer technologies will be developed to determine the sex of the foetus has not been allowed for (Arora, 1992; Menon, 1996; Sengupta, 1992). The result of such partial regulation is that sex determination and selection 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 in writing, and would hike the fees of the test to compensate for the legal risk. The bans in Maharashtra did not have much impact, as sex determination facilities have continued to burgeon (Kishwar, 1995). Some part is missing here.

Some systematic studies clearly indicate the increasing spread and acceptability of the techniques. A 1982 study of Ludhiana, an urban area in Punjab state, questioned 126 randomly selected individuals, of whom approximately half each were male and female; and the majority of whom were educated and middle class. All the respondents had heard of the amniocentesis test; 66% of them thought it was intended for sex determination; few knew that it was actually for detecting foetal abnormalities. While 73% of the women and 59% of the men believed that a girl should be aborted if the couple already had two or more daughters, only 25% 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% 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 (Gupta, Bandewar and Pisal, 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 1980's, 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 - 83, in cities such as Amritsar, Bombay, and Delhi. Within 2-3 years thereafter, 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. It is reported that the clinics were offering services from the late 1970's onward, but were brought to widespread public attention and formed the subject of a Parliamentary debate only in the early 1980's, 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 use of these techniques thus grew 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- 1980's. 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 have been reported to have sex determination clinics; where refrigeration and cold chain facilities for vaccinations are not available but amniotic fluid samples are sent in ice packs to towns for testing (FASDSP and Saheli, no date, cited in Menon, 1996). Grassroot 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. 1,000) a barrier. While we may expect that the largest consumers of such tests may 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 of these tests (FASDSP and Saheli, no date., cited in Menon, 1996). In 1981-82, the approximate average daily wage of a skilled male agricultural worker in Punjab was Rs. 25, that of female and male field or other worker ranged from Rs. 10- 13. In Haryana, the figures are Rs. 18 for skilled workers, and Rs. 7-15 for female and male field and other workers. By 1991-92, 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. 20-25 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, 5,00,000 tomorrow" that was widely used in the early 1980's 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. 1,000, and a clinic performs 10 to 12 such tests a day, based on a 6 day work-week, a clinic can gross up to Rs. 2.8 lakh (one lakh = one hundred thousand; approximately 40 rupees = 1US $) a 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 sectors. 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, claimed to use 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 wishing 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 (R. P. 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, 1983 a and b).

Making even approximate computations of the numbers of such procedures occurring in India is difficult. One retrospective estimate (Saheli, Delhi, cited in Arora, 1996) suggested that between 1978 - 82 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 - 94.

It was early pointed out that the distribution of such facilities in India was greater in areas where females were more devalued, i.e. the North - North-west (Patel, 1988). During, the time period in question in this study (1981 - 1991), we can assume that such techniques would have been more widely available in urban areas, though there is every indication that their awareness and use spread into the rural hinterlands too. Urban areas are characterized in developmental terms by higher literacy especially among females, more non-agrarian employment opportunities, more paid employment opportunities for women, and better infrastructure, including availability of health services.

Thus, while contrasting urban/ rural SRB's over time in India,one might investigate whether urban SRB's grow progressively more "normal", with improved education and greater accuracy of reporting/ recording births, and decreasing scope for female infanticide or abandonment of girls. Moreover, in urban areas, economic opportunities for women would be greater, increasing their worth, and a more egalitarian ethos may accompany increasing education, income, and exposure to diverse groups and thoughts.

On the other hand, if gender stratification in India is intensifying, attested by the increase of phenomena such as dowry and marginalization of women, many urban families would not necessarily have greater incentive to welcome the birth of girls. They would also have more access to the means to avert their birth, i.e. prenatal sex determination techniques 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. It is these possibilities that we investigate in this study.

Data and methods

We use data from the 1981 and 1991

censuses of India. We present sex ratios of children aged 0 and 1, i.e. under age 2. We also 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.

The authors warn that the technique is sensitive to age – misreporting, especially for children aged 0 or 1. 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 virtually identical to those among infants aged <2; none differed by more than 2%). 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 under-report 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 statistics on period sex ratios at birth, we argue that infancy sex ratios and estimated SRB's 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. Analyses of such issues up to now have used juvenile sex ratios, that are more shaped by sex differentials in child mortality than by SRB'S.

We also present sex ratios of under-five mortality probabilities for children (q5) for 1981 and 1991. We present these figures for each state, for rural and urban areas. SRB's within the range of 103 - 106 males per 100 females are considered "normal", a value of 107 is borderline masculine, those higher than this are excessively masculine. For mortality, ratios that favour females (i.e. male to female ratio greater than 1) are considered normal. Ratios that favour males are considered anomalous.

Results

The main results are presented in Table 1, which shows observed sex ratios at age 0+ 1 and estimated SRB'S, for 1981 and 1991, for rural and urban regions by state and zone. Ratios here are always presented as males per 100 females. The results can be very simply summarized. First, there is by and large little difference between sex ratios at ages 0+1, and estimated sex ratios at birth. As may be expected, once mortality at infant ages is taken into account the ratios lessen, but only very slightly. However, in some states, predominantly in rural areas, the ratios heighten slightly, such as rural MP, North-Eastern states (Mizoram, Nagaland, Arunachal Pradesh. Tripura), South (rural Kerala, Tamil Nadu, Karnataka), urban and rural Maharashtra and Orissa. In 1991, much fewer regions show this pattern: Himachal Pradesh, and urban parts of Sikkim, Goa, Dadra and Nagar Haveli, and Pondicherry.

In 1981, most parts of the country exhibited infancy sex ratios and sex ratios at birth that were not abnormally masculine. The all-India SRB's appear within the normal bounds. The few masculine regions were mostly within the North / North-Western zone such as urban Jammu and Kashmir, and Chandigarh and Haryana. Surprisingly, the Lakshadweep union territory indicates very high masculinity, with values ranging from 109 to 112. Some states (Andhra Pradesh and urban Tamil Nadu in the South—Manipur, urban Nagaland, Meghalaya and Arunachal Pradesh in the North East: Madhya Pradesh and urban Orissa in the Centre; Rajasthan. urban UP and rural Bihar in the North / North-West; urban Dadra and Nagar Haveli), show SRB that may be seen as too feminine (below 103). We speculate that this might be due to underreporting of infants that may 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 SRB's.

In 1991, the picture greatly changes. The all-India urban SRB appears slightly too masculine, at 108. We see that a stark shift towards excess masculinity occurs mostly within the Northern/North-Western zone. All urban areas in this zone now exhibit highly masculine SRB's, ranging from 107-118. Most rural areas (with the exception of Bihar and UP) also appear highly masculine. The lowest values area 105-107 for rural Bihar and UP. The highest values reach 118 for urban Punjab and 116 for urban Haryana. The Central zone states of Maharastra, MP and Gujarat also exhibit masculinity of SRB's in urban areas, in the range of 107-111. In the East, urban Arunachal Pradesh still shows a high SRB, 109.

The Southern states appear normal. The Lakshadweep Union Territory (off the Kerala coast) that had hight masculine SRB in 1981 is in the normal range in 1991. The phenomenon noted in 1981 of excess femininity of SRB's has greatly lessened, now noted only in Dadra and Nagar Haveli, urban Nagaland, and rural Arunachal, Manipur and Madhya Pradesh. This could be due to improved enumeration and tabulation, or lessening of male infant/child mortality due to improvement in health facility coverage, or to the general countrywide trends towards masculinization of SRB's.

Table 2 gives sex ratios of mortality probabilities at childhood ages (q5), for rural/urban areas and state/zone. Overall, though levels of child mortality in India have declined considerably from approximately 152 per 1000 (both sexes, all India) in 1981 (Census of India, 1981:5) to 96 per 1000 in 1991 (Rajan and Mohanachandran, 1998, based on 1991 Census records), the sex ratios of mortality actually decline (i.e. grow more male-biased) 1981-1991, indicating that mortality fell more for males than females. Positive changes, i.e. lessening female mortality disadvantage 1981-91 are seen in only very few small areas, such as Himachal Pradesh, the Union Territories of Delhi and Chandigarh, urban West Beneal, and Mizoram. In the North, the decline, (i.e. increasing female disadvantage) appears in some states: rural Rajasthan, urban Haryana, all of UP and Bihar. All these states had female-disadvantaged mortality sex ratios in 1981. In the Central zone, all the states show a marked decline; Orissa, which had 'normal' mortality sex ratios in 1981 now shows female disadvantage in 1991. In South India, rural Tamil Nadu shows a sharp decline from normal to female disadvantage, in keeping with the rise of female infanticide reported in that region.

Karnataka and Goa ratios also indicate a slight decline to female disfavour, in contrast with their normal ratios in 1981. While the 1991 Census mortality figures for urban Kerala also indicate female disfavour, infant and child mortality is generally so low in the 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 urban 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 there. This logic also applies to some Union Territories and states in the North-East, that indicate extreme values of the sex ratios. 1981 values such as 152 for urban Meghalaya or 128 for urban Sikkim are an artifact of small sex differences in low levels of mortality.

To contextualize the scenario of birth and life chances of male and female children in India, Table 3 gives the chance in fertility in different regions of India 1982-1994. This decade witnessed a moderate (20%) fertility decline in the country as a whole, from a TFR of 4.5 in 1982 to 3.5 in 1994 (SRS Reports). By region however, we observe dramatic declines in the Southern states, such that Kerala now has below replacement fertility, Tamil Nadu is at replacement, and Karnataka and Andhra Pradesh are below the national average. The Eastern states also register moderate declines. The Central, Northern and North-Western states, with the exception of Gujarat and Punjab, record much more modest gains.

The demographic picture that emerges

1981-91 is one of declining fertility and mortality, overall worsening sex ratios of child mortality and increasing masculinity of SRB'S. Many 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 conceivable 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, SRB's 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 general female mortality disadvantage in other regions that have 'normal' birth patterns.

The numerical magnitude of the impact of sex selective abortion in India is not great as yet. In East Asia, the impact of such practices amounts to only about 5% of female births (Asia Pacific Population Policy Report No 34, 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 chance 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' (to be conservative), then only 2% of female births are affected. This translates to a shortfall of 74.6 thousand female births (all-India urban). Since official records of induced abortion in India are notoriously flawed and incomplete. Mishra el al (1997) have estimated the likely number of abortions occurring in India using, the National Family Health Survey data (1992-93). They show that the possible numbers of induced abortions for all-India were 207.1 thousand (Mishra et al, 1997, Table 7).

Discussion and Conclusion

The first point we highlight here is the great need for suitable data to be collected and released in a timely manner by the Government of India. The census does collect information on the number of births in the enumeration year; a small amendment to the question could provide information on the sex of the infant. Statistics on period SRB's for all parts of India could then 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 SRB's have been estimated based on the reported numbers of infants aged under 2 years, and are thus may be affected by any under-registration of female births or female infanticide, though we argue otherwise.

However, even with indirectly estimated measures, clearly, there is a marked shift towards increasing masculinity of SRB's in North/ North-West India, especially in urban areas. This suggests the rising use of prenatal sex determination and sex selective abortion there. The evidence we have summarized, and the spatial distribution of the SRB figures we present, indicate plausibly that sex determination and selection techniques are being increasingly used in some parts of the country. The trend initially began (as might be expected for a medical technological innovation) in urban areas and spread out to the rural surroundings, especially concentrated in those regions of the country that have a socio- cultural history of disfavour towards women. As we saw in 1981, only urban areas of the North-Western region had somewhat abnormal SRB'S. By 1991, urban and rural parts of the North-West, and urban parts of Central regions, all had masculine SRB'S. 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 SRB's could also he 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 SRB's 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 SRB'S, 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 pre-natal sex determination and abortion are further implicated.

Evidence indicating women's increasing economic marginalization and greater sociocultural devaluation underlines the contention that development in India has generally been to the detriment of women. Despite gains in education. longevity, and income for some groups of women, large sections of Indian society still consider daughters a liability, and would apparently prefer to avert their birth. While infanticide in earlier eras had been confined to certain limited caste and geographical groups, neglect of daughters and female infanticide and foeticide appear widespread in some parts of Indian society, and have pervaded groups and classes where they were hitherto unknown (Adithi, 1995: Harriss-White, forthcoming; Jeffery et al 1984). 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, 'gender-cleansing' (Harriss-White, forthcoming).

However, while the aggregate statistics 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, belonging to the Jat community, had an ideal family composition of 2 sons and a 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). This suggests that a pattern of substitution is indeed occurring. More such micro-level, studies would more clearly illuminate whether within any region, some families use certain strategies and others follow, other methods, or whether both strategies are indeed being followed by the same groups. Future research should prioritize examination of demographic behaviour in India from gendered perspective, that scrutinizes development trends and policies and focuses on the nexus between cultural and economic factors and 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. In fact, the ideational shift to controlled fertility that includes acceptance of modem means of contraception has, in India, also meant a growing societal acceptance of medical technologies surrounding conception, pre-natal 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 clearly untenable. 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 1881. 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 eroding, 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 over them. The increasing intensity of violence against women in all domains of life is testimony to this.

The trend towards greater spread and acceptance of pre-natal sex selection techniques despite legislative proscription, combined with persistent female disfavour in mortality ratios, combines to produce a scenario that is not likely to ameliorate in the near future. These demographic phenomena are themselves only symptoms of the worsening situation of women in the Indian socioeconomic developmental context. Any policy measures must not focus exclusively on regulating or banning 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.

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Table 1

Sex Ratios at Ages 0+1, and Estimated Sex Ratio at Birth; 1981-1991

State Region	1981						1991					
	Sex Ratio (M/F)						Sex Ratio (M/F)					
	Observed ratio			Estimated SRB			Observed ratio			Estimated SRB		
	0+1						0+1					
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
India	103	104	103	4103	104	103	106	108	106	106	108	107
North/North West												
Himachal Pradesh	105	105	104	105	105	105	108	113	108	109	114	109
Jammu & Kashmir	105	110	106	105	110	105	-	-	-	-	-	-
Punjab	107	108	107	105	108	106	117	119	118	117	118	117
Rajasthan	103	103	103	101	102	103	108	111	108	107	110	107
Haryana	109	107	109	108	106	107	114	117	114	113	116	114
Delhi (UT)	105	104	106	105	106	105	111	111	111	110	110	110
Chandigarh (UT)	112	103	108	111	107	108	110	109	109	110	109	110
Gujarat	105	108	106	104	107	105	107	112	109	106	111	108
Uttar Pradesh	10	4102	104	103	102	102	107	109	108	106	108	106
Central												
Madhya Pradesh	101	102	102	102	101	101	103	108	102	102	107	103
Bihar	102	104	102	101	103	101	107	108	107	105	107	105
Maharashtra	102	101	102	106	105	106	103	108	104	106	109	107
Orissa	101	103	102	104	102	104	104	104	104	103	103	103
Goa	104	105	104	104	105	104	103	106	104	103	107	104
East North West												
West Bengal	102	104	103	103	103	103	104	105	105	103	104	101
Assam	-	-	-	-	-	-	105	108	105	104	107	105
Mizoram	103	100	102	104	100	103	102	104	103	103	104	103
Nagaland	101	103	102	102	103	102	99	103	100	103	104	103
Meghalaya	102	104	102	102	104	102	101	103	100	101	103	101
Arunachal Pradesh	100	105	101	102	102	105	102	101	109	102	109	102
Tripura	105	104	105	106	104	106	104	104	104	104	104	104
Manipur	101	101	101	101	100	101	103	105	103	102	105	103
Sikkim	105	99	104	104	98	104	105	123	106	105	124	106
South												
Kerala	102	107	103	103	106	103	106	106	106	105	106	105
Andhra Pradesh	101	102	101	102	102	101	103	104	103	103	103	103
Tamil Nadu	103	102	103	104	101	103	105	105	105	105	105	105
Karnataka	102	104	103	103	104	103	105	105	105	105	105	105
Union Territories												
Andamans	102	94	101	104	95	101	100	104	101	100	103	101
Lakshadweep	109	110	110	109	108	109	102	106	104	102	106	104
Dadra Nagar Haveli	98	100	98	99	103	99	101	94	100	101	101	101
Pondicherry	102	102	102	103	103	103	103	105	104	103	106	105

Sources: Census of India 1981 and 1991.

Any value above 107 can be considered excessively masculine.

Table 2
Sex Ratios of Child Mortality 1981-1991

State/ Region	1981			1991		
	Sex Ratio of Child Mortality q5 m/f			Sex Ratio of Child **Mortality q5 m/f**		
	Rural	**Urban**	**Total**	**Rural**	**Urban**	**Total**
India	93	98	94	89	95	90
North/North West						
Himachal Pradesh	104	107	104	108	110	109
Jammu & Kashmir	97	102	97	-	-	-
Punjab	87	92	88	92	92	89
Rajasthan	89	89	89	85	90	86
Haryana	81	89	82	81	82	83
Delhi (UT)	85	95	94	89	96	96
Chandigarh(UT)	88	99	97	107	110	110
Uttar Pradesh	83	86	84	79	82	79
Bihar	87	90	86	72	79	73
Central						
Madhya Pradesh	96	98	96	92	92	91
Maharashtra	101	106	101	100	104	93
Orissa	103	101	103	93	86	93
Gujarat	92	94	92	80	82	81
Goa	106	103	105	96	91	96
East/North East						
West Bengal	99	99	98	92	152	91
Assam	-	-	-	103	108	102
Mizoram	107	111	108	113	108	102
Nagaland	106	132	108	100	107	95
Meghalaya	105	126	107	104	105	103
Arunachal Pradesh	106	152	107	104	91	107
Tripura	105	108	105	102	104	101
Manipur	104	103	102	90	94	92
Sikkim	120	128	120	110	106	107
South						
Kerala	113	101	112	94	88	94
Andhra Pradesh	105	107	106	103	108	102
Tamil Nadu	101	104	102	88	100	92
Karnataka	101	102	102	96	97	96

Union Territories						
Andamans	107	92	106	112	102	113
Lakshadweep	121	105	115	136	91	103
Dadra Nagar Haeveli	113	94	112	133	136	113
Pondicherry	103	104	104	107	103	103

Source: Census of India, 1981 Occasional paper No.5 of 1988 "Child Mortality Estimates of India" Demographic Division, Office of Registrar General of India, Ministry of Home Affairs, New Delhi.
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Table 3
Profile of fertility decline in Major states of India (1982-1994)

State Region	**Total Fertility Rate (TFR)**		
	1992	**1994**	**% decline**
India	4.5	3.5	22.20
North/ North West			
Rajasthan	5.3	5.1	10.10
Uttar Pradesh	5.7	5.1	10.10
Haryana	4.9	3.7	24.50
Punjab	4.0	2.9	27.50
Bihar	5.6	4.6	17.90
Central			
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: Sample Registration System, 1982, 1994.

(Intensifying Masculinity of Sex Ratio in India: New Evidence 1981-1991 by S. Sudha and S. Irudaya Rajan. Centre for Development Studies, Thiruvananthapuram, 1998. 49 pgs)

11

Has The Sex Ratio Really Improved? Alarming Ramifications of Population Trends

Malini Karkal

Preliminary figures from the 2001 census were recently released by the Census Commissioner of India, who is also the Registrar General (RG) of India. Newspapers reports on the findings of the census count have reacted favourably to the information about the rise in literacy level of the population and the sex ratio. The Indian Express said: "First news is good news: literacy and sex ratio are up. The sex ratio, which was 927 females per thousand males in the 1991 census, went up to a corresponding 933 in 2001. However, a small increase in the deficit of females is not very significant in the context of the continuing enormous deficit of females, and the information about the sex ratio among children gives an ominous indication of vast increases in the deficit in future.

35 Million Females Missing

The press release reports that the number of males in the 2001 census count was 531,277,078 and that of females, 495,738,169. This actually indicates that there are over 35 million fewer females then males. During the last decade, the absolute deficit of females increased by about three million. In most other nations there are more females than males.

More significant is the report on the sex for children below six years of age. The Registrar General (RG) reports that the sex ratio for this age group has gone down from 945 in 1991 to 927 in 2001 - a large decadal difference. The sharpest declines in sex ratio for these children are reported from Himachal Pradesh, Punjab, Haryana, Gujarat, Uttaranchal, Maharashtra and Chandigarh - areas where abortions of female fetuses after sex determination test are known to be widely practiced. In addition to the foeticides, the practice of female infanticide is apparently increasing, as reported from districts like Salem in Tamil Nadu, a state where the status of women was believed to be better than in the northern states.

Greater neglect of female babies in terms of provision of food and medial attention also decreases their chances of survival. UNICEF reported that, of the 402 districts, the number of deaths of females upto age five is higher than males in over half (224) the districts. This, in spite of the fact that biologically speaking, female babies have better chances of survival than male babies. Amartya Sen reports that the sex ratio is about 105 women per 100 men in the populations of nations where women are not discriminated against.

Total fertility rate (TFR) went down to 3.3 by 1997, while the birth rate was 26.4 in 1998. However, in India the maternal mortality rate (MMR) or the chances of dying from pregnancy related causes - continues to be among the highest in the world. MMR in India was 408 per 1,00,000 mothers, while it was 115 in China and 30 in Sri Lanka. Similarly the chances of dying of children born to mothers whose health is not satisfactory - the infant mortality rate (IMR) - in India were 72 per 1,000 births - high compared to 31 in China, 46 in Indonesia and 22 in Thailand.

One can therefore conclude that the rise in the sex ratio of the Indian population is due to the improvement in survival chances of older women, those who have survived the hazards of younger ages and are able to express their biological advantage, and not because of the improvement in the status of women or in their living conditions.

Devaluation of women

The practice of female foeticide and infanticide bears out the continuing influence of patriarchy and the lower status of women. The health of the population continues to be poor and, from the data on registration of deaths, it is seen that 22.8 percent of the total deaths are of children below the age of one year, 9.9 per cent of children between ages one to four years. Thus, of the total deaths, 32.7 per cent (or one in three) were of children under the age of five years. The percentage of deaths for children under age 15 years was 37.3. The mortality percentages were higher for the BIMARU states: 47.7 per cent in Uttar Pradesh, 41.5 per cent in Bihar, 45.3 per cent in Madhya Pradesh, 46.4 per cent in Rajasthan and 42.2 per cent in Assam. The data available indicates that a large majority of children born in these states are of low birth weight, with the mothers ot in good health.

Marrying girls off young is also an indication that women have low status. They are recognised only in their role as mothers and are denied opportunities for education or economic independence. The National Fertility and Health Study (NFHS) reports that about half the women between ages 25-49 are married before they are 15 in Madhya Pradesh, Bihar, Uttar Pradesh, Andhra Pradesh and Rajasthan and about four-fifths of women in these states are married before reaching the mandated minimum age of 18 years. Even in states like Kearla, Nagaland, Punjab, and Manipur, where the age at the time of marriage is higher, at least one out five women is already married by the age of 18.

Early Age of Sterilisation

Regarding the decline in the rate of growth of population, data available from NFHS shows that this is primarily being achieved through sterilization of women. Among the currently married women in reproductive ages (13 to 49) years. 41 per cent were using contraception sterilisation accounted for 76 per cent of the contraceptive used (81 per cent in rural areas and 66 percent in urban areas). The source for contraception was mostly (for 79 per cent of the users- 87 per cent in rural areas and 62 per cent in urban areas) either a government hospital or primary health centre. It is also reported that 82 per cent of those resorting to sterilisation had never used any other method of contraception before. The percentage of such non-users of other methods was: Andhra Pradesh (93 per cent), Bihar (91.6 per cent), Rajasthan (91.3 per cent), Uttar Pradesh (88.9 per cent), Orissa (88.2 per cent), Maharashtra (86.9 percent), Madhya Pradesh (86.7 per cent), Nagaland and Mizoram (86.4percent each), and Karnataka (83.1 per cent).

That women are being sterilised at young ages is indicated by the fact that the average age of the wife at the time of sterilisation was 25.7 years, with 44 per cent of the couples undergoing sterilisation before the wife was 25. Seventy nine per cent sterilisation took place before the wife was 30, and less than one percent when the wife was in her 40s. Over the years, the proportion of all sterilisation that were done on women has increased as a proportion of all sterilisation the proportion of sterilisation of men has been declined relative to women. NFHS reports that 23.3 per cent sterilised women, 15.1 per cent sterilised men, 20 per cent pill users and 18.9 per cent IUD users experienced health problems because of the use of this method of contraception. It was also reported that only 15 per cent of the pill and IUD users and 30 per cent of he sterilised women and men received follow up visits from health staff. The users did need follow up care and sought it from private sources.

Reduction in the growth rate of the population must be seen in the context of the fact that women are being sterilised through government facilities at young ages. Most of them have had no previous experience with any other method of contraception before being exposed to a permanent method. A substantial number of them experience health problems after sterilisation an there is no assurance that a significant proportion of the children they have already borne, will survive through childhood.

To Sum Up

Though there has been a small change in the sex ratio in favour of women from the 1991 census to the 2001 census, the improvements is not significant, especially considering that the absolute deficit of

females has increased by about three million. Also, despite this small improvement, the rapidly declining sex ratio among young children indicates that the overall sex ratio is handed for further decline and the deficit of females is almost certain to increase substantially in the near future. The maternal mortality rate remains among the highest in the world; foeticide of females is becoming far more common in more and more states; age of marriage and age at first pregnancy remains low and women status as reflected in access to health care and basic education remains low in absolute terms, and as compared to that of males.

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12

Effects of Sex Preference on Contraceptive Use, Abortion and Fertility in Matlab, Bangladesh

Radheshyam Bairagi

Context: *Contraceptive prevalence in Bangladesh has been increasing, but for the last 6-7 years the total fertility rate has remained at 3.3 lifetime births per woman. Son preference is thought to be a constraint on further fertility decline.*

Methods: *Data from the Matlab Demographic Surveillance System were used to investigate the effects of son preference on contraceptive use, abortion and fertility, and trends in these effects over time, in the Matlab maternal and child health and family planning project area and in a comparison area. A modified Arnold Index was used to estimate the increase or decrease in contraceptive prevalence, abortion or fertility that would occur in the population in the absence of sex preference. The level of sex-selective abortion was measured by the deviation from the expected ratio of males to females at birth.*

Results: *Between the early 1980s and the middle 1990s, contraceptive use and recourse to abortion increased in Matlab, while fertility declined. Method use rose with parity in the project area. (Adequate data were not available for the comparison area.) At low parities, method use increased with the number of sons; among women with three or more children, however, it stabilized or decreased among those who had at least two sons. In the absence of sex preference, contraceptive use in the project area would have risen by 9% in 1983, by 8% in 1988 and by 6% in 1993. The abortion ratio increased with parity; within parities, it was generally lowest for women with no sons and was often highest for those with at least two sons and a daughter. In the absence of sex preference, the abortion ratio would have increased by 27% in 1982-1986, by 36% in 1987-1991 and by 55% in 1992-1995 in the project area, and by 36%, 37% and 38%, respectively, in the comparison area. The percentage of women giving birth declined as parity rose and, within parities, was highest for women without sons. Among women with more than two children, fertility was lowest for those who had sons and a daughter. In the absence of sex preference, fertility would have decreased by 9% in 1984-1986, by 10% in 1989-1991 and by 12% in 1994-1995 in the project area, and by 7%, 8% and 9%, respectively, in the comparison area. There was no evidence of sex-selective abortion in Matlab.*

Conclusions: *Sex preference does not have a strong effect on contraceptive use in Matlab. Its absence, however, would probably increase recourse to abortion, which is used to limit fertility once couples have the number of sons they desire. The effect of sex preference on childbearing is becoming stronger as fertility declines, because couples must achieve their desired number of sons within a smaller overall number of children.*

The decline in the total fertility rate (TFR) of Bangladesh from more than six lifetime births per woman in the mid-1970s to slightly more than three births per woman in the early 1990s is remarkable. Some observers, pointing to a sharp increase in contraceptive prevalence—from less than 10% in the mid-1970s to about 45% in 1993-1994—attribute this decline to a successful national family program.[1] Others, however, express doubt that the program could have reduced fertility by half without societal change. [2]

Fertility remained relatively static in Bangladesh between 1993 and 2000, despite a seven-point increase in contraceptive prevalence.[3] In Matlab, where fertility was also stable during that period, the effect of an eight-point increase in contraceptive use was offset by the effect of a decrease in abortion.[4] On the other hand, recourse to

abortion is increasing in the country overall. [5]

Son preference, which has its roots in the patriarchal form of society, dependence on sons for financial support during old age and continuation of the family name, and the necessity of a dowry for female children, may be an obstacle to further decline in fertility.[6] Although several studies have examined the effects of son preference on fertility and mortality, none has looked at its effect on abortion in Bangladesh.

Abortion is one of the four most important proximate determinants of fertility; [7]in some countries, it has at times been the principal means of fertility control.[8] Abortion is not always used exclusively for fertility control, however. In countries where the preference for sons is strong, such as China and Korea, sex-selective abortion is very common. [9]

In Bangladesh, induced abortion is illegal except to save the life of a pregnant woman. The government of Bangladesh, however, stated in a 1979 memorandum that menstrual regulation is an "interim method of establishing nonpregnancy" for a woman at risk of being pregnant, whether or not she is actually pregnant. In reality, menstrual regulation is used to avoid unwanted births, and the procedure is usually considered as abortion in Bangladesh.[10] Because abortion is a sensitive issue on which data collection is very difficult, no accurate estimates of abortion prevalence and trends are available, and the purposes for which it is used in Bangladesh are not clearly understood. The study on which this article is based investigated whether son preference is a common reason for abortion in Bangladesh and, if so, how much abortion contributes (relative to contraceptive use) to achieving a couple's desired number of sons and daughters, as well as to limiting fertility.

In most of the countries in South and East Asia, people prefer sons to daughters. [11] This preference often influences people's behavior and affects both fertility and mortality. [12]The effects of son preference on mortality and its proximate determinants have been examined in many studies in Bangladesh. One study revealed preferential treatment of sons in food distribution and use of health care. [13] Other research demonstrated that preferential treatment escalated during periods of famine, [14] and that excess female child mortality was much higher among girls who had sisters than among those who did not. [15] In another study, however, mortality was higher among both girls and boys who had one or more siblings of the same sex than among those who did not. [16]

Although the effects of sex preference on mortality in Bangladesh and other countries are consistent, its effects on fertility are not. Some observers have argued that son preference would be a strong barrier to the success of family planning programs, and thus would be an obstacle to fertility decline. [17] According to one study, given perfect contraceptive use, if all couples desired at least two sons, families would have an average of 3.9 children, whereas if all couples desired at least one son and one daughter, the average would be three children[18]

Son preference was not found to have an influence on fertility in the 1960s in Bangladesh and Pakistan. [19] In Taiwan and South Korea in the 1970s and 1980s, however, couples with more daughters than sons had higher subsequent fertility.[20] Investigators examining the reasons for this inconsistency concluded from the Matlab data that the effect of son preference on fertility would be more pronounced in a population with high contraceptive prevalence than in a population with low contraceptive prevalence. [21]

Their work explains the relationship between son preference and fertility in countries with low or moderate levels of contraceptive use, but does not explain the situation in developed countries, where contraceptive prevalence is usually high, fertility is low and son preference has little or no effect on fertility. Moreover, their study did not take the other proximate determinants into consideration. In Korea and China, abortion was found to be the principal means used to have children of the desired sex. [22]

An examination of cross-sectional data on fertility intentions and contraceptive use from 27 countries concluded that sex

preference was not likely to have a major impact on contraceptive use and fertility.[23] That analysis, however, had several limitations because of the lack of appropriate data. It covered a wide range of fertility intentions and contraceptive use, and the difference between observed contraceptive use and expected contraceptive use in the absence of sex preference was interpreted as the effect of sex preference on contraceptive use. Naturally, this effect will be small if prevalence is low. Furthermore, if a population does not prefer children of a particular sex, the effect will be small even if contraceptive use is high. Thus, at low values, this measure does not provide a clear indication of the effect of sex preference on contraceptive use (regardless of level of use) in a country in which sex preference is strong.

Moreover, that study used data on fertility intentions, not on fertility. The relationship between contraceptive use, fertility intentions and actual fertility is not clear-cut. Therefore, longitudinal data at different levels of contraceptive prevalence, as well as data on other proximate determinants (particularly on abortion) and on actual fertility, are very important and useful in assessing the role of sex preference on demographic transition. The research reported on in this study used longitudinal data on contraceptive use, abortion and fertility from Matlab, Bangladesh, to examine the issue.

Data and Methods

Data for this study came from the Demographic Surveillance System and the Record-Keeping System of the ICDDR,B: Centre for Health and Population Research in Matlab, Bangladesh. Since 1966, ICDDR,B has been recording data on the vital events of Matlab's population. The data, collected during biweekly household visits by community health workers, are checked at different levels for accuracy before being transferred to the surveillance system database.[24] In 1977, a maternal and child health and family planning project began in half of the Matlab surveillance area. The remaining half, known as the comparison area, remained under the government's standard program. Information on the contraceptive use and reproductive status of married women of childbearing age has been collected every two weeks by community health workers in the project area only.

At the beginning of the project, neither fertility nor mortality differed between the two areas.[25] Over time, contraceptive prevalence increased* and fertility and mortality declined in each area, but change occurred more rapidly in the project area. By 1995, statistics in the project area were more favorable than those in the comparison area for contraceptive prevalence (67% vs. 45%), the total fertility rate (3.0 vs. 3.7 lifetime births) and the infant mortality rate (51 vs. 79 deaths per 1,000 live births).

The four most important proximate determinants of fertility are contraceptive use, the proportion of women of reproductive age who are married, postpartum amenorrhea and abortion.[26] Son preference is unlikely to affect the proportion of people of childbearing age who are married or of women in sexual union in a population, and its effect on postpartum amenorrhea is thought to be small in Matlab because the patterns and duration of breastfeeding of male and female infants do not differ significantly. [27] This article, therefore, examines the effects of son preference and the trends in these effects on the other two main proximate determinants of fertility—contraceptive use and abortion—as well as on fertility in Matlab.

The effect of son preference on contraceptive use could be studied only in the project area, as contraceptive use data for the comparison area were available only in two knowledge, attitude and practice survey samples from 1984 and 1990. These sample sizes were not large enough to provide a valid estimate of the fertility effects of numbers of sons and daughters at different parities.

To cover a wide range of levels of contraceptive prevalence, we took contraceptive use data from the project area for three dates at five-year intervals: December 31, 1983; December 31, 1988; and December 31, 1993. We examined the fertility effect of the number of sons and daughters in a family for the periods 1984-1986, 1988-1989 and 1994-1995, and the

effect on induced abortion for the periods 1982-1986, 1987-1991 and 1992-1995.†

The occurrence of abortion‡ has been found to be underestimated, despite the record-keeping efforts of the community health workers. [28] This underestimation is not expected to affect abortion trends over time or comparisons among different groups of people, because the procedures used in collecting abortion data have been the same.

A modified Arnold Index[29] is used here to estimate the effects of sex preference on contraceptive use, abortion and fertility. This index provides an estimate of the relative change in a variable caused by an absence of sex preference. It is defined as the ratio of the absolute difference between observed and expected fertility measures (contraceptive use, abortion and fertility) to the observed value, multiplied by 100.§ (When the expected rate was estimated, it was assumed that all couples at a given parity will act in the same manner as the couples at that parity who are currently most satisfied with the number of sons and daughters among their children.) The index is not affected by errors in reporting contraceptive use, abortion or fertility, unless the amount of error differs by the number of sons and daughters within a given parity. Couples were assumed to be most satisfied with their number of sons and daughters at the parity at which contraceptive use and the abortion ratio were highest and at which fertility was lowest.

The assumptions regarding contraceptive use and fertility seem reasonable, but for abortion, the situation is not clear-cut. If the purpose of abortion is to regulate fertility without knowing the sex of the fetus, the assumption regarding abortion seems logical. However, if the purpose is to abort the fetus only if amniocentesis or ultrasound identifies it as being female (as often occurs in China and Korea), then the current number of sons and daughters needs to be considered in combination with the sex of the fetus. In the latter case, the observed sex ratio at birth in Bangladesh should be greater than the expected sex ratio at birth, as is the case in China and Korea.[30] In Matlab, the sex ratio at birth (about 104) remains within the normal range. These results imply that induced abortion in Matlab is not related to the sex of the fetus, suggesting that the women who have the highest abortion ratio in a parity do not want more children of either sex.

Results

The percentage of married women aged 15-49 years who were practicing contraception on the last day of the year (December 31) in 1983, 1988 and 1993 in the Matlab project area, according to the number of sons at each parity, is shown in [Table 1). Contraceptive use increased from 40% in 1983 to 54% in 1988 and to 64% in 1993. In each year, the percentage of women using contraceptives increased with parity; within each parity, it increased with the number of sons, except for a slight decrease among women at parities greater than two who had only sons. Contraceptive use increased less with parity (and sometimes decreased) among women with no sons than among other groups. The data also suggest that although the preference for sons was quite strong, couples liked to have a daughter after having two sons.

Women in the comparison area had 17,803 live births during 1982-1986, 18,431 during 1987-1991 and 11,884 during 1992-1995 (Table 2). In the project area, the numbers of live births in these periods were 15,018, 15,092 and 10,604, respectively. The abortion ratio, defined as the ratio of abortions to live births multiplied by 1,000, was 21 during 1982-1986, 39 during 1987-1991 and 51 during 1992-1995 in the comparison area. In the project area, those ratios were 16, 25 and 24, respectively. In each area and each period, the abortion ratio usually increased with parity, and within a parity it was generally lowest for women with no sons and was often highest for women who had sons and a daughter.

Fertility fell sharply in both areas over time, but the decline differed between areas. In the comparison area, the percentage of women giving birth was 58% in 1984-1986, 50% in 1989-1991 and 27% in 1994-1995; in the project area, those percentages were 47%, 36% and 23%, respectively (Table 3). In both areas, fertility declined with rising parity; within each parity, fertility was highest for women

without sons. Among women in the project area with two living children, fertility was lowest among those who had two sons. Among women with more than two children, the lowest fertility in both areas was found among those who had sons and a daughter.

The effects of sex preference on contraceptive use as measured by the modified Arnold Index are shown in (Table 4).The proportion of couples practicing contraception in 1983-1993 would have increased by no more than five percentage points (expected minus observed) if there had been no preference for children of a particular sex. Thus, the impact of sex preference on contraceptive use was not great at any time. The contraceptive index declined from 9% in 1983 to 6% in 1993, indicating a decrease in the effect of sex preference on contraceptive use. In other words, the relative importance of sex preference as a determinant of contraceptive use declined as use of contraceptives increased.

The expected abortion ratio was higher than the observed abortion ratio in each year in each area (Table 5). suggesting that the abortion ratio would increase in the absence of son preference. This finding reflects the fact that the abortion ratio among women who had their desired number of sons was higher than the ratio among women who did not. For example, women with two living children preferred two sons to two daughters, and those who had two sons had a higher abortion ratio than those with two daughters (Table 2).In the comparison area, the abortion ratio would have increased by 36-38% in the absence of sex preference, while in the project area it would have increased by 27% during 1982-1986, 36% during 1987-1991 and 55% during 1992-1995 (Table 5).The increase in the abortion ratio as a result of son preference was greater than the increase in contraceptive use; moreover, the effect on contraceptive use decreased over time, but the effect on abortion increased.

The index for fertility and the TFRs during three periods are shown in (Table 6). The effect of sex preference in the comparison area increased from 7% in 1984-1986 to 8% in 1989-1991 and 9% in 1994-1995. In the project area, the index increased from 9% in 1984-86 to 10% in 1989-1991, with a further increase to 12% in 1994-1995. Although the contraceptive prevalence rate for the comparison area was not available, there is no question that contraceptive use was increasing in the area over time.[31]

Discussion

The great advantage of this study is its use of the largest and most comprehensive longitudinal population data set in the developing world. An estimate of the effect of son preference on fertility and its related variables requires data on these variables according to the number of sons and daughters at different parities. If the overall sample is not large and if there are not enough children in each category, the standard error will be very high. On the other hand, longitudinal data at different levels of contraceptive use and fertility are needed to investigate trends in the effect and to predict future effects. Cross-national data with different levels of contraceptive use and fertility will not serve these purposes, because the nature and intensity of sex preference may vary from country to country, along with fertility and contraceptive use.

The use of Matlab to represent Bangladesh as a whole may be questioned. Matlab is slightly better off socioeconomically than Bangladesh in general. However, there is no evidence that Matlab is an atypical area in Bangladesh; rather, trends and differentials in fertility and mortality in Matlab are similar to those in the country overall. The differences found in some studies are thought to be due mainly to the inferior quality of data in the national surveys.[32] The project and comparison areas in Matlab were found in 1993-1994 to be virtually the same socioeconomically, except for the level of children's education, which was higher in the project area.[33] The Matlab comparison area in most respects is similar to Bangladesh as a whole, while the project area is demographically a few years ahead of the rest of the country.

The long-term effects of son preference, as calculated here, may be underestimated. An examination of the distribution of women with one or two children according to the number of sons shows that the

proportion of women with sons is greater than expected. For example, in (Table 1). The number of women in the Matlab project area in 1982 with two sons and no daughters was 633, while the number with two daughters and no sons was 461, a ratio of 1.37. However, assuming a sex ratio at birth of 104, the ratio of women with two sons to the number with two daughters should be 1.08 (or $0.51^2/0.49^2$). This disparity occurs mainly because women with two sons and no daughters move to the next parity less often or more slowly than women with two daughters and no sons, and partly because of higher mortality among female children than among male children. In this article, however, the calculation of the effect of sex preference was based on the existing distribution of women, so it will yield an estimate of the immediate effect of sex preference on fertility and its related variables. If a situation in which parents preferred neither sons nor daughters persisted over a long period, the distribution of women by number of sons within a given parity would eventually change, and the long-term effect would be somewhat greater than the short-term effect found in this study.

The effect of sex preference on contraceptive use was never high, and it decreased over time as contraceptive prevalence rose (Table 4).The absolute increase in contraceptive prevalence in the absence of sex preference would be no more than five percentage points at any time. Results from previous research for other years in the project area and the comparison area were almost identical.[34] This study confirms results of earlier research indicating that sex preference is not a constraint to contraceptive use in Bangladesh.[35]

The same cannot be said, however, in the case of fertility. The effect of sex preference increased consistently over time as fertility declined. It is reasonable to assume that the change in the proportion of married women giving birth was the same as the percentage change in the TFR. Thus, the effect of sex preference increased almost linearly with the decrease in the TFR. This finding is consistent with the hypothesis that the effect of son preference is stronger in low-fertility situations, because couples have to have their desired number of sons and daughters within a smaller overall number of children. The TFR in the Matlab project area in 1994-1995 (three lifetime births per woman) would have decreased by 12% in the absence of son preference. However, this effect is much weaker than the effect estimated in a population that uses contraceptive methods perfectly.[36]

A comparison of the effect of sex preference on contraceptive prevalence, abortion and the TFR reveals some important and interesting features. Here, the effect on contraceptive prevalence is smaller than the effect on fertility (see Tables 4 and 6). If the effect of sex preference on fertility were mediated by contraceptive use alone, the effect on contraceptive prevalence should be greater than the effect on fertility.** This finding suggests that the effect of son preference on fertility is mediated not only by contraceptive use but also by one or more of the other proximate determinants of fertility.

Among the other three important proximate determinants of fertility, abortion is the most likely candidate. As Tables 4 and 5 show, the effect of son preference on abortion increased over time, while the effect on contraceptive use decreased; moreover, the effect on abortion was much greater than the effect on contraceptive use. These results suggest that abortion was used more liberally than contraceptives to maintain the desired number of sons and daughters. It is true that fetal sex identification and sex-selective abortion did not exist in Matlab at the time of this study, and that the Matlab maternal and child health and family planning program was successful in reducing induced abortion.[37] But if son preference remains strong in the area, facilities that identify the sex of a fetus may become available, resulting in an increase in the abortion of female fetuses.

The literature includes no studies on sex-selective abortion in Bangladesh. In neighboring India, however, about one million female fetuses were aborted in 1981-1991,[38]and about 70% of all abortions in Delhi were performed because the fetus was female.[39] Sex-selective abortions were so common that the Indian government

announced a ban on the abortion of healthy female fetuses identified during permissible genetic tests.[40]

Abortion is legal in India, but not in Bangladesh. Yet, about 750,000 abortions occur in Bangladesh each year.[41] Islam, which is thought to discourage abortion, is the religion of 85% of the people in Bangladesh, while Hinduism is the religion of 85% of India's population. But the religious and other cultural differences between India and Bangladesh do not seem to lead to much difference in the prevalence of abortion or son preference in the two countries. Policymakers thus need to find how to reduce both son preference and recourse to abortion in Bangladesh. An improvement in the status of women and female children should be helpful in reducing son preference,[42] and an improvement in maternal and child health and family planning services should be helpful in reducing the number of abortions in the country.[43]

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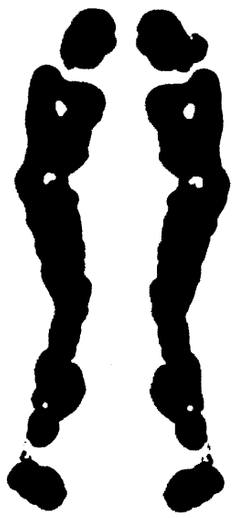

Table 1

Percentage of women using contraceptives, by parity and number of sons, according to year, Matlab project area, Bangladesh

Parity and number of sons	1983		1988		1993	
	N	% using	N	% using	N	% using
All	12,283	40.0	13,442	54.0	16,410	63.9
Parity 0	**907**	**7.2**	**659**	**10.2**	**1,162**	**14.9**
Parity 1	**2,276**	**25.4**	**2,401**	**39.9**	**2,993**	**49.7**
0	1,100	23.8	1,164	40.1	1,445	46.4
1	1,176	26.8	1,237	39.8	1,548	52.8
Parity 2	**2,207**	**34.7**	**2,594**	**50.3**	**3,263**	**61.1**
0	461	28.4	552	41.1	636	50.3
1	1,113	35.0	1,293	50.7	1,677	64.2
2	633	38.9	749	56.3	950	63.1
Parity 3	**1,954**	**44.5**	**2,507**	**57.6**	**3,231**	**72.7**
0	204	26.0	229	36.7	313	59.1
1	672	41.8	829	53.4	1,096	67.2
2	830	51.7	1,126	65.3	1,438	80.4
3	248	43.1	323	56.3	384	70.8
Parity 4	**1,761**	**50.2**	**2,115**	**65.5**	**2,665**	**77.9**
0	89	21.3	102	37.3	123	48.8
1	407	44.0	490	62.7	602	72.4
2	672	53.6	834	67.6	1,050	81.0
3	479	55.5	553	70.7	713	83.6
4	114	52.6	136	62.5	177	75.1
Parity >=5	**3,178**	**55.2**	**3,166**	**66.4**	**3,096**	**77.9**
0	100	55.0	87	55.2	87	59.8
1	355	48.7	362	63.0	405	73.6
2	732	56.8	799	67.3	811	79.0
3	894	56.8	902	68.8	874	82.3
4	664	55.7	608	70.2	591	77.5
>=5	433	53.3	408	59.1	328	74.7

Table 2

Number of live births and abortion ratio in Matlab comparison and project areas during three periods, by parity and number of living sons

Parity and no. of sons	Comparison area						Project area					
	1982-1986		1987-1991		1992-1995		1982-1986		1987-1991		1992-1995	
	No. of live births	Abortion ratio	No. of live births	Abortion ratio	No. of live births	Abor-tion ratio	No. of live births	Abor-tion ratio	No. of live births	Abor-tion ratio	No. of live births	Abor-tion ratio
births	ratio	births	ratio	births	ratio	births	ratio	births	ratio	births	ratio	
All	**17,803**	**21**	**18,431**	**39**	**11,884**	**51**	**15,018**	**16**	**15,092**	**25**	**10,604**	**24**
Parity 0	**4,352**	**16**	**4,518**	**21**	**3,450**	**22**	**4,270**	**12**	**4,509**	**16**	**3,591**	**11**
Parity 1	**3,720**	**9**	**3,859**	**20**	**2,721**	**20**	**3,513**	**9**	**3,652**	**15**	**2,704**	**11**
0	1,857	11	1,943	21	1,364	16	1,736	7	1,799	15	1,320	8
1	1,863	8	1,916	19	1,357	24	1,777	11	1,853	15	1,384	14
Parity 2	**3,122**	**17**	**3,376**	**24**	**2,112**	**30**	**2,635**	**9**	**2,900**	**19**	**1,994**	**16**
0	715	4	847	21	589	15	629	10	781	14	568	9
1	1,532	18	1,690	20	1,008	37	1,317	8	1,415	18	919	22
2	875	25	839	35	515	33	689	10	704	27	507	12
Parity 3	**2,346**	**21**	**2,666**	**34**	**1,586**	**52**	**1,866**	**13**	**1,898**	**32**	**1,227**	**34**
0	246	4	337	18	243	33	246	4	290	14	216	9
1	884	21	997	28	639	52	710	13	749	27	489	18
2	909	25	963	44	504	69	677	18	613	47	354	68
3	307	23	369	41	200	30	233	9	246	28	168	42
Parity 4	**1,754**	**43**	**1,761**	**62**	**1,001**	**107**	**1,258**	**24**	**1,035**	**43**	**646**	**68**
0	116	9	120	8	70	43	120	0	102	0	93	22
1	437	32	470	51	316	57	334	12	282	18	178	45
2	643	48	627	73	324	120	432	32	338	53	211	76
3	437	59	408	64	212	160	287	31	232	78	121	132
4	121	33	136	88	79	165	85	35	81	37	43	47
Parity >=5	**2,509**	**68**	**2,251**	**121**	**1,014**	**222**	**1,476**	**51**	**1,098**	**82**	**442**	**152**
0	62	0	64	47	44	23	45	22	46	0	30	67
1	60	31	243	82	142	134	208	38	165	55	79	89
2	609	71	565	108	246	183	367	38	310	55	115	165
3	701	57	641	117	259	251	411	73	268	104	113	186
4	529	83	427	129	205	268	287	45	188	112	70	143
>=5	348	106	311	190	118	339	158	57	121	123	35	229

Table 3

Number of women and percentage giving birth in Matlab comparison and project areas during three periods, by parity and number of sons immediately before period

Parity and no. of sons	Comparison area						Project area					
	1984-1986		1989-1991		1994-1995		1984-1986		1989-1991		1994-1995	
	No. of Women	% giving birth	No. of Women	% giving birth	No. of Women	% giving birth	No. of Women	% giving birth	No. of Women	% giving birth	No. of Women	% giving birth
All	14,219	58	15,155	50	17,350	27	13,701	47	16,112	36	18,576	23
Parity 0	**1,609**	**82**	**962**	**72**	**1,618**	**55**	**1,083**	**80**	**892**	**72**	**1,447**	**60**
Parity 1	**2,437**	**80**	**2,522**	**78**	**2,800**	**47**	**2,462**	**74**	**2,865**	**65**	**3,380**	**39**
0	1,206	82	1,226	80	1,358	47	1,186	77	1,390	67	1,625	40
1	1,231	78	1,296	75	1,442	46	1,276	72	1,475	64	1,755	39
Parity 2	**2,171**	**76**	**2,408**	**69**	**2,717**	**36**	**2,348**	**62**	**2,976**	**50**	**3,537**	**28**
0	478	81	558	73	604	42	494	73	635	63	687	28
1	1,113	73	1,237	68	1,414	34	1,182	61	1,500	48	1,825	26
2	580	75	613	68	699	36	672	58	841	43	1,025	25
Parity 3	**1,989**	**61**	**2,446**	**55**	**2,821**	**26**	**2,093**	**47**	**2,837**	**34**	**3,476**	**17**
0	195	70	251	68	308	40	227	61	266	55	336	33
1	701	64	851	59	947	30	721	53	937	40	1,179	20
2	814	57	1,007	47	1,227	20	886	39	1,265	25	1,547	10
3	279	60	337	59	339	27	259	47	369	34	414	19
Parity 4	**1,845**	**50**	**2,219**	**40**	**2,673**	**17**	**1,905**	**35**	**2,429**	**21**	**2,930**	**10**
0	100	55	112	59	124	24	100	59	129	43	139	32
1	416	56	487	48	594	22	441	39	581	25	668	11
2	683	50	858	38	1,084	15	719	32	940	17	1,155	8
3	515	42	609	31	712	12	520	29	622	17	776	7
4	131	50	153	46	159	20	125	38	157	30	192	12
Parity >=5	**4,168**	**31**	**4,598**	**24**	**4,721**	**9**	**3,810**	**20**	**4,113**	**12**	**3,806**	**5**
0	114	24	101	35	85	25	153	18	131	17	106	11
1	422	34	436	28	502	15	438	25	472	17	483	5
2	886	37	1,032	28	1,107	9	844	22	992	13	976	7
3	1,106	32	1,279	23	1,353	8	1,042	19	1,154	11	1,072	5
4	944	29	996	20	989	7	794	19	816	9	728	4
>=5	696	25	754	18	685	7	539	14	548	10	441	2

Table 4.

Observed and expected contraceptive prevalence and effect of sex preference on prevalence in Matlab project area, by year

Prevalence	1983	1988	1993
Observed	40.0	54.0	63.9
Expected	43.4	58.4	67.6
Effect*	-8.5	-8.2	-5.8
*Calculated as ([Observed prevalence - Expected prevalence]/Observed prevalence) x 100.			

Table 5

Observed and expected abortion ratio and effect of sex preference on the abortion ratio in Matlab comparison and project areas, by period

Ratio and effect	Comparison area			Project area		
	1982-1986	1987-1991	1992-1995	1982-1986	1987-1991	1992-1995
Observed	20.9	39.5	51.1	15.6	24.8	23.8
Expected	28.5	53.9	70.5	19.9	33.8	36.9
Effect*	-36.0	-36.5	-38.0	-27.4	-36.3	-55.0
*Calculated as ([Observed ratio - Expected ratio]/Observed ratio) x 100.						

Table 6

Observed and expected percentage of women giving birth, effect of sex preference on fertility, and TFR in Matlab comparison and project areas, by period

%, effect and TFR	Comparison area			Project area		
	1984-1986	1989-1991	1994-1995	1984-1986	1989-1991	1994-1995
Observed	58.1	49.6	27.2	47.3	36.4	22.7
Expected	54.3	45.4	24.9	43.1	32.6	19.9
Effect*	6.5	8.3	8.6	9.0	10.4	12.3
TFR	5.5	4.7	3.8	4.3	3.3	3.0
*Calculated as ([Observed percentage - Expected percentage]/ Observed percentage) x 100.						

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13

Female Foeticide in Rural Haryana

Sabu M. George & Ranbir S. Dahiya

Female foeticide over the last 15 years has distorted sex ratios at birth in several Asian countries. Foetal sex determination clinics have been established in India over the last 20 years in northern and western cities. Presented here is the outcome of an intensive study of the abuse of prenatal diagnostic techniques for sex selection in a rural population of 13,000 in Rohtak district. Parents tend to be calculative in choosing the sex of the next child and the decision is based on the birth order, sex sequence of previous children and number of sons. Transfer of reproductive technology to India is resulting in reinforcement of patriarchal values as professional medical organisations seems to be indifferent to ethical misconduct.

I) Introduction

STRONG preference for sons over daughters exists in the Indian subcontinent, east Asia, north Africa and west Asia unlike in the western countries [Muthurayappa et al 1997, Lancet 1990, Okun 1996]. People realise smaller family sizes with relatively greater number of sons by abuse of medical technologies. Pregnancies are planned by resorting to 'differential contraception' - contraception is used based on the number of surviving sons irrespective of family size [Okun 1996]. Following conception, foetal sex is determined by prenatal diagnostic techniques after which female foetuses are aborted [Park and Cho 1995, Arora 1996]. China adopted one child family norm in 1979 and the phenomenon of millions of 'missing girls' was recognised by early 1990s [Coake and Banister 1994]. Female foeticide was a major cause of this imbalance. As fertility declined rapidly in east Asian countries (South Korea, Taiwan, Hong Kong), selective abortion of female foetuses increased, leading to rising sex ratios at birth (SRB) (male/female) over the last 10 years (Park and Cho 1995). In India the population sex ratio which was 1.03 in 1901 census rose relatively consistently to 1.08 in 1991 [National Commission for women 1994]. Indian medical researchers who pioneered amniocentesis in 1975 said thatit would assist those Indian women who keep on reproducing just to have a son; although this may not be acceptable to 'persons in the west' [Verma et al 1975]. Since then the contribution of sex determination tests (SDT) to the rising sex ratio has been vigorously debated [Lancet 1983, Chhachhi and Satyamala 1983, Kumar 1994]. While urban feminists demanded legislation against SDT, several social scientists felt that SDT had little impact on sex ratio [Forum against Sex Determination and Sex Preselection 1993, Rajan et al 1992].

According to the 1991 census, 15 of the 20 districts with the highest child (0 to 6 years) sex ratios were in the states of Haryana and Punjab in northwest India. A well known demographer suggested that the distortions in child sex ratios in the northwestern region for the last 100 years could be due to biological peculiarity of these women to have a highly distorted sex ratio at birth, in favour of boys [Premi 1994]. However, UNICEF argued that "female foeticide is reported to be a cause for adverse sex ratios in some Indian districts in the 1991 census" [UNICEF 1994]. Therefore, we selected villages from one such district in this region to investigate if indeed SDT were being performed and if so, to measure its impact on sex ratios. We examined the role of doctors, and also considered the contributions of contraception and of the social practice of female infanticide in skewing sex ratios.

II) Subjects and Methods

Geographical Location and Background

This study was initiated in June 1996 in six villages of Rohtak district in Haryana. Haryana was part of the composite Punjab state till 1966. This region witnessed tremendous economic progress over the last 30 years due to 'green revolution' [Singh 1997].Haryana's per capita income is among the highest and fastest growing in the country [UNDP 1997]. Consequently income poverty reduced by more than 50 per cent. But the Anthropological Survey of India reports that the status of women in Haryana continues to be bad.

Haryana Vigyan Manch (HVM) has been active in promoting literacy. It worked with the district administration (1991-95) and succeeded in enrolling 1.15 lakh illiterates in the literacy campaign. Ninety per cent of the neo-literates and their instructors were women. HVM provided medical relief during floods and epidemics. It organised successful public campaigns in Rohtak to get clinics to remove advertisements promoting foetal sex determination [Chowdhry 1994]. After literacy efforts, more villagers started coming to the Medical College Hospital where the second author works.

Selection of Study Villages

Following completion of the literacy endeavour in 1995, HVM undertook a survey in 36 villages where there was good community participation. This was motivated by the impression of the literacy activists that in some villages about half of the pregnancies were terminated after SDT because the foetus was female. As the enumeration was done by the village activists only limited information on children was elicited. Demographic data such as birth order of children, timing of pregnancy outcomes; and assessment of the completeness of the survey were not available from this attempt. This field research is therefore a systematic effort to follow upon indications of rampant female foeticide.

Given the sensitive nature of induced abortions and that it is a criminal offence to do SDT we could not undertake a truly random survey of women in the district. We wanted to obtain reliable information on deliberate termination of female feotuses and neglect of girls from the women themselves. Our attempt was to identify villages where there was greatest likelihood that communities would trust our intentions given our past social commitments. An open dialogue on SDT is possible only when women could confide about such matters without fear of being victimised. Therefore, we chose to select Villages where we had the most respected-women literacy activists. These women have developed excellent rapport in their villages. Some of these empowered women later got elected as members and even chiefs of village panchayats. The study villages were identified by asking the three district literacy women coordinators who independently ranked the women activists present in the 36 villages. The six study villages lie in blocks of Rohtak out of the total 12 blocks. On completion of the study, this district (original Rohtak) was sub divided into Rohtak and Jaghar districts. Today, our study villages lie in both the new districts.

III) Methodology

Discussions with Medical practitioners and others

First we interviewed leading obstetricians, medical practitioners of SDT in Rohtak and women doctors of departments of obstetrics and gynaecology (OG) and radiology of the Post Graduate Institute of Medical Sciences (locally called Medical College Hospital and henceforth referred to as MCH). We ascertained their perceptions and involvement in SDT. The role of ultrasound scans in ante-natal care was ascertained. They were asked if SDT could result in raising the status of women. We met with about 150 village level literacy activists in Jind district along with a senior medical officer to be informed of SDT practices. Jind is adjacent to Rohtak and has the highest sex ratio in Haryana state.

Interviews with individual study women

To reduce recall errors, we confined interviews to women who experienced a pregnancy outcome in the last five years rather than to all village women. There were 1,022 eligible women. The criterion of using pregnancy outcome in the last five

years included almost all out comes in the study villages in the recent past, as the average interval between successive births in Haryana is 28 months [NFHS 1993]. Our sampling excluded just four women who had a previous pregnancy outcome and were currently pregnant. They were excluded as they experienced no outcome in the last five years. The entire history of pregnancies of study women is necessary for us to understand family building strategies and to obtain accurate birth orders of recently born children.

Women were interviewed at their homes in the presence of the local woman activist. Pregnancy history was elicited from each study woman, beginning with the last outcome. This demographic method is known to produce excellent results with minimal loss of information. We asked very few questions in order not to be suspected by the community as accomplices of the health department. From our decades of contact with rural women, we knew that any suspicion of being associated with the coercive family planning programme would make women unwilling to reveal sensitive aspects of their reproductive history. We deliberately avoided asking individual women whether they went for SDT as we did not want to make women feel guilty for not bearing the desired number of sons. Rural men blame women for not producing enough sons. Some husbands married a second time because the first wife did not bear a son.

Of these interviews 98.9 per cent were conducted by trained local women. Nearly 50 per cent of the interviews in each of the six villages were conducted by the same interviewer. No study woman refused to co-operate for individual interviews.

Validation of information

We obtained government sources of information on vital events to validate the reported information on deaths. We independently contacted the anganwadi worker (AWW), the female health worker (FHW) and the chowkidar (functionary reporting to police). As complete records were available only for recent years we had to limit validation to past five years. AWW and the chowkidar were resident in the village but FHW resided in Rohtak town. We went back to the study women in case of any discrepancy between the information they reported and the official records.

Dialogue with the communities

We shared the findings with village women in 22 group meetings. On an average 20 women attended these sessions in each hamlet. We sought their explanation for any observed gender imbalances. We asked about discrimination against girls. In areas where there was no distortion of SRB, we enquired if the practice of female foeticide was prevalent.

Outcomes

In the course of field work, qualitative information and sociological data related to the practice of female foeticide were obtained. These strengthen some of the findings presented like caste differentials in foeticide. They also throw light on the fact that foeticide is not an isolated phenomenon but one of several ways patriarchy demeans women; others being violence against women [Jejeebhoy and Cook 1997], anti-women inheritance practices, customary marriage conventions which result in a significant proportion of women being married before 18 years, and coercion of widows to undergo levitate marriages facilitated by state administrative directives. However for brevity, only data on sex ratio distortions and information related to abuse of medical technology by doctors are presented here.

In this paper we do not consider sophisticated reproductive technologies such as X-Y sperm selection or pre - implantational genetic diagnosis (PGD) which enable families to choose the sex of the child without having to resort to abortion [Ramsay 1993, Parikh 1998]. In X-Y separation, male sperms are separated and are used to fertilise the egg. In PGD the pre-embryos are sexed for the selective destruction of the female pre-embryo (female embryocide). As the validity of these methods appears to be uncertain outside the research labs which developed them. Also these very expensive methods are available at present only in a handful of clinics in a few cities.

IV) Results

Virtually all (99.5 percent) study women

were interviewed and 94 per cent of the respondents were mothers themselves. The social, demographic and educational characteristics of families of these women are described in Table 1. The duration of cohabitation after marriage ranged from one year to 30 years (mean = 8.7). Thirteen women had children who were already married. Jats and Yadavs are the cultivating castes who own most of the land. Harijans are the poorest section in this agrarian society; and are primarily labourers of the land owning castes. There is gross disparity between the educational status of men and women.

The pregnancy outcomes reported by the women were 2,642 live borns, 48 still births and 272 abortions (243 spontaneous and 29 induced). Of live borns 66.5 per cent were of orders 1 and 2. only 1.4 per cent of children were of orders greater than 6. There were thrice as many families having more than two surviving girls as those having more than two sons (110 vs 37 respectively), The study women had a maximum of five live born sons whilst the maximum number of live born daughters was nine. Just 14 per cent of families account for 34 per cent of girls while having only 21 per cent of boys. Over 48 per cent of mothers who reported deaths in the cohort born in the past five years were not captured by the government workers. The official records revealed that only two mothers had not reported the deaths (one female each) of their children to us. Subsequently both mothers confirmed that the deaths did occur.

The onus of contraception was almost entirely on women. Tubal ligation (sterilisation):was virtually the only form of contraception used (270 women vs one man). The percentage of sterilised women increased as they had more surviving sons (Table 2). Such a strong rising trend was not evident with increasing number of girls. Just one mother got sterilised with no surviving boys while 69 mothers who had no surviving daughters got sterilised. Furthermore, the family size and sex composition of the surviving children of women who were pregnant (N=129) at the time of interview indicated that the rates of pregnancy were higher among women who had relatively less number of surviving sons than daughters. Within each family size, the current rate of pregnancy were five to six times higher for mothers who had no sons as compared to mothers who had several sons.

A manifestation of intense son preference in a population is that for a given family size the sex ratio of the last born child will be greater than 1.06 (i.e. skewed towards male). This is demonstrated by using the' gender preference indicators', family size sex ratio (FSSR) and the sex ratio of the last born child (LCSR). Family size refers to the total number of children live born. Table 3 indicates the sex ratio for each family size. The FSSR monotonously declines as the family size increases from one to ten. While the LCSR is generally more elevated than that of the FSSR. Both FSSR and LCSR are much higher for completed (sterilised) families (Table 4) with the exception of birth orders greater than five where due to small sample sizes the ratios are not stable.

A different strategy which some parents adopt to limit family size of surviving children and to eventually have the desired number of sons is female infanticide [George et al 1992]. Direct infanticide refers to killing of infant usually immediately after birth. Indirect infanticide is death caused a little after birth, due to deliberate neglect. This could be by inadequate child care, or by poor food related practices or health related neglect. Of the 2,642 live borns, 2,327 children were still surviving at the time of the interviews (Tables 5 and 6). We confine detailed examination of mortality to the cohort born in last five years as the recall errors are minimal for recent events and also because records for validation from official sources were only available for this period. Further, this cohort represents virtually the total population of preschool children in the villages. For this cohort, both sex ratio at birth (SRB) and sex ratio of surviving children at the time of survey are 1.20. Mortality data suggests that there is no excess girl mortality in the early neonatal or late neonatal phase (Table 6). But there appears to be excess girl mortality in the post-neonatal phase and girls are at risk of significantly greater mortality after the first year of life. Ethnographic information indicates the existence of direct female infanticide in the study villages and 41 per

cent of the female early neonatal deaths are due to direct female infanticide. Excess female mortality in the post- neonatal and later childhood suggest the occurrence of indirect female infanticide. Disaggregation by caste indicates that there is no excess post-neonatal girl mortality in harijans but exists among the upper castes.

Another indicator of deliberate discrimination against girls is the survival of live-borns in twin pairs. The women reported that 16 twin pairs were born alive (23f+9m). The mortality of the females was higher than that of males (57 per cent vs 44 per cent). One manifestation of discrimination against girls is, the observation that the inter birth interval between successive live born children is shorter if the preceding child is female. This observation has been reported from Haryana state also [NFHS 1993]. We found greater discrimination in upper castes as compared to harijans (difference is 48 days vs 29 days).

Demographers consider the SRB of children born in last five years as the most sensitive index of current gender imbalance at birth in the society. Table 7 suggests that SRB for all birth orders for recently born children are masculine including the first birth order. The SRB for harijans (lowest caste) was 1.02; whilst among upper castes it was 1.27. The SRB of upper caste children rose from 1.26 to 1.89 as birth order went up from 1 to 5 (above 5 numbers are too small and therefore the ratio not dependable). A similar rising trend was not seen in harijans. The SRB kept increasing over the last five years among upper castes. It increased from 1. 15 to 1.42 from the first 2.5 years to the last 2.5 years. In fact, in the last year, the SRB was as high as 1.80. Apart from birth order the sex composition of the preceding born children seems to be an important determinant of the sex of the next child (Table 8) in the upper castes. Within each birth order, sex ratio of the next child increases as the number of preceding girls increases (We stopped at order 5 as there are very few children to fill the increasing m/f combinations). For each birth order, generally the ratio is often closer to the natural sex ratio (1.06) when the preceding number of male children is the highest. For families with no boys the SRB of the next child increased from 1.47 to 2.50 as the preceding number of girls went up from one to four.

We presented the results of individual women interviews at discussions held in the hamlets. There was universal awareness of SDT and most knew where to go for the tests and abortions. In upper caste hamlets there was open admission of the widespread practice of female foeticide. In a few places the women blamed doctors who are doing this for money. Some women complained that their families first concern following pregnancy is to put pressure on them to determine the sex. If it is a boy then only the need for anti-natal care is raised. In harijan areas were the distortions in sex ratios were less (Table 7), there were denials about the practice.

From our dialogue with Rohtak doctors the following emerged: ultrasonography is abused for sexing foetuses. More doctors are buying ultrasound machines and some are taking it in cars to villages. The only difference after the national law banning the test was passed in 1994 was that cost of the test doubled (now about 900 rupees). Almost everybody, including women MCH doctors felt that selective abortion of female foetuses would increase the status of women. They were unanimous in the positive role of ultrasound in normal pregnancies. The only dispute between the radiologists and the obstetricians of MCH was on the issue who was most competent to do the scanning! Ultrasound is used in the MCH for routine confirmation of pregnancy as problems were experienced in getting kits for the urine test. Neither does the MCH reveal the sex of the foetus nor conduct sex selective abortions. Following popularity of sex selective abortions, the OG department decided a few years ago not to train their post graduates to do mid trimester abortion as it was felt that students would later be practicing female foeticide. However, they were forced to rescind the policy after two years when they started getting referrals of botched abortions from their alumni. This decision was reversed in the interests of the lives of mothers.

Jind activists told us about the widespread practice of female foeticide. Despite Jind being one of the most backward districts in Haryana,

ultrasonography, a modem technology, is extensively abused.

V) Discussion

Families continued to have children till they had adequate number of surviving sons. Consequently small families had more sons while large families had more daughters. That family size is inversely related to the FSSR suggests differential stopping by contraception (Table 3). It appears that most women want to have at least two sons. When two surviving sons are ensured nearly 50 per cent of women use sterilisation (Table 2). There is some evidence that with two sons and one daughter nearly 75 per cent of women use sterilisation. Our findings about completed families (sterilised women) are consistent with that reported for India [Arnold 1996]. Sex ratio of surviving children of sterilised couples are significantly higher than that for couples not using any contraception (1.25 vsO.97). The marginal excess of girls in our total study children (1342 f vs 1300 m) is itself a reflection of intense son preference. Our sample consists of all women in the villages who had a pregnancy outcome in the last five year and the study children comprise all their children; and this included some mothers who were desperate for sons; for instance, seven were willing to have six to nine girls just to have one or more sons.

It is imperative to examine the role of female infanticide as it was prevalent earlier in this region [Chowdhury 1994]. There are also reports of its persistence in the contemporary times [Kakar 1980]. Though direct infanticide has been known for centuries, systematic investigation of the phenomenon is recent [George et al 1992, George 1997]. We have an estimate only from Tamil Nadu state, where direct female infanticide accounted for 8 to 10 per cent of all infant deaths in 1995 [Athreya and Chunkath 1997]. Direct infanticide affects just 0.99 per cent of our liveborn females and therefore can account for only a fraction of the observed gender imbalance in surviving preschool children. The existence of indirect female infanticide in our area is consistent with the finding of excess girl mortality in Haryana state [NFHS 1993]. The deaths were disproportionately high among higher birth order children. This pattern has been reported from many parts of the subcontinent [Das Gupta 1996]. There is no known biomedical reason to explain the observed higher risk of mortality for females born in a twin pair. Village women rationalised the excess mortality of females by saying that mothers can take care of only one child. Such unspoken social sanction for severe neglect of females within a twin pair has been witnessed in south India by the first author and also reported by others[Miller l985].The inter-birth interval after a girl is shorter because girls are breast-fed for a lesser period than boys (19 per cent less; from state data [NFHS 1993]). After consideration of mortality experiences we conclude that past mortality of girls cannot explain the masculinity in sex ratios of surviving children (the higher post-neonatal girl mortality is offset by higher early neonatal boy mortality). However, mortality data provides corroborative evidence for deliberate discrimination against girls. Demographically, SRB will not be affected by differential contraception but the sex ratio of the last born child will be higher than normal [Coale and Banister 1994]. LCSR is masculine because women who have not had enough sons continue to bear children until they have the right number of boys when they undergo sterilisation. The observed sex imbalance in children - born over past five years in 'upper castes' can only be due to selective abortions of female foetuses as we have ruled out other causes. Further, in group discussions upper caste women confirmed that abortions of female foetuses were taking place. The rising trend of SRB over the past five years suggests an increasing incidence of female foeticide in the villages. That increasing numbers of boys are being born over recent years is evident from sex differentials in chronological age of liveborn children. Among upper castes, boys are significantly younger than girls by 66 days (N=l169, p=0.03) while the difference in harijans is only 39 days, which is not statistically significant (N=392).

A sex ratio of 1.27 suggests that 16.8 per cent of female feotuses have been aborted among upper castes in the last five years (taking 'normal' SRB as 1.06). This is an underestimate of the current rate of sex

selective abortions. Firstly, we have downplayed the dramatic rise in SRB by averaging over five years (last year=1.80 vs 5 years=1.27). Secondly, sex determination is done by poorly trained ultrasound imagers. Just as in other non- western countries a majority of Indian imagers have inadequate training [Mindel 1997]. In fact there is no formal certification of ultrasound imagers in India. One way women respond to this uncertainty is that they go for scanning only at the end of the second trimester (instead of 16 to 18 weeks). Despite this, we are not certain that the sensitivity of sex determination is over 90 per cent for boys. Thus in the desperation for sons, some male foetuses would have likely been aborted inadvertently. Our doubts are based on errors highlighted in the media [Lancet 1983, Kakadkar 1997], literature [Booth et al 1997] and from dialogue with imaging experts. Therefore, the real rates of induced abortions for sex selection are likely to be higher than our estimate.

That female foeticide is occurring in many cities of India is well known [Miller 1985, Booth et al 1997, Kishwar 1995]. The following observations from urban/ clinic studies are consistent with our findings: (1) SRB increases with birth order (2) families with only daughters are more likely to practice female foeticide. The latter is evident from our finding that the highest distortion of SRB is among families with no sons (Table 8). A significant outcome from our study is that certain rural families are unable to tolerate even the first child to be a female and therefore will abort it. Our finding contradicts Das Gupta and Visaria's claim that women are unlikely to use SDT for the first pregnancy [Das Gupta and Visaria 1996]. Their reasoning is based on the fact that deliberate girl child neglect often spares the first girl. This extrapolation of human behaviour from female infanticide to female foeticide is fallacious. As a Lancet editorial argued, new technology will create new problems for the society [Lancet 1974]. The evidence from Delhi (Khanna 1997) as well as South Korea are also supportive of our observation [Park and Cho 1095, Leete 1996]. Our data indicates that the proportion of families aborting female foetuses in the first pregnancy has been increasing over the past five years.

The increased popularity of female foeticide reported by doctors in Rohtak district is consistent with the finding that over a period of two decades the SRB of children born in MCH, Rohtak has become pronounced masculine (SRB for the years 1993-95 is 1.25, N=12,166 births). Distorted SRB have been reported from other hospitals in this region [Booth et al 1994. Das Gupta and Visaria 1996]. A part of the increase may reflect discrimination against girls following foetal sex determination in place of birth. Male babies may be given the privilege of safer hospital deliveries while for females delivery at home in the village is considered adequate. The SRB of institutional deliveries in India, predominantly an urban sample, increased from 1.06 to 1.12 over the period 1949- 58 to 1981-91 [National Commission for Women 1994]. Note that the latter estimate is based on 6 million live births.

The existence of relatively greater gender equality in harijan castes has been reported from south India [George et al 1994]. This is because the only economic asset harijans have is their labour so women are seen as productive members of the family. Therefore harijans had no excess post-neonatal girl mortality, or longer inter- birth interval after a girl, or more favourable SRB as compared to upper castes. This does not imply that harijans do not express sex preference. They do practice differential contraception like the upper castes. But their intensity of preference for boys is lower. The overall LCSR is 1.05 for harijans as against 1.59 for uppercastes. Further for almost every birth order the LCSR is less distorted for harijans. Note that sex selective abortion can also raise the LCSR like differential contraception. As couples who have girls continue to abort female foetuses until they have the right number of boys at which point they cease childbearing. Our ethnographic information that female foeticide is much less among harijans is consistent with the demographic data presented.

This comprehensive enquiry provides incontrovertible evidence of the practice of female foeticide in a rural population. Both in medical anthropology and anthropological demography meticulous

micro level studies with people's participation have become a standard research methodology. We have not captured female foeticide at an individual level, which is most unlikely given the criminality of the act, the collusion of medical professionals and cultural sensitivity. However women collectively accepted the widespread extent of the practice in their villages. Our field research which has an ethnographic component complements district level census data. In matters like son preference which is intensifying, information from large surveys becomes outdated soon. Consequently village studies need to be routinely carried out to understand the trends and determinants of gender inequality in every district.

Our research has a major limitation. We have not explored the significant health hazards of repeated late mid trimester abortions for women. The villagers reported that abortions are usually done in unregistered village clinics [Chowdhry 1994]. Further, maternal depletion following abortions in an environment of extensive iron deficiency could have additional adverse consequences for women's health.

The Rohtak district overall sex ratio-is 1.18 while for Haryana it is 1.16 as per the 1991 census. The sex ratio of surviving children for both Haryana and Rohtak is 1. 14. Our villages are better off than the average Rohtak village as far as women's status is concerned based on the intimate knowledge of the second author of the district. Also our selection criterion identifies the more liberal villages. The emergence of women leaders in our villages is significant in that it has occurred in one of the most conservative regions of India where women have led very secluded lives. We therefore believe that the sex ratio of surviving children in the district is likely to be at least as masculine as in the study villages. The sex ratio of surviving pre-school children in a December 1997 survey of randomly selected households of rural Haryana (total population=10,000) was found to be 1.18 [Kumar 1998]. Furthermore, sex ratios from Sample Registration Surveys and in direct estimates from 1981 & 1991 censuses; all are supportive of such elevated child sex ratios and sex ratios at birth for Haryana [Sudha and Rajan 1998, Mari Bhat 1998]. Thus these data along with our knowledge of the extensive spread of SDT clinics all over Haryana in the mid to late 1980s suggests that the findings from our study villages have relevance for the state.

We are not implying that the rates of female foeticide elsewhere in rural India are as high as in Haryana. There has been a tradition of fierce patriarchy in this region as in some other parts of north India [Dreze and Sen 1996]. Women have long suffered patriarchal practices as female infanticide, child marriage, seclusion, dowry, levitate and polygamy. Not surprisingly, Haryana state has the highest overall sex ratio, the highest sex ratio at birth, the highest excess female child mortality and the lowest divorce rate for women in the country [NFHS 1993, GOI 1997]. SDT clinics have been functioning in Haryana towns for about 15 years. Mobile SDT clinics have been visiting many Haryana villages for over seven years [Chowdhry 1994]. The dramatic drop in fertility in Haryana over the period 1971-91 has been associated with increased use of SDT. The total fertility rate in rural Haryana in 1971 was 7.15 children per woman, which was the highest in India then, dropped to 4.17 by 1991 [Krishnaji and James 1998]. In patriarchal cultures, son preference intensifies in the transition period when fertility is declining [Das Gupta and Visaria 1996].

We selected villages in this region as we wanted to highlight the imbalance that could take place in case the same intensity of sex selective abortion were to take place elsewhere in India. There is no reliable data for the incidence of female foeticide but the Central Committee on Sex Determination described it as an epidemic across the length and breadth of the country (National Commission for Women 1994). A rough estimate of female foeticide and direct infanticide together obtained by direct demographic techniques on census data is 1.2 million 'missing girls' in India during 1981-91 [Das Gupta and Mari Bhat 1997]. If we attribute all the missing girls' to foeticide this would amount to less than 1 per cent of female births. But the first author acknowledged that most of the selective abortions occurred during the

second half of the decade and predicted that "we should expect to see more of it in 1991-2001" [Weiss 1996]. Therefore the I per cent figure should be cautiously interpreted as there had been an explosion of SDT clinics in a few places from the late 1980s and in most parts of the country by early to mid 1990s. The access for rural populations enhanced substantially after sophisticated ultrasound machines became widely available in India from early 1990s. Historically, the east Asian experience suggests that it takes less than a decade of spread of clinics for a dramatic rise in SRB to occur. Yet another comparative study of the 1981 and 1991 Indian censuses with a different methodology revealed that there has been a marked shift towards excess masculinity of SRB in 1991 in northwest and in north India with the exception of rural areas of Bihar and UP [Sudha and Rajan 1998]. These authors attribute, this shift to female foeticide. Further, our greatest concern is that female foeticide is becoming popular even in south India where status of women has been historically much better. As late as 1987 there were virtually no SDT clinics in the south as opposed to north and west India. But over the last two to five years in southern states of Tamil Nadu and Andhra Pradesh, clinics have started mushrooming in small towns and even in semi-urban areas. We are aware from 13 years of field work in Tamil Nadu that rural women are increasingly resorting to SDT in recent years. Though present level of incidence may not result in a serious distortion of SRB at the state level, the trends observed in northwest India and elsewhere indicate that it is just a matter of time before the distortions become evident in population data unless these states immediately take determined action to prevent emergence of more SDT clinics and the abuse of these tests.

Advances in medical technology for sexing foetuses have made SDT more convenient and less risky for Indian women over the last two decades. Initially chorionic villus biopsy and amniocentesis were the techniques used. Ultrasonography has become the most widely used method of sex determination from the early 1990s. Besides being non-invasive, it also requires no laboratory set up. Following adoption of economic liberalisation policies by India in 1991, several multinational companies have entered the domestic ultrasound market. Some have even begun to manufacture the equipment in India. Increased competition has led to the appearance of lower priced portable models, flexible credit and dependable service for the customer. Doctors motivated in part by multinational marketing muscle and considerable financial gains are increasingly investing in ultrasound scanners. In South Korea and China, domestic production of ultrasound machines facilitated increased utilisation of SDT [Cho and Hong 1995].

The general lack of gender sensitivity of Indian doctors and other professionals contributed to the popularisation of SDT. Just as in China, the first use of SDT in India was in a Government institution. These researchers advocated the use of amniocentesis for sexing focuses and claimed that in the foreseeable future sex selective abortions will not result in increasing the number of males [Verma et al 1975]. There are doctors who wanted the government to promote SDT to reduce population growth [Lancet 1983]. Many gynecologists see female foeticide as a medical solution to son preference and find nothing unethical in it [Lancet 1983]. Some economists argued that SDT would result in better status of women based on supply and demand 'logic'. Ignoring that cultural practices as son preference are not predictable by economic principles [Arora 1996]. For over two decades, medical abortions (MTP) were promoted by the Indian government to reduce fertility. Also traditional methods of abortion, though unsafe are still used to space and limit family size in rural India. Like traditional Chinese and Japanese societies, rural Indians have beliefs and methods which supposedly determine the sex of the foetus [Kakar 1980, Khanna 1997]. There is no evidence to suggest that these are sensitive enough to distort sex ratios. But they are accepted on 'faith' and too often abortion follows when the prediction is female. Given all this, the widespread acceptance of modern methods of sex determination and selective abortion of female foetuses in parts of India should not have been a surprise.

Some professionals hope that the national law (1994) against SDT will prevent female foeticide. The experience of Maharashtra state law (1988) does not give much ground for optimism. Before the legislation in Bombay city alone the number of SDT clinics went up from 10 to 248 (during 1982-87). After the legislation the practice just went underground. Over the last 10 years not even one doctor has been penalised for breaking the law [Kakodkar 1997]. Some women activists argue that lobbying for gender just laws is not worthwhile as the state would not implement them [Kishwar 1995, Menon 1993]. This cynicism is not warranted as the state itself has an obligation to set desirable ethical standards. The profound inaction of Indian Medical Association, Medical Council of India (MCI) on SDT by doctors for 20 years despite representations is proof of gross professional indifference to gender equity [Lancet 1983, Kokodkar 1997. Mazumdar 1992]. However, recently the National Human Rights Commission (NHRC) asked MCI to take cognizance of the law. Following which the MCI decided to amend the code of medical ethics in order to initiate disciplinary proceedings against errant doctors [National Human Rights Commission 1996].

Health workers did not have proper records of births and deaths as they seldom visited villages in Haryana though their salaries are six times higher than that of AWW. A similar finding on vital events was reported from another district. The FHW had no records of births in some villages and in most villages the FHW were not even familiar with the women in their villages though they have been working there for over three years. The coverage of antenatal services is poor. Though Haryana is economically prosperous and rural people have access to health facilities about 70 per cent of deliveries are conducted at home by untrained workers [Das Gupta 1996, Jejeebhoy 1997]. Infant and child mortality is unacceptably high as compared to the poor southern states. A reduction in this mortality will likely reduce the gender disparity in post-neonatal mortality rates. Unfortunately, the entire focus of the health system is on fertility reduction. Till last year this was based on an elaborate system of targets for government workers, money for acceptors and incentives for health staff and even coercion of women [Bose 1996, Kumar 1997]. This led to widespread falsification of data and corruption [Bose 1996] and alienated the health system from people. The contraceptive burden is almost entirely on women. The government claims that there is a change in approach from the old method-specific contraceptive targets to client centred performance goals [Kumar 1997]. However, Rohtak FHW report that unofficial targets still remain though monetary incentives have been withdrawn.

Dreze and Sen (1996) have pointed out that the persistence of gender inequality and female deprivation are among India's most serious social failures and few other regions in the world have achieved so little in promoting gender justice. To raise the status of women it is imperative for the state to be aggressive about reducing existing gender disparities in education, economic opportunities, inheritance laws, property rights and political power. One step in the right direction is the Indian prime minister's 'girl child scheme' announced in August 1997, whereby two infant girls of every poor family will receive monetary incentives till they become adults [TOI 1997]. This will promote fertility reduction with gender equity. Further, public action has to challenge the many ways patriarchy demeans women. Men have to accept responsibility for contraception. Doctors and professional medical organisations by far have been indifferent to such gender concerns. Ethical medical practice is imperative for enforcement of the 1994 law against pre-natal sexing of foetuses [Kakodkar 1997, Dickens 1986]. Medical education has to inculcate gender sensitivity in students. The focus of the health department has to change from forcing contraception on women to enhancing women's health and reducing the gender disparities at birth and in child survival. Otherwise the incidence of female foeticide will increase. Women's health will be the first casualty. The acceleration of the increasing SRB will lead to disastrous social consequences for the well being of our women and our society.

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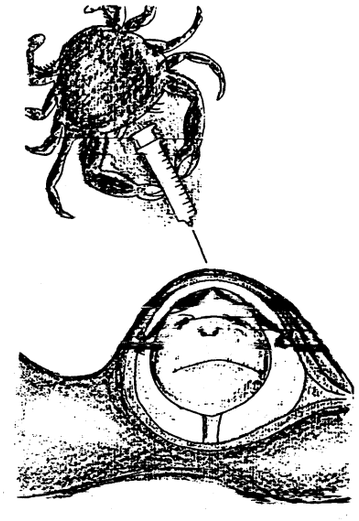

Table 1

Characteristics of study families (N=1017)

Characteristic	**Variable**	**Value**	
Demographic	Wife: Mean age	25	
	Husband: Mean age	25	
	Children: Mean no	2.60	
	Sons: Mean no	1.28	
	Abortions (per cent)	10.3	
Educational		Wife	Husband
	Illiterate	40.1	9.3
	Primary and neoliterate	7.0	3.4
	5-10 years of school	47.2	68.9
	11-12 years of school	5.6	12.3
	College	1.7	6.1
Social (per cent)			
Cast	Harijan	23.6	
	Artisan and minor	10.6	
	Brahmin	4.3	
	Jat and yadav	61.5	
Second Marriage	Husband	3.4	
	Wife	1.2	

Table 2

Percent Women Sterilised by Number of Surviving Children vs Number of Surviving Sons

No of Surviving Sons							**Families (N)**
		0	1	2	3	4	
	0	0					27
	1	0	3				258
No. of	2	0	14	51			336
surviving	3	2	36	76	78		246
Children	4	0	20	71	44	0	102
	5	0	30	42	100	0	25
	6+	0	20	33	100	50	19

Note : Four women were excluded as they died prematurely

Table 3

FSSR and LCSR for all Families

Family Size	**Liveborn**			
	M	F	FSSR	LCSR
1	134	95	1.41	1.40
2	359	259	1.39	1.33
3	352	347	1.01	1.49
4	233	303	0.77	1.48
5	120	165	0.73	2.39
6	45	63	0.71	1.43
7	36	55	0.66	1.50
8	17	31	0.55	0.50
9	3	15	0.20	0.0
10	1	9	0.11	0.0
Total	1300	1342	0.97	1.44

Table 4

FSSR and LCSR for Sterilised Families

Family Size	Liveborn			
	M	F	FSSR	LCSR
1	3	0	*	*
2	115	21	5.48	5.60
3	193	122	1.58	2.25
4	116	116	1.00	2.93
5	50	60	0.83	5.00
6	21	27	0.78	1.00
7	14	14	1.00	1.00
8+	3	16	0.19	0.0
Total	515	376	1.37	2.91

Note:* Ratio could not be calculated as denominator is 0.

Table 5

Sex Specific Survival of Liveborns by Birth Cohorts

Birth Cohorts	Survivors		Dead		Total	Liverborn
	M	F	M	F	M	F
< 5 years	787	654	66	54	853	708
> = 5 years	358	528	89	106	447	634
Total	1145	1182	155	160	1300	1342

Table 6

Sex Specific Death Rates by Age at Death

(*Percent)*

Sex/Age at Death (days)	⊕0 to < 7	Death Rates ⊕7 to < 28	⊕28 to < 365	⊕ 365
M	3.99	0.70	2.58	0.47
F	2.40	0.71	2.97	1.55
Total Dead (N)	51	11	43	15

Table 7

SRB by Birth Order and By Caste

Caste/Birth Order	Sex Ratios at Birth						Total	Total (N)
	1	2	3	4	5	6+		
Upper Castes	1.26	1.19	1.34	1.25	1.89	1.25	1.27	1169
Harijan	1.15	1.04	0.77	1.15	1.09	1.06	1.02	392
All Castes	1.24	1.16	1.16	1.22	1.59	1.14	1.20	1561

Table 8

Upper Caste SRB by Birth Order vs Preceding Number of Children by Sex

Birth Order	**Preceding Number of children by sex**			
	Males	Females	N	SRB
1	0	0	364	1.26
2	1	0	189	1.01
	0	1	175	1.47
3	2	0	29	0.93
	1	1	139	1.32
	0	2	72	1.57
4	3	0	2	1.00
	2	1	20	0.25
	1	2	69	2.25
	0	3	26	1.60
5	4	0	1	*
	3	1	5	1.50
	2	2	17	1.13
	1	3	22	2.67
	0	4	7	2.50

Note : * There was no girl in this group and therefore the ratio cannot be calculated.

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Section IV

The Political Economy of Sex-Selection

14

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 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.

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 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 ease 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 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.

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)*

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[1]; 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[2] 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 area 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, 78,000 female 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 (Patel 1991).

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 the mid-1980s, with over 106 million women of reproductive age, only 4,600 medical 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 wanted. 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 patterns, 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 towards 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.

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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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Table 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.

Table 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.

Table 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.

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15

Sex Determination And Sex Preselection Tests In India: Recent Techniques In Femicide

Vibhuti Patel

Synopsis: *Sex determination and sex preselection, scientific techniques to be utilized only when certain genetic conditions are anticipated, are used in India 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 in this way. Population control and money making 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 has made concerned efforts to fight against the abuse of these scientific techniques.*

Advances in medical science have resulted in sex-determination and sex pre selection techniques. Sonography, fetoscopy, needling, chorion villi biopsy (CVB) and the most popular one, amniocentesis are increasingly becoming household names in urban India. Bombay and Delhi are the major centres for sex determination (SD) and sex preselection (SP) tests; the technique of amniocentesis is used even in the clinics of small towns and cities of Gujarat, Maharashtra, Uttar Pradesh, Bihar, Madhya Pradesh, Punjab, 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" (Patanki, Banker, Kulkarni & Patil, 1979). Here the word 'quality' raises a number of issues that we shall examine in this paper.

Amniocentesis, a scientific technique that was supposed to be used mainly to detect certain genetic conditions, has become 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 infant's sex are also gaining increasing popularity. Diet control method, centrifugation of sperm, drugs (tablets known as SELECT), vaginal jelly, 'Sacred' beads called RUDRAKSH are also used for begetting boys (Kulkarni, 1986).

Compared to CVB and preselection 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 (Ravindra, 1986)

Popularity of the test

Amniocentesis became popular in the last 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 foetuses through induced abortion carried out in private clinics, private hospitals, or government hospitals. This perverse use of 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 (Abraham and Shukla, 1983). This survey also revealed the hypocrisy of the 'non-violent,' 'vegetarian,' 'anti-abortion' management of the city's reputable Harkisandas Hospital, which conducts antenatal sex determination tests. Their handout declares the test to be 'humane and beneficial'. The hospital has outpatient facilities, which are so overcrowded that one has to book or the test one month in advance. As the management does not support abortion the hospital recommends women to various other hospitals and clinics and asks them to bring back the aborted female foetuses for further 'research'.

In other countries, the amniocentesis test is very expensive and under strict government control, while in India this test can be done for Rs. 70 to Rs. 500 (about US $6 to $40). Hence, not only upper class but even working class people can 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 is 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 grows up.

The popularity of this test attracted young employees of Larsen and Toubro, 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 Associations 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 (Abraham 1985).

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" (Jeffery, Jeffery & Lyon, 1984). According to 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, has 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. They were flooded with requests for abortion as soon as the parents were told that the foetus was a girl (Chhachhi & Satyamala, 1983).

A sociological research project in Punjab 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 (Singh & Jain, 1983). Why not? Punjab was the first to start the commercial use of this test as early as 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 gynaecologists were interviewed by Dr. Sanjeev Kulkarni (who is himself a gynaecologist). His findings disclose that about 84% of the gynaecologists interviewed are performing amniocentesis for SD tests. These 42 doctors were found to perform on an average 270-amniocentesis tests per month. Some of them have 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, go for the test. About 29% of the doctors said that upto 10% of the women who come for the test already have one or more sons. A majority of doctors feel that by providing this service they are doing humanitarian work. Some doctors feel that the test is an effective measure of population control. With the draft of the 8th five year plan, the Government of India aims 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 are seen as handy; the logic being a lesser number of women means less reproduction (Kulkarni, 1986).

Controversy around amniocentesis

Five years ago a controversy around SD and SP started as a result of several investigatives reports published in popular magazines such as India Today, Eve's Weekly, Sunday and other regional English language journals. One estimate which shocked many, for 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 (1986) 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.

A government that refuses to ban the test for SD exposed its hypocrisy when it failed to provide facilities of amniocentesis to pregnant women during the Bhopal gas tragedy, inspite of repeated requests by women's groups and inspite 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, nor because of "empathy towards poor Indian women" as has been claimed. Forced sterilization of males during the emergency rule of Indira Gandhi's regime 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 or 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 (Mies, 1986).

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 infants face, or simply by illtreating daughters (Clark, 1983). A recent 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 (Kynch & Sen, 1983). 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 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. 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 patrilocal society with patrilineage, 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 and insults and injuries perpetrated by the grooms family. This factor also results into further devaluation of daughters. The uncontrollable lust of consumerism, the 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. Now, dowry is not limited to certain upper castes only but to all communities in India irrespective of their class, caste and religious backgrounds are prone to it. Its extreme manifestation is seen in the increasing state of dowry related murders in recent years. 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 are only the registered cases; the unregistered cases are estimated to be ten times more.

In such circumstances, "Is it not desirable that a woman dies rather than be ill-treated?" ask many social scientists. In Dharam Kumar's (1983) 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 the Indian women.

As Table 1 reveals, 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 continues to be adverse for women. The situation may be 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 formerly limited to certain warrior castes (Jeffery & Jeffery, 1983).

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 (Sheth, 1984). Scarcity of women will increase their value (Bardhan, 1982). 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 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. 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 (Dubey, 1983). 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? 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 (Rapp, 1984). They can be harassed, taunted, even deserted by their husbands and affined 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 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" (Chhachhi & Sathyamla, 1983).*

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. Sex choice can be another way of oppressing women. Under the guise of choice we may indeed exacerbate our own oppression. The feminists assert, survival of women is at stake.

Outreach and popularity of sex preselection 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 Erricsson, who has a chain of clinics conduction sex preselection tests in 46 countries in Europe, America, Asia and Latin America, announces in his hand out that out of 263 couples who approached him for begetting offspring, 248 selected boys and 15 selected girls (Holmes& Hoskins, 1984). 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, the need to link science and technology with socio-economic and cultural reality. The class, racist and sexiest biases of the ruling elites have crossed all boundries of human dignity and decency by making savage use of science. Even in China, after 39 years of "revolution" and "socialist reconstruction" SD and SP tests for femicide have gained ground after the Chinese government's adoption of the "one-child family" policy (Wichterich, 1988). Many Chinese couples in rural areas do not agree to the one child policy but due to state repression they sulkingly 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- precapitalist, capitalist and even post-capitalist - if not challenged consistently (Patel, 1984).

Action against SD and SP

Can we allow Indian women to become

an endangered species? This question is 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 - 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 have now converted into a consistent campaign at the initiative of the Forum. Even research organisations such as Research Centre on Women's Studies, Centre for Women's Development Studies 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 (Patel, 1987). 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, 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 is limited only to SD tests, it does not say anything about the SP techniques. It admits that the medical technology can be misused by doctors and banning SD tests has 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 parishioners of the SD tests are culprits. Any advertisement regarding the facilities of the SD tests is declared illegal by this Act. But the Act has 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, are not included in the Act. On the contrary the Act intends 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 makes 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 seems to be the most favoured group in the act. It, " has scored the most in the chapter on Offences and Penalties....the last clause of this chapter empowers the 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," says 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,"

(Jesani, 1988). 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 makes the victim a culprit who will be imprisoned up to three years. For the woman, her husband and her in-laws, using SD tests become a "cognisable, nonbailable and noncompoundable" offence! But the doctors, centres and laboratories are excluded from the above provision. The Act also believes in victimising the victim. With this act the medical lobby's fear that the law will drive SD tests underground have vanished. They can continue their business above ground. A high powered committee of experts has been appointed by the Central Government to introduce a bill applicable through out India to ban SD tests leading to female foeticide. It is expected to be on the agenda of the winter session of the parliament. One hopes it will not be a replica of the Act of Maharashtra.

The Forum knows that with only the help of the law we cannot 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, for example, 'daughters can also be a source of support to parents in their old age,' 'eliminate inequality, not women' 'make your daughter self sufficient, educate her, let her take a job, she will no longer be a burden on her parents.' Last month's, "Women's struggle to survive," a mobile fair that was organised in different suburbs of Bombay, conveyed this message through its songs, skits, slide-shows, video films, exhibitions, booklets, and debates and discussions.

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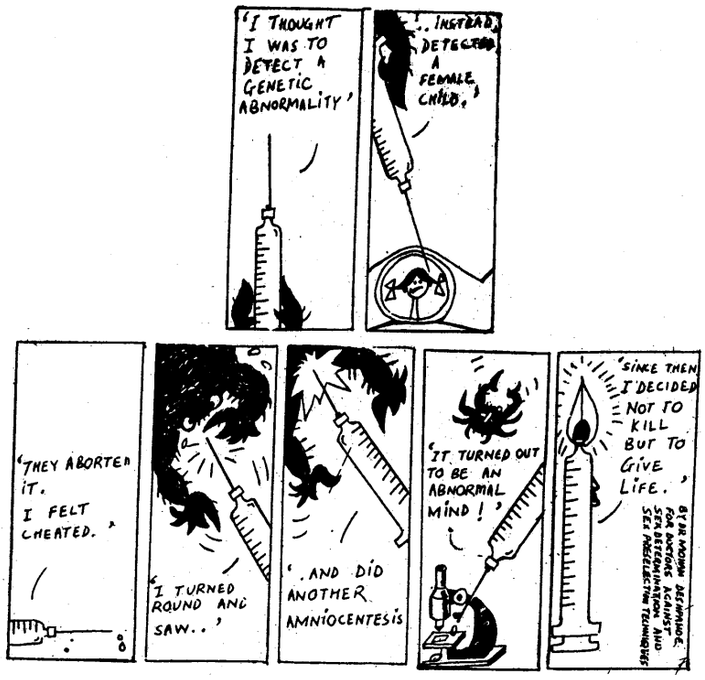

16

Female Foeticide: The Abuse Of Technology

Kalpana Sharma and Ammu Joseph

The use or misuse of new developments in science and medicine have only recently been viewed critically by feminists in India. They have raised questions about the family planning programme and the kind of contraceptives it advocates since these have failed to demonstrate that the health of the woman is a central concern. Medical prescriptions, especially for pregnant women, have been another subject to investigation.

In the early eighties, some women's groups in Bombay found that the medical technique of amniocentesis, which involves the removal of amniotic fluid from the placenta to detect genetic abnormalities, was being misused to discover the sex of the foetus. Furthermore, women not wanting another girl child were being persuaded to have abortions even after the twentieth week, although this is considered dangerous. Some clinics provided both sex determination tests and abortion facilities.

This led to the formation in 1986 of the Bombay- based Forum Against Sex Determination and Pre-Selection, comprising men and women, including some doctors. They launched the campaign not just to raise awareness about the misuse of these technologies but also show its link to status of women in India, denied even the chance to be born.

The periods selected for this study were mid-June to mid-August 1986 when the campaign against female foeticide was launched, and December 1986, when a private members Bill to curb this practice was under discussion. Also surveyed was January 1988, following the Maharashtra Governments announcement of its intention to introduce a law restricting the use of sex determination and pre-selection techniques.

Although the debate on the issue continued through 1988, especially on the edit page of the *times of India,* the selected months mark the periods when the issue was most in focus. The coverage over these months, therefore, gives a fairly good idea to the extent of interest in the subject. The discussion in the 'Letters to the Editor' columns of the *Indian Express* and *The Times of India* is particularly revealing as it provides an insight into the perceptions of readers.

Minimum Coverage

Compared to the other issues surveyed in this study, this subject received the minimum coverage altogether and in individual newspapers. Although the Bombay based newspapers, the *Indian Express* and *The Times of India,* did carry more than the other three, mainly because the campaign against amniocentesis was launched in Bombay, their coverage was extremely scanty.

In quantitative terms, the *Indian Express* gave the most coverage, including one edit, while the *Hindu* carried only four items, of which not a single one was an edit.

Like other issues, once the subject acquired legal dimensions, it merited the front page. Therefore, in January 1988, when the Maharashtra government announced its decision to ban sex determination tests except under strict supervisions, the news was displayed on front pages of both *The Times of India* and *The Indian Express. The Hindustan Times* and *The Hindu* also carried these news, but on the inside pages.

Earlier the subject had figured either as small news items somewhere on the inside pages or as features in the magazine section. The one exception to the rule was *The Times of India*, which carried an edit

page main article by Achin Vanaik on 20th June 1986, around the time the issue was raised by the Forum. The writer placed the subject in the wider social context without underplaying the centrality of the women's question.

Most of the editorials generally disapproved of female foeticide and either recommended a strict law to control the misuse of the technology or commended the Maharashtra government for taking the initiative. The Indian Express, for instance, welcomed the new law in Maharashtra in its edit (4 January 1988) headlined 'Well Done': '…for female foeticide at one end and sati at the other illustrate only two starkly "the womb to tomb" oppression of women in Indian society.'

A Different Note

The *statesman,* however, struck a different note in one of its three edits. In a comment (18 December 1986) which was basically in favor of the Maharashtra governments plan to amend the Medical Termination of Pregnancy Act in order to prevent female foeticide, it raised a problematic point which had anti-abortion overtones: 'An amendment might help, but only if the fine print is carefully noted and abortion is not so readily available on demand.' Its edit of 17 January 1988, following the Maharashtra ban, however, struck a more decidedly pro-women note when it stands that 'other states would do well to follow the example of Maharashtra.' The paper argued:

> *The demand that such tests should be allowed is prompted as much by consideration of the mother's health and the safety of the unborn child as by objections to the grim practice of systematically destroying one gender, a form of discrimination that has sombre implications not only for the status of the women but, ultimately, for the social fabric as a whole.*

The editorial in *The Hindustan Times* following the Maharashtra ban (4 January 1988) pointed out the crucial role of media intervention in the issue when it wrote: 'In fact, the private clinics offering this test gained notoriety when the media began spotlighting the abuse and rank commercialization of this important scientific discovery.'

Apart from such editorial comment, which was fairly general in nature, there was no detailed discussion on the law and its efficacy or on the question of conflict with other laws, such as the Medical termination of Pregnancy Act.

Difficult Dilemma

Coverage of this subject posed a difficult dilemma for editors who disapproved of female foeticide and did not want to give free publicity to the methods available for sex determination and pre-selection. They found that even routine reports, or articles written by people critical of these methods, unwittingly publicized hitherto unknown techniques, inviting queries from readers.

For instance, the 29 June 1986 edition of express magazine carried an article about a new technique for sex pre-selection, devised by a Dr. Ericsson, which was being introduced in India. Written by Manisha Gupte and Ravi Duggal, who were active in the campaign against female foeticide, it had a discernibly critical perspective. The very headline of the article ('A New Way To Eliminate Women?') indicated their position. The writers deliberately avoided giving specific details about the doctor who was introducing the technique and instead used this development to comment on what the issue reveals about the situation of women. They wrote: 'The status of Indian women is pitiful enough when they are born as "unavoidable evils" but it will be much worse when they are born despite a planned conspiracy to eliminate them.'

Despite all efforts to discourage and discredit this trend, the editor of Express Magazine received queries about the doctor from as far away as Jullundar in Punjab. Obviously, even negative publicity on such an issue can prove useful to those wishing to propagate these techniques; thus, even those critical of such practices can inadvertently contribute to their publicisation.

A few articles managed to go beyond reporting on the misuse of these technologies to discussing the more fundamental questions raised by the issue. Vanaik's piece in *The Times of India* (20 June 1986) was one such write-up: ' This Problem of sex determination tests and

selective abortion, or female foeticide, as it is aptly called, has at least three dimensions – misuse of science and technology, social oppression of women and abuse of human rights.'

Conclusion

This issue received uniformly minimal coverage, although newspapers published from Bombay, where the campaign was launched, gave it marginally more attention. This could be due to a combination of several factors. First female foeticide was essentially seen as a middle class urban problem, involving a relatively small section of society.

Secondly, the first evidence of misuse was collected by groups, which had already taken a position on the issue. It is possible that some newspapers, chary of any kind of flag- waving, were cautious about accepting such data. Nevertheless, none of them took the trouble to verify the facts. For instance, one of the most startling statistics put out by a Forum Against Sex Determination and Pre- Selection in 1986 was then out of 8000 foetuses aborted following amniocentesis in one Bombay Hospital, 7999 were female. Newspapers either published these statistics unquestioningly or avoided them altogether – not entirely surprising, as most newspapers tend to reproduce figures without double-checking them as long as they come from what are perceived as 'reliable' sources.

Another possible reason for the cautious of newspapers towards this issue could be their reluctance to question the creditability of the medical profession. Journalists investigating medical ethics and malpractice have encountered considerable resistance from editors. This partly because professional medical bodies have successfully lobbied newspaper owners and editors to promote a positive image and to prevent articles which raise uncomfortable questions. It is not unknown for instance, for reporters of a particular newspapers, whose proprietors have close connections either with a hospital or some leading doctors, to be told specifically that they are not to include any critical references to these institutions or individuals in their stories. As a result of this nexus, health activists have found it extremely difficult to encourage newspapers to conduct investigations into medical malpractices involving over-prescription or wrong medication leading to ill health and sometimes even death.

Also, unlike dowry death, or rape, or sati, or even the Shah Bano controversy, female foeticide is not obviously linked to the question of violence against women, although it could be argued that it constitutes violence against the female gender. The risk of projecting it as violence against the unborn foetus, however is that it can be seen as a support for the 'pro-life' lobby. Most of those campaigning against female foeticide would not wish to be identified with an anti-abortion position, which curtails a woman's right to reproductive choice.

Further more, although some of the statistics gathered by activists were dramatic, it was difficult to prove conclusively the nexus between sex determination tests and female foeticide. The women who opted for abortion on discovering the gender of the foetus were not always willing to admit on record, that this was the reason. The law permits abortion in a number of situations, the most common being 'failure of contraceptive'. In fact, it is very difficult, of proving deliberate female foeticide, which has detracted from the efficacy of the Maharashtra law restricting sex determination tests.

Finally, the coverage of this issue illustrated how the dominant orientation of news coverage towards events can lead to the neglect of a process like foeticide. If activists groups had not made the connection between the increasing number of clinics offering sex determination tests and the rise in abortions and conducted independent investigations that established that these tests were indeed being used for female foeticide, it is more than likely that the press would have missed out on this issue altogether.

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17

Dubious Choice

Parvathi Menon
Srobona Roy Choudhury

A U.S.-based company's advertisement campaign in an Indian newspaper to market a pre-conception sex selection technique, exploiting the son-preference in Indian society, runs into rough weather.

INDIAN women, under social and familial pressure to produce sons, are very often forced to find ways to do so, often at great risk to their health. Commonly available techniques such as ultrasound scanning make it possible to determine the sex of the foetus within the first trimester of pregnancy. The demand for this relatively simple and inexpensive technique is so high that unregistered mobile diagnostic clinics have mushroomed, and female foetuses are often aborted. The status of the girl child in India is reflected in the juvenile sex-ratio, which has registered a sharp decline over the last decade - from 945 females per 1,000 males in the 1991 Census to 927:1,000 in 2001.

Cashing in on son-preference, a value that is entrenched in Indian society, a new sex-selection procedure has entered the market. A United States-based company recently ran a series of advertisements in The Times of India for a gender selection approach that is "safe", "easy-to-use" and "upto 96 per cent effective". "Gender Selection is now a reality," the advertisement read, along with a photograph of a bonny baby boy.

The advertisement provoked immediate protests from women's and child rights groups in Bangalore that are fighting retrograde social attitudes and practices that discriminate against the girl-child. The groups were equally critical of the newspaper that carried the advertisement, for allowing commercial objectives to overshadow its social responsibilites. Vimochana, a city-based women's organisation, held a demonstration outside the newspaper's office, which it followed with a letters-to-the-editor campaign. In this it was joined by the Network to Empower Women Journalists (NEWJ), a Bangalore-based women journalists' organisation.

The Times of India subsequently stopped running the advertisement, but not before it had made its editorial judgment on the matter. In an editorial entitled "Sophie's Choice", it acknowledged the widespread misuse of sex-determination techniques and the failure of legislation to bring new and questionable technologies for sex-selection within its ambit. However, it also justified its decision to carry the advertisement by arguing that women must be given the "freedom of choice", a fundamental tenet of democracy. "Can we abridge an individual's right to choose the gender of her child before conception?" the editorial asked.

The newspaper's stand has added a new dimension to the ongoing controversy. What are the ethical and social responsibilities of the media with respect to social issues, and in this specific case, a blatant form of discrimination that women face? "Almost every day, newspapers publish at least one case of a woman being murdered or driven to suicide because she failed to produce a male child," Dona Fernandes of Vimochana told *Frontline*. "The toll-free international number for India provided in the advertisement clearly shows that the company is trying to exploit the Indian market. Allowing Gen-Select to market its product will mean giving encouragement

to the obsession for male babies that is widespread in our country," she added. Vimochana has filed a complaint against the product with the Health and Family Welfare Department, stating that it violates the Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994.

Gen-Select, the company, provides sketchy details about its product both in its advertisement and on its website. *Frontline* contacted the promoters, Jill and Scott Sweazy, who offered through e-mail information on the procedure and the reasons for promoting it in India. The Sweazys' claim that it was not the commercial opportunities India offered which led them to market the product in India, but a deeper moral and ethical urge. The procedure, they emphasise, is not a pre-natal, but a pre-conception one.

"We found that the people of India have a strong desire to choose the sex of their children and frequently go to the extreme of foeticide to achieve this goal," Jill Sweazy said, side-stepping any mention of the fact that it is the female foetus that is inevitably aborted. "With our product, the freedom to choose the gender of your next child is preserved, while the moral, ethical and legal issues of foeticide are put at ease," said Sweazy.

Hardly anyone will incur the expense and make the effort to acquire a kit, unless they are desperate. The Indian experience ("the strong desire of the people of India" that Jill Sweazy alludes to) shows that it is the desperation for sons that drives couples to commit female foeticide. She claims that a part of the proceeds from the sale of every Gen-Select kit sold in India would be donated to the cause of prevention of foeticide. The website received thousands of hits in the first week of the product's advertising, she said.

While she did not disclose the actual number of requests for the kit from India, Jill Sweazy said that they were "encouraged by the favourable response to their product in India" and were " already processing requests for both boy and girl kits". Claiming scientific validity for the method, which is known as the "Fully Integrated Programme," she said that they had put in a patent application for it a year ago.

The method, "as simplistic as it is intricate," is dressed up in pseudo-scientific jargon. It has four components as described by its developers. First, there is a prescribed dose of "carefully formulated gender specific nutriceutical supplement". The nutriceuticals include "specific univalent and divalent cationic elements" which "combined with appropriate vitamins and herbal extracts", can create the "strongest bias possible for successfully accomplishing a conception of the requested gender". The nutriceuticals are produced in Food and Drug Administration-approved facilities in the U.S., they add.

The second aspect of the method is monitoring monthly ovulation cycles by recording changes in body temperature (here the kit helpfully provides a digital thermometer) and charting instructions for timing sexual union. Here the Sweazys offer a proposition that effectively knocks the bottom off their method. "Strong evidence exists," Jill Sweazy notes, "which shows that the ratio of viable 'y' carrying (male) sperm and 'x' carrying (female) sperm differ in concentration in the female reproductive tract depending upon when they were deposited."

The third element of the method lies in the use of external sprays or douches which will alter the acidic/alkaline environment of the female reproductive tract. The mysterious "'x' carrying (female) sperms have a survival advantage in acidic secretions while the 'y' carrying (male) sperms have motility advantage in more alkaline solutions."

The last component recommends "specific dietary guidelines" that will change the "critical elements in the male and female reproductive fluid". The kit is "specially priced" at $196 (approximately Rs.5,800) for India.

DR. LEELA PAI, a leading obstetrician and gynaecologist in Bangalore, told *Frontline* that pre-conception sex-selection technologies are not scientifically validated. A procedure such as the Fully Integrated Programme would fall in the category of "hit or miss" techniques.

According to Dr. C.M. Francis of the

Community Health Cell, Bangalore, altering the alkalinity of the body through the use of external sprays is risky and can lead to infertility. The Gen-Select method and kit, Dr. Francis said, was designed in such a way that the company will have the least legal accountability. "In case the method fails, the company can get away by saying that the instructions were not followed, or that they only promised 'up to 96 per cent' effectiveness," he added.

Gen-Select cannot be prosecuted under the provisions of Indian law, Jill Sweazy told *Frontline* in an e-mail. According to her, the relevant law (the PNDT Act, 1994) only applies to pre-natal diagnostic techniques, not to pre-conception techniques. "Our product is a pre-conception product and is subsequently not governed by provisions addressing pre-natal concerns," she said.

Anitha Shenoy, a Delhi-based lawyer, disagrees. She is part of the Lawyers Collective, which is representing the petitioners in a public interest petition filed in the Supreme Court, seeking changes in the PNDT Act. Since the Act aims to prohibit the use of modern medical techniques in ways that discriminate against women, Shenoy said, it can be interpreted widely. In fact, in medical dictionaries, the word 'pre-natal' includes the pre-conception period as well. She said that the newspaper that carried the offending advertisement also violated the PNDT Act. Section 22 of the Act prohibits any advertisement that relates to pre-natal determination of sex.

The Supreme Court is monitoring the implementation of the PNDT Act. Drawing a link between the declining juvenile sex ratio and the proliferation of sex determination diagnostic clinics, the Supreme Court had, on May 4, 2001, issued a directive to the Centre and the State governments to "monitor and review the implementation of the PNDT Act" (*Frontline*, June 22, 2001). On August 6, the apex court issued summons, to appear on August 10, to the Chief Secretaries of the 13 States which had failed to submit progress reports on the implementation of the Act.

The court directive came after a public interest petition was filed jointly by the Centre of Enquiry into Health and Allied Themes (CEHAT), Mumbai; the Mahila Sarvangeen Utkarsh Mandal (MASUM), Pune; and Dr. Sabu M. George, a health policy expert and activist in the campaign against female foeticide. The petitioners have asked for the inclusion of pre-conception sex-selection techniques within the purview of the Act. They have also asked for a ban on advertisements promoting the use of sex-selection techniques. "It is significant that apart from Bangalore, few other cities had any objection to the advertisement," Dr. George told *Frontline*. He was also critical of the media in general for having remained silent on the Gen-Select issue. "Despite seeing the effects of discriminatory technologies like these on India's demographic pattern, it is tragic that people are still willing to endorse the product. When pre-natal sex-determination techniques became common, there was an alarming increase in the number of foeticides. Now if pre-conception sex-selection technologies become easily available, the possibilities are frightening," he said.

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18

Missing Girls: Political Economy of Sex-Determination

Ravi Duggal

Discrimination against the girl child and women is an old tradition in India, as it has been all over the world. Forms of discrimination have undergone changes over time and in many parts of the world open and obvious forms of discrimination have disappeared. However, in India and a few other countries around it the open forms of discrimination not only continue but also are getting exacerbated through use of new technologies and with the connivance of professionals, especially medical professionals. Here we will not go into the entire gamut of discrimination against the female of the species but restrict ourselves to sex-determination and sex-selective abortions which have caused havoc over the last two decades and are clearly manifested in rapidly declining juvenile sex-ratios.

A Peek into History

The PNDT Act came into force on 1st Jan. 1996. This was after a long and protracted struggle by women's groups and health groups from Maharashtra, and later Delhi, Gujarat, Tamil Nadu and Punjab. The history of use of modern medical technology for sex-selection goes back to the mid-seventies when in 1974 AIIMS was experimenting with amniocentesis to detect foetal abnormalities. By 1975 it had become clear that doctors were using this test rampantly for sex-determination leading to abortion of female foetuses. As early as May 1975 an article in Indian Paediatrics pointed out that 7 out of 8 persons who did the test were doing it for sex-determination. As knowledge of the use of this test spread doctors in the private sector saw this as an opportunity for making money. From Delhi it quickly spread to Punjab, Haryana, Maharashtra, Gujarat and other states. By 1979 Amritsar had become the headquarters of sex-determination with the setting up of Bhandari's Antenatal Sex-determination Clinic.

In 1982 there were some protests against the use of genetic tests for sex-determination which even got the then Union Health Minister to make a statement at the annual Health Ministers Conference where he exhorted his counterpart in the states to take appropriate preventive action against this "highly unethical, unjust and immoral practice." The Govt. of India even issued circulars making the use of these tests for sex-determination and abortion a penal offence and ordered the concerned departments in the centre and states to monitor this.

But it was only in the mid-eighties that this became a major campaign issue by women's and health groups in Mumbai. A concerted campaign in Mumbai under the banner of Forum Against Sex Determination and Sex-Pre-selection, supported by groups in other states, led to the formation of an investigation committee and later the formulation of an Act in 1988 in Maharashtra. This had a snowball effect and subsequently Punjab, Gujarat and Goa also saw struggles by women's and health groups that led to formulation of Bills in these states on the lines of Maharashtra's Act. In the meantime advocacy initiatives and pressure from women's and health groups, as well as the Health Secretary D T Joseph from Maharashtra got the Union Ministry of Health to hold a national Consultation on Sex-determination and the process was set for formulation of a national legislation, which was passed in 1994 as the Pre-Natal Diagnostics Techniques (Regulation and Prevention of Misuse) Act.

Failure to Implement

While the Act was brought in as a secular

initiative of health and women's activists and the governments, there was no effort in pushing for implementation of the Act. It suffered the same fate as that of other social legislation like those against dowry, child marriage, Sati etc. The machinery required to enforce this Act at the state and the district levels was not put into place, the required allocation of resources needed were not provided and there was general disinterest on the part of various governance bodies to take this Act seriously.

Further, the family planning program's insistence on the small family norm (2 children or even one child now) coupled with the son preference bias in India added pressure on families to look at sex-selection as a via media for their desired family composition. And now with many states talking about disincentives in their "Population Policies" for those who do not follow the norm, there would be added pressure to seek access to technologies that help sex-determination. Also the medical profession and its associations like IMA and FOGSI remained silent over such malpractice by their members. So the State's complacency coupled with socio-cultural "demands", the disincentive pressures of population policies and the unconcern of the medical profession led to the failure of enforcement of the Act.

Given this situation and a growing evidence of the practice of femicide (this includes, sex-selection of embryos, sex-selective abortions and female infanticide and all other methods of averting the natural formation of a female foetus), especially reflected in the fast declining sex ratios, it became necessary to intervene and bring back this issue on the national agenda. Thus Sabu George (individual activist), CEHAT (Centre for Enquiry into Health and Allied Themes) from Mumbai and Pune, and MASUM (Mahila Sarvangeen Utkarsh Mandal) from Pune decided to file Public Interest Litigation and approached the Supreme Court. The decision to file the petition was primarily a result of the commitment of the petitioners to women's health and rights issues, ethical medical practice, and upholding human rights.

Back to Struggle

The PIL was filed in Feb. 2000 with two goals. First, to activate the central and state governments for rigorous implementation of the central legislation, and second, to interpret the legislation and/or to demand amendment to ensure that the techniques which use pre-conception or during-conception sex selection like, for instance, the Ericsson method (X and Y chromosome separation) and Pre-implantation Genetic Diagnosis (PGD), or any other technology existing or from the future which prevents the natural assignment of gender, are also brought under the purview of the Act.

The petition draws attention to the gross misuse of reproductive technology in a society characterized by a strong bias against the female child. Even as female infanticide is yet to be eradicated, techniques like PGD are widening the gap in the already skewed sex ratio. Sex-selective abortion needs of society finds its roots in the patriarchal social norms and the low status accorded to women. The new reproductive technologies - unregulated and abused - are now further perpetuating these practices which are discriminatory and unethical from the standpoint of medicine, as well as violative of human rights of women. That a link exists, between elimination of female foetuses during pre or intra conception or post-conception or infanticide and the widening gap in the juvenile sex ratio, is now being accepted by demographers. Thus a sophisticated technique like PGD helps couples with genetically determined conditions, but this does not out-weigh the damage caused by its misuse by unscrupulous practitioners.

The evidence is clear from the sex-ratio data of the census. Rapid declines from 1981 onwards in the juvenile sex-ratio clearly points a finger at sex-determination tests. The 2001 Census results are indeed shocking (see Annexure 1). Similarly, data compiled recently from Jalandhar city birth records is also very revealing - in year 2000 month-wise data for boys and girls born is as follows:

The Supreme Court passed an order on 4th May 2001, which aims at ensuring the implementation of the Act, plugging the various loopholes and launching a wide scale media campaign on the issue. As regards this order, the second goal of filing the PIL, that is amendment of the Act to

include pre and during conception techniques, like X and Y chromosome separation, PGD, certain ayurved/herbal methods etc has not been considered - there is no specific order on that. The order largely concerns only the implementation of the Act and putting the required infrastructure in place. However, the order entrusts the responsibility to the Central Supervisory Board of examining the necessity to amend the Act keeping in mind emerging technologies and difficulties encountered in implementation of the Act and to make recommendations to the Central Government. The SC order also does not make any directives for the medical professionals and their associations to make them accountable given the fact that it is the medical professional who has been critical to the failure of implementation of this Act.

As mentioned earlier, social legislations like dowry, child marriage, sati etc have failed and there is no reason why this will not fail if the approach remains similar to how those issues have been tackled. The court judgement in this case is only the starting point; it is a means to bring the issue back on the national agenda. The real struggle has to begin now. We have to bring together all stake holders, like the government who has to implement the provisions of the Act, the medical profession which has to fight unethical practices and malpractice within their profession, and the women and health groups, NGOs and the media which have to campaign and build awareness within civil society. Only such an approach can deal with a problem that is essentially social. The one difference sex-selection has in comparison to issues like dowry and child marriage is that the process is not confined to within a closed community interaction. The interface for sex selection is a secular process between social norms (son preference in this case) and the medical profession. The fact that law prohibits sex-selection is a strong deterrent (if implemented in right earnest) for the medical professional, and it should not be difficult to convince a large proportion of the profession on just ethical and moral grounds (in relation to its illegality) to stop such practices. The easiest way, if professional bodies do not respond to take action against their erring members, is to convict afew doctors and the others will fall in line. Activists supported by women and health groups can easily precipitate such action.

The government on its own is going to find it difficult to implement the provisions of the Act. They should pass the onus on to medical bodies like the Medical Council of India, IMA, FOGSI, Indian Radiology and Imaging Association etc by bringing in an amendment that holds these associations responsible and accountable. The government should also involve on a large-scale women and health groups and other civil society organisations to be partners in the implementation and monitoring process. And for this there is a national platform available in the Peoples' Health Assembly (PHA) initiative, which is a global initiative and is very active in India through over 1200 peoples' organisations, NGOs etc. in 18 different states. The PHA has taken a decision to take up sex-selection and femicide as a major campaign issue this year and it has launched this campaign after a national meeting on this issue held in Rohtak, Haryana in April 2001. The PHA also has state level and district level branches and hence is in a position to make a sustainable impact. Ofcourse, the ultimate responsibility will have to remain with the government, that is the authorities created by the PNDT Act. And ofcourse major amendments in the Act to include pre-conception and intra conception technologies need to be undertaken immediately.

The Political Economy

The medical profession is central to the political economy of sex-determination. Similar to other modern technologies, which are mass-based, it has provided an opportunity to the traditional patriarchal preference for sons to transit from a traditional and cruder form of sex discrimination, which is today considered criminal by modern law to a form of sex discrimination that is subtle and secular. New medical technology has helped (sic) discrimination based on gender transit from the old political economy based on socio-cultural determinants of patriarchy to a new political economy based on technological determinants of patriarchy. This is not very different from caste-based discrimination

where the modern form of discrimination is not based on physical distance but on professional assignment. This transition by no means implies that traditional forms have ceased to exist. Infact, unlike most other countries, India and perhaps afew neighbours, can claim credit for preserving older/feudal forms of discrimination as well as devising or adopting newer forms. This despite the fact that there is a ban on such practices by an Act of Parliament.

As mentioned earlier, the main missing link in the failure of the Act is the complacency of the associations of the medical profession. They have failed to check any form of malpractice in the profession. With these issues coming into the arena of public debate some associations are voicing concern but have not been able to put this concern into positive action. The malaise is so deep set that the average medical professional does not view this issue from the ethical or moral standpoint. For them it is a business opportunity and if one talks to them many feel that they are doing a social service; many even go to the extent and say that they are helping control the population of the country through sex-determination. This understanding is part of the overall process of complete commodification of medicine and what really matters to the professional is only money. Hence, medical associations have got a lot of work on their hands since sex-selection is illegal. They have to be proactive in educating their members on the implications of such malpractice and to set an example they would have to take harsh decisions to drive home the point.

This should not be difficult given the fact that the technology used for sex-determination is available in cities and larger towns, though it is expanding at a fast rate to smaller towns. This is an opportune moment when there is pressure from the state to implement the Act, that the medical associations provide support to the state authorities by doing their own vigilance and restoring ethical practice by its members. If they fail to do this then actions like that taken by Indian Express by sending a decoy and trapping two doctors in Delhi and Faridabad will become the only means of driving home the message.

The sexratio declines in themselves suggest the wide scale of practice of sex-determination. Infact it is the better off districts where this practice seems to be more common as revealed by the sex ratio data. The volume of these tests being done is difficult to obtain because of the poor registration system in India – let alone amniocentesis laboratories and ultrasonography centres, we do not have firm data on number of medical clinics and hospitals. However, some indirect estimates have been made. In 1975 the May issue of Indian Paediatrics found that 7 out of 8 women using amniocentesis test did it for sex selection. This means that a test mainly to be used for identifying genetic abnormalities was being used almost entirely for sex determination. In 1984 a survey done for the Public Health Department of Maharashtra by Dr. Sanjeev Kulkarni, himself a gynaecologist, found that 42 out of 50 gynaecologists he interviewed consented that they were using genetic tests like amniocentesis and chorionic villi biopsy for sex determination and most of them believed that they were doing a social service by saving the women the repeated trauma of female births and thus also contributing towards population control! In 1985 a survey of a major abortion centre in Mumbai revealed that nearly all of the 15,914 abortions done in that centre were post-sex-determination tests. And in Nov. 1999 a UNICEF/IMA workshop pointed out that in India each year over 50 lakh female foeticides were being done. This is the kind of sporadic evidence that is available. Also one can safely estimate that it is the developed states like Punjab, Haryana, Maharashtra, Gujarat, Tamil Nadu and within them the developed districts which have a large infrastructure of amniocentesis laboratories and ultrasound centres. And it is no coincidence that such states and within them developed districts also have the lowest and rapidly declining sex ratios in the country. The tables below reveal the declining sex ratios in these “worst” states, and districts of Maharashtra:

The favourable judgement of the Supreme Court of May 4, 2001 is a positive step forward. Unless it is backed by stringent implementation by the state and complemented by people based advocacy, it

would only be another women-centred judgement that would remain on paper without having any impact at the ground level.

As a result of this court case the IMA at the national level seems to have made a turn around and has issued a warning to its members. The FOGSI too has shown some concern through its newsletter. In Punjab the Akal Thakt in Amritsar (where it all started!) after an inter-religious meeting issued a hukumnamma warning all concerned to refrain from using sex-determination and resorting to femicide. The government too, that is the Dept. of Family Welfare, has got energised thanks to Minister Dr. CP Thakur and Secretary Mr. Nanda and they have issued an advertisement in national dailies saying that it is a crime to carry out sex selection and have also activated the Central Supervisory Board by calling a meeting. This is a step forward and we hope that all stakeholders, the State, the medical profession, NGOs, activists, women and health groups, journalists and media etc come together to see that the provisions of the PNDT Act are implemented to its fullest extent.

In Maharashtra the Centre for Enquiry into Health and Allied Themes (CEHAT) and the Maharashtra State Commission for Women (MSCW) are bringing various stakeholders together on a common platform. CEHAT, alongwith other organisations who have been part of this campaign, is actively supporting the implementation of the Act in Maharashtra through the Jan Arogya Abhiyan (People's Health Assembly) initiative and continues active advocacy on this issue at the national, state and grassroots levels, including policy makers, peoples' organisations, medical profession bodies and the media. The MSCW has taken on an active role to pressurize the state government from within to set up the appropriate machinery for implementation of the Act as well as to build awareness on this issue. The MSCW has constituted a vigilance committee, which has been authorized by the government to monitor and investigate laboratories and clinics to see if there is any evidence of malpractice.

Thus, in order to change the political economy of sex-determination the medical professional, who thrives on it, has to be targeted by his/her own associations who have to become proactive to re-establish professional ethics and to punish those who indulge in malpractice, that is if they want self-regulation. If they continue to be unconcerned with the filth within their profession then they have no right to protest when their members are taken to task. They have an opportunity to redeem themselves by taking the lead in identifying those who indulge in malpractice and take away their membership and registration to practice. They could begin with the two doctors indulging in sex-determination exposed by the Indian Express reporter.

Acknowledgement: Tables compiled by T.R. Dilip

Jalandhar City Births for Year 2000

Sex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Boys	780	805	636	-	629	629	811	1145	936
Girls	608	583	598	-	537	513	622	840	874
Sexratio	**779**	**724**	**940**	**-**	**854**	**815**	**767**	**734**	**934**

Source: Indian Express, December 12, 2000

Sex-ratio for population aged below age 1 – females per 1000 males

YEAR	Tamil Nadu	Punjab	Haryana	Gujarat	Maharashtra
1961	1013	968	-	970	975
1971	1012	952	960	973	970
1981	988	946	929	971	951
1991	968	854	871	919	935

Source: Census of India, respective years

Sex-ratio 0-6 age group – selected districts of Maharashtra

Year	**Ahmed-nagar**	**Auran-gabad**	**Jalgaon**	**Kolhapur**	**Pune**	**Sangli**	**Satara**	**Solapur**
1991	949	933	925	931	943	924	941	935
2001	890	884	867	859	906	850	884	897
Decli-ne	59	49	58	72	37	74	57	38

Source: Census of India – Maharashtra, respective years

ANNEXURE 1

SEX-RATIOS ACROSS STATES – females per 1000 males

STATE/UNION TERRITORY	TOTAL POPULATION			0-6 YEARS AGE GROUP		
	2001	1991	1981*	2001	1991	1981#
India	933	927	934	927	945	979
Jammu& Kashmir	900	NA	892	937	NA	
Himachal Pradesh	970	976	973	897	951	970
Punjab	874	882	879	793	875	925
Chandigarh	773	790	769	845	899	914
Uttaranchal	964	936		906	948	
Haryana	861	865	870	820	879	921
Delhi	821	827	808	865	915	943
Rajasthan	922	910	919	909	916	979
Uttar Pradesh	898	876	885	916	927	965
Bihar	921	907	946	938	953	1004
Sikkim	875	878	835	986	965	978
Arunachal Pradesh	901	859	862	961	982	984
Nagaland	909	886	863	975	993	991
Manipur	978	958	971	961	974	991
Mizoram	938	921	919	971	969	994
Tripura	950	945	946	975	967	983
Meghalaya	975	955	954	975	986	995
Assam	932	923	910	964	975	
West Bengal	934	917	911	963	967	991
Jharkhand	941	922		966	979	
Orissa	972	971	879	950	967	1003
Chhatisgarh	990	985		975	984	
Madhya Pradesh	920	912	941	929	941	989
Gujarat	921	934	942	878	928	962
Daman&Diu	709	969	1062	925	958	
Dadra&Nagar Haveli	811	952	974	973	1013	1000
Maharashtra	922	934	937	917	946	961
Andhra Pradesh	978	972	975	964	975	1000
Karnataka	964	960	963	949	960	981
Goa	960	967	975	933	964	965
Lakshadweep	947	943	975	974	941	972
Kerala	1058	1036	1032	963	958	
Tamil Nadu	986	974	977	939	948	974
Pondicherry	1001	979	989	958	963	986
Andaman&Nicobar	846	818	760	965	973	985

Highlighted figures and states are cause for concern

Source : Census of India 2001 – Provisional Totals

Census of India 1991 - Working Children in India (this data is for 0-4 years population)

*Census of India 1991 - State Profile of India

19

Curbing Female FoeticideDoctors, Governments and Civil Society Ensure Failure

Ashish Bose

The Supreme Court's tough stand on implementation of the Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act is unlikely to be effective in dealing with female foeticide given the indifference of governments, especially of the states with the worst records in this regard, and the silence of civil society.

President K R Narayanan, in his Republic Day address this year, did well to refer specifically to female foeticide in the context of the "deplorable status" of women. He also referred to the increasing incidence of rape, domestic violence, sexual harassment at work places and trafficking of women. In the powerful words of the president, the crime statistics are indicative of women's "traumatised existence. No place is safe for them, not even in their mother's wombs. They are put to death before they are born".

In recent months, the Supreme Court has taken a tough stand in regard to the implementation of the Pre-natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act 1994 (briefly called PNDT). On January 29 this year, health secretaries of Punjab, Haryana, Delhi, Bihar, Uttar Pradesh, Maharashtra, Gujarat, Andhra Pradesh, Kerala, Rajasthan and West Bengal were lined up before the Supreme Court and asked to explain the steps taken by their state governments to curb female foeticide. CEHAT, a leading NGO, had petitioned the Supreme Court to intervene in this matter in the face of the apathy of the states. The petitioner's counsel, Indira Jaising, complained that the state governments were casually granting licences to ultrasound clinics. The Supreme Court bench, after hearing the case, asked state governments to impound ultrasound machines in unregistered clinics. It said: "The state governments are directed to take immediate action if such machines are being used in clinics without licences. The machines are to be seized and sealed for the time being."

Earlier (December 11, 2001), the Supreme Court had directed five multinational companies – Philips, Symonds, Toshiba, Larsen and Tubro and Wipro GE – to give the names and addresses of the clinics and persons in India to whom they had sold these machines in the past five years in order to enable the state governments to find out if these machines were registered. Obviously, not much has happened after this directive from Supreme Court , though it is reported in the press that the companies did supply the names and addresses. A leading newspaper (The Statesman, February 3, 2002) reports that not a single illegal ultrasound machine had been impounded in Delhi. It says that "all that the government has done is to register cases against five persons, including two advertisers of ultrasound machines run without licence. Registered ultrasound clinics, however, will continue to use the facilities for detection and prevention of congenital complications in unborn child." Here lies the catch: on the pretext of detection of genetic disorders in the unborn child, if a doctor misuses the ultrasound machine to detect the sex of the unborn child, who can stop this? Surely, a policeman will not be present in the doctor's chamber when a pregnant woman is being examined! Besides, the doctor will certainly not give in writing what the test reveals. It is common knowledge that a code is used and the patient gets the message.

As a layman, I feel that the Supreme Court's prescription of registering all

ultrasound machines may not be an effective deterrent to unscrupulous doctors. Even if the doctors are honest, there are other considerations when it comes to punishing a fellow doctor. As I had argued in my earlier article on 'Fighting Female Foeticide' (*EPW*, September 8, 2001): "My own understanding of the field situation is that the chief medical officers who are supposed to prosecute the guilty doctors are normally not inclined to go against a fellow doctor."

We have different layers of bureaucracy at the centre and in the states which have been recently created to deal with the implementation of the PNDT Act but onehas grave doubts about the functioning of these administrative structures, including the working of several committees. Our bureaucrats in the ministries of health and family welfare are not equal to the task. The Act was passed by parliament in 1994 and was supposed to be operational from 1995 but very little was done by way of its implementation. The bureaucrats woke up only when a public interest litigation was filed and the Supreme Court came down heavily on the government's inertia.

There are ethical aspects of the misuse of ultrasound machines. To quote Dr M C Kapilashrami, director of the National Institute of Health and Family Welfare: "As foetal sex determination by ultrasound is not possible in the first trimester, this is a false and exploitative practice taking advantage of the ignorance of the population. In order to curb this, it is essential that as part of the IEC activities connected with the PNDT Act, an awareness generation campaign is taken up informing the public that it is not possible to determine the foetal sex by ultrasonography in the first three months of pregnancy" (*NIHFW Newsletter,* October-December 2001).

The entry of an American company promoting a gadget which helps gender selection is both pathetic and hilarious. Priyanka Kakodkar in her article on 'XY Terror' (*Outlook*, December 10,2001) says: "At first glance, it seems like an innocuous spiel for baby-food. The advertisement, tucked away on page 19 of *The Times of India,* shows a mop-haired and diapered toddler, gleefully clutching its hands. Then, you notice the disquieting catch phrase: 'Gender Selection now a Reality.' It goes on to offer Gen-Select-a pill-and-douche kit from a US firm which claims to help couples choose the sex of their child. That too before conception. The product, which has been on offer for more than two weeks on son-craving Indian shores, has sparked a wave of protest from women's rights groups and health activists. The foray made by the manufacturers of Gen-Select into the Indian market has also highlighted the urgency of plugging legal loopholes vis-a-vis the ban on sex determination tests. Currently the law bans the use of genetic tests for identifying the sex of the foetus. But it doesn't address pre-conception sex determination tests. Gen-Select – its claims have been dismissed by doctors in Mumbai – is the product of Orangeberg, a South Carolina, firm. That it has specifically targeted the Indian market, which reveres sons and despises daughters, is clear from its website. The only overseas toll-free number listed is for India. The product costs $119.95 (roughly Rs 6,000) and can be ordered online. When contacted by *Outlook*, the firm's managing director Scott M Sweazy said he had received a "tremendous response" in India, both from the public and distributors.

Banning pre-conception sex determination tests calls for new legislation. But the fact is that even the present PNDT Act is full of loopholes and cannot be effectively implemented. Law certainly empowers the government to act but the fundamental question is: Can the government or Supreme Court alone usher in social transformation in Indian society? Look at all the social legislation we have had for the last 50 years on child marriages, dowry, child labour, etc, etc. We do admire the Supreme Court's proactive role in attempting to curb female foeticide but there are limits to what law can do. In any case, doctors are cleverer than policemen and sending a couple of doctors to jail will not stem the tide of female foeticide.There is no evidence that our state governments have gone out of their way to curb female foeticide. Unfortunately, our civil society is by and large silent. Are our girls doomed? Are we heading towards distorted, perverted, daughterless families as the torchbearers of Indian society?

In the absence of field surveys specifically aimed at finding out the incidence of female foeticide (an extremely difficult proposition in the face of the legal ban on sex determination tests), one cannot comment with confidence on the magnitude of the problem. However, the results of Census of 2001 and the data from NFHS-2, 1998-99 do confirm the phenomenon of what I called in my earlier EPW article (September 8, 2001) DEMARU (daughter eliminating male aspiring rage for ultrasound) states.

The International Institute for Population Sciences (IIPS), Mumbai, in collaboration with the Ford Foundation organised a two-day (January 10-11) symposium on the sex-ratio in India. The participants produced a useful set of papers, doing their best in technical demography, but the figures really don't matter as increasing female foeticide is a stark reality and we must fight it: the issue is not quantification, though we should respect reliable statistics. Demographers are not social activists and they cannot usually go beyond quantification (which keeps them busy in any case).

Fred Arnold and T K Roy in their paper 'Sex Ratios and Sex-Selective Abortions in India: Findings from the 1998-99 National Family Health Survey' calculate the sex ratio of last birth. To quote them: "In every state, except Meghalaya, the sex ratio of last births is much lower than the sex ratio of other births. For all-India, the sex ratio of last births is 697 and the sex ratio of other births is 936. For the high son preference states of Punjab, Haryana, Gujarat, and Maharashtra, the sex ratios are 561 for last births and 998 for other births. Even in the low son preference states of Tamil Nadu, Kerala, Karnataka, and Andhra Pradesh, there is a substantial differential (821 vs 983). The biggest differential is in Punjab, where the sex ratio of last births is 460 and the sex ratio of all other births is 991".

Arnold and Roy estimate on the basis of sex ratios at birth for children whose mothers had ultrasound or amniocentesis that "about 5 per cent of female foetuses in India are aborted among women who have these tests. In Haryana, it is estimated that 43 per cent of the female foetuses are likely to have been aborted for these same women. Another indication of the use of sex selective abortions in India is the very low sex ratios of births to women with no living sons, particularly in states with strong parental preferences for sons.".

P N Mari Bhat in his paper on 'Vanishing Women: Demographic Perspectives on Falling Sex Ratios' offers the following explanations for the long term fall in the sex ratios in India during the last five decades: "(a) Disappearance of famines that used to take greater toll of men than women (period: 1901-1951); (b) sex discrimination in medical care that began to have an effect on the sex ratio only after modern medical facilities became accessible in rural areas (Period: 1951-71); (c) fall in the sex ratio at birth as a result of declines in male foetal mortality (since 1901); (d) fall in the sex ratio at birth as a result of diffusion of pre-natal sex-determination technologies in regions where there is a sizeable pool of unwanted female births (after 1985)".

Arresting the decline in the overall sex ratio (which has accelerated during the last decade, but we do not know if this trend will persist in the next decade) and in particular, the child sex ratio which has declined sharply during the last two decades calls for action on many fronts.

There are several NGOs which are taking interest in the subject lately. For example, the Voluntary Health Association of India (VHAI) has made an excellent film on the plight of the girl child with a positive message at the end (the film is called 'Aparajita' and was conceptualised and produced by Alok Mukhopadhyaya, with popular TV and film stars). Such a film will no doubt provoke parents of girls and society at large to seriously ponder over the plight of the girl child in India. It will also motivate other NGOs to take up action programmes in this field. The Indian Medical Association did make some early efforts with the able help of Dr Sharda Jain to bring into the limelight the perverse trend of increasing foeticide, but the IMA feels helpless in the absence of legal powers to punish doctors.

I will end by quoting from a long poem composed by Chris Mooney Singh, an Australian white Sikh and a talented 'rabab' player, who recited it at a workshop on female foeticide, organised by Voluntary Health Association of Punjab in Chandigarh in July 2001:

Dear Mrs. Mother-In-Law pulling the strings,Planning coolly in the kitchen As your son's wife prepares the evening dinner,And

cleans the house and obeys your whims and fancies.Your lust for security and sons Is clearly seen behind the census figures. Your desire for control has shown its colours When Dr Terminator does his job. Your actions have been duly noted on file And stored in the cosmic archives for later assessment By the clerks who will bring your case before the Court For Mrs Mother-In-Law, you too are a woman And know the joys and pangs of childbirth. Please do not victimise the woman.

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20

Sex Selection: Ethics In The Context Of Development

Neha Madhiwalla

All too often we reduce 'son preference' to a crude caricature of starving, harassed and tortured girl children. However, the reality is much more complex. In the same society where sex selection is used as a new means to perpetuate on old bias, education levels are rapidly raising, floods of girls are going to school and college, there are more women working in offices and factories, in *panchayats* and in parliaments.

It is actually not surprising that sex selection is highly co-related to development. After all modernization has made abortion available accessible and morally acceptable to thousands of other conventional families. And development itself brings new pressures. The cost of rearing children rises with the social imperative of educating them and providing health care some families may feel that such money and efforts are better spent on boys rather than on girls; also girls are less needed in the new urban household, where small families and little need for unpaid labour.

It is in this context that sex selection must be understood. The movement towards more equal gender relation is in a sense, inextricably embedded in the development process. However the resistance to it is stiff and takes new forms such as sex selection. Thus on one hand, middle class families can allow their daughters to study after marriage, girls get sent to the best available schools and women with 'girls only' families see older couples in the extended family managing without sons, buying houses for their married daughters, or sending them abroad. On the other hand, women still feel the pressure to have sons and mothers of daughters, find their children are not fawned upon as their sons may have been.

And this is danger that sex selection poses. With one sweep, it threatens to reverse a process that has taken many decades to evolve. The power of technology can overwhelm the slow reflective process of change set in motions by millions of girls going to school and starting to work.

A young urban women as myself, sex selection can never be an issue of mere academic interest. It is the lived experience of several friends, relatives and acquaintances. But I must address the question: how does one presume the availability of technology to make abortion and childbearing safe and accessible – and in the same breath ask for restrictions on its use? And as a member of CEHAT's team, I feel the need to situate the campaign against sex selection in its proper context. [CEHAT is one of the co-petitioners in a Supreme Court writ petition calling for implementation of Prenatal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994.] Almost a decade of advocacy by CEHAT for more liberal abortion laws and services is obscured when we get clubbed with religious and quasi-religious political organizations holding diametrically opposing views on women and on sexual and reproductive rights.

The proponents of sex selection have various arguments. Sex selection is a personal choice, they say and the state should not interfere in it. Intervening in matters of individual choice is a step towards greater state scrutiny and control. Rather than curbing the use of technology, we should spend our energies on educating the public and changing social norms. Some people also accuse us of imposing a western ideological perspective on people with a very different value system. It is also argued that doctors should not be expected to play the

role of moral police and reform their clients.

This perspective ignores the fact that the preference for sons is not personal, but completely socially determined. Second, the phenomenon of sex selection would never have existed without modern medical technology and it is directly linked with the expansion of modern western medicine. In India sex selection has risen along with the penetration of technology into semi-urban and rural areas. This is what distinguishes sex selection from other forms of neglect and determination that girls may face: it is not merely a manifestation of gender discrimination that households resort to. It is intimately connected to other phenomenon of development: the health-care market. Doctors, as professionals, do not participate in infanticide or wife abuse. But they not only participate in sex selection, they benefit materially from it. And that explains the rapid proliferation of sex selection: it is a good business.

Doctors and technicians know that sex determination for sex selection (without any medical reason) was never the intended use of diagnostic tools like amniocentesis and ultra-sound. However, because of the wide publicity that sex selection has received, many people are unaware of any other use for this technology. According to a recent study on abortion in villages of Pune district, while 75% of the women (39 women) were aware that sonography can be used to determine sex, only 4 women knew that this technology was used to detect foetal anomalies. (1)

Doctors represent society's elite and what they say and do significantly affects public opinion. They lend legitimacy to the practice of sex selection by the very fact that they do not oppose it. Therefore, they will have to accept the challenge of reforming their own fraternity and influencing public opinion. No doubt, social reform has an important role to play in bringing about gender equality. What better group to begin with than one in which every member has at least five to seven years of college education and an income many times higher than the national average?

There is a need for a law, as well as a commitment from the profession to condemn and isolate those providers who engage in sex selection. The only real and lasting strategy to eliminate this practice is by consensus within the profession. Only when the option of sex selection ceases to exist will coercion of women to abort female fetuses stop. As long as providers are willing to offer such services, women will remain venerable to such exploitation within their households.

Having said all this, the ethical providers today may face dilemmas in individual situations.

Is sex selection justified if the doctor is certain that the woman will come to harm if she bears a girl?

The doctor may indeed worry that a woman will be deserted or tortured if she bears a girl. However, the pressure to bear sons is only one aspect of the oppression that women suffer. In fact, as the family has no control over the doctor, the professional may be the only influential person who can argue against sex selection without fear.

What if the woman herself requests it?

If the woman has been coerced by her family to ask for a sex selective abortion, then by refusing one, the doctor infact is acting in her interest. If she has really made an autonomous choice, it may be more useful for her to know that this act is illegal (many do not know) and that the doctor considers it unethical.

Is it all right if the couple already has one or more daughters?

How often do couples request an abortion because the fetus is male and they have too many sons? Only parents of girls have an urge to 'balance' the family, indicating that the whole process of discriminatory. Children lend variety to a family by their personalities, not by their sex. If family balancing was such an issue for households, the sex ratios would never be so skewed. Many families voluntarily limit family size after they have had one or two sons, even when they do not have daughters. Significantly fewer families with only daughters do the same.

If you refuse to provide services, some untrained provider will?

Sex selection reduces even the qualified, ethical provider to the same level as the unethical or the unqualified provider: both are guilty of violating the law. In this way professionals loose their moral authority to demand the elimination of both unqualified as well as unethical providers.

Secondly, the influential(i.e. urban middle) class will not risk safety beyond a point and this will eliminate the largest and the most lucrative market for sex selection.

How is sex selective abortion different from the abortion of foetus with serious genetic abnormalities?

When parents opt to abort a foetus with genetic abnormalities, they are concerned about the poor quality of the life of the child, which would be born. Girl's disadvantages are not biological, but social, and social change is more rapid and unpredictable than the improvements of prospects for the severely disabled.

This is not to claim the eugenic abortions are without dilemmas.

Is the ban on sex selection abortion not a conflict with the unrestricted right to abortion?

Through the anti-sex selection campaign, right wing anti abortion groups have suddenly discovered a love for the girl child. The unsaid message is that abortion itself is unethical and immoral.

Nonetheless, the opposition to abortion and the ethical issues surrounding it, must be discussed by anyone serious about campaigning against sex selection. It is necessary to separate the two issue and yet see how they connect. The opposition to abortion is based on two arguments; the sanctity of life (including that of the foetus), and the fear that abortion will lead to promiscuity and the breakdown of the institution of the family. Often these two arguments enter each others territory.

One cannot challenge the personal views of those who would not opt for an abortion, or conduct one themselves. We must respect the freedom of choice to have a baby, as well as those professionals who would not like to participate in abortion.

But the right to abortion, as a women right and without restriction, must exist. This is because women are often coerced to have sex, whether within or outside marriage. Second, contraception when available, is not fool proof and has its own risks. Third, women must bear the burden of the responsibility for contraception, of the child bearing itself, and of rearing children as well. Finally, the risk of childbearing are borne by women alone, although women are hardly ever have exclusive or anyright over the children born. Thus access to abortion is a substitute for the right denied to women otherwise by society (the right to have or not to have sex, the right to ask a partner to use birth control or to look after the child).

Whenever safe abortion is available, women have used it judiciously. Freedom for women has strengthened families, not weakened them. What it has weakened is men's control over women – and in any case this ought not to be the basis of the institution of the modern family.

Thus the demand that 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. For one, the family which opts for the abortion of the female foetus is no different from the family which determines it is a male, and therefore goes home happy. The ban on sex selection, like the right to abortion, is a proactive step; it gives a women protection from coercion by the family and the right to respect whether she bears a girl or a boy.

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Prenatal Sex Determination and Sex-Selective Abortion in Rural Central China

Chu Junhong

THE RISE IN the reported sex ratio at birth[1] in China since the early 1980s has aroused the concern of scholars and policymakers. The reported sex ratio at birth in China was very close to 106 males per 100 females in most years in the 1960s and 1970s (Johansson and Nygren 1991; Zeng et al. 1993). The ratio increased after 1980: it was 108.5 in 1981 (based on the 1982 Population Census—Zeng et al. 1993), 110.9 in 1986 (based on the 1987 One Percent Population Sample Survey—Hull 1990), 111.3 in 1989 and 111.9 in the first six months of 1990 (based on the 1990 Population Census State Statistical Bureau 1993: 58–59).

Three factors are seen as responsible for the increase in the reported sex ratio at birth: (1) increasing underreporting of female births, (2) excess female infant mortality, and (3) increasing incidence of prenatal sex determination and sex-selective abortion of female fetuses[2]. But no agreement has been reached on the relative contributions of these factors, particularly on the contributions of prenatal sex selection. Most non-Chinese scholars (e.g., Johansson and Nygren 1991; Park and Cho 1995) do not think modern technology for prenatal sex determination is widely available in China, a developing country with the majority of the population living in rural areas. Some of these scholars (e.g., Aird 1990; Banister 1992) speculate that the high reported sex ratio at birth and at very young ages in China in the 1980s was mainly the result of excess female infant mortality due to gender bias in health care and food allocation and to female infanticide. Chinese scholars (e.g., Zeng et al. 1993; Tu 1993; Li 1993) assert that modern technology for prenatal sex determination is widely available and accessible, even in rural areas, and claim that after the increasing underreporting of female births, the increasing incidence of sex-selective abortion is the second most important factor explaining the rising reported sex ratio at birth, and that female infanticide is negligible, if practiced at all.

The disagreement arises largely from the lack of data on the prevalence of prenatal sex determination and on the occurrence of sex-selective abortion in China. The claim that sex-selective abortion is an important factor in China's rising sex ratio at birth is not based on evidence, but on speculation about residuals: sex-selective abortion must be responsible because the abnormal sex ratio cannot be fully explained by the underreporting of female births and by excess female infant mortality (Zeng et al. 1993; Tu 1993). This article presents recent evidence on the prevalence of prenatal sex determination and sex-selective abortion in rural central China. To anticipate the findings, among survey respondents nearly half of reported pregnancies were subject to sex determination by ultrasound examination, and nine out of ten of the determined female fetuses in second pregnancies were aborted if the couple's first child was a girl. Prenatal sex selection was probably the primary cause, if not the sole cause, for the continuous rise of the sex ratio at birth in the study area in the past decade.

History of prenatal sex determination in China

In China, both traditional and modern methods are used to determine the sex of a fetus. Although traditional methods have been practiced for thousands of years and are still widely used in rural areas, their efficacy has never been scientifically tested or theoretically explained in medical terms. A study by Peng and Huang (1999) found that one traditional Chinese method diagnosis through feeling the pregnant woman's pulse had an overall accuracy rate of 83.5 percent in determining the sex of a fetus.

Modern methods such as examination though ultrasound, amniocentesis, and chorionic villi sampling are highly reliable. The most widely available modern method for prenatal sex determination in China is the ultra-sound B-scan (B-chao). China manufactured its first ultrasound B-machine in 1979. Since 1982, both Chinese-manufactured and imported ultrasound B-machines have been introduced on a large scale. In 1987, over 13,000 such machines were being used in hospitals, on average about six for each county. In 1989 alone, 2,175 high-quality color ultrasound B-machines were imported (Zeng et al. 1993: 291). In 1991, China's largest ultrasound B-machine manufacturer had the capacity to produce 5,000 machines annually, the equivalent of two for each county (Long and Xuan 1991; Xu and Huang 1991). Now almost all county and township hospitals and family planning service stations in China are equipped with high-quality ultra-sound B-machines operated by skilled technicians, and such equipment is also available in many private clinics.

It was originally planned that ultrasound B-machines would be used for monitoring pregnancy, checking IUD placement, and various other diagnostic purposes. However, couples' strong son preference and the birth-limitation program led people to use ultrasound to ensure the birth of one son.

Recognizing the potential adverse consequences for China's sex ratio at birth, the Chinese government outlawed prenatal sex selection. In September 1986, the Ministry of Health and the State Family Planning Commission jointly handed down to all provinces the Notice on Forbidding Pre-natal Sex Determination, originally formulated by the Family Planning Commission and the Bureau of Health of Beijing Municipality. In May 1989, the Ministry of Health issued an emergency notice to all health administrative organizations and institutions that no health institution, including private practitioners, be allowed to perform prenatal sex determination by medical technology for any reason other than diagnosing hereditary diseases. The notice was distributed to all family planning organizations and service stations by the State Family Planning Commission in 1990. In 1993, the two ministries reiterated the order forbidding prenatal sex determination (Peng 1997: 939, 959–960, 984). With increasing abnormality of the sex ratio at birth, a number of provinces enacted local regulations on prenatal sex selection, and some provinces added the reduction of sex ratios at birth as one of the work evaluation indicators of local family planning commissions[3].

Prenatal sex selection, however, is not easily subject to government regulation. The root cause is son preference. Regulations and laws cannot eliminate the practice if the root cause persists. There is no evidence that the strong son preference among rural Chinese has been reduced in the past decade or so. The persistence of "back-door" services (private connections and bribing) makes it impossible to enforce regulations against prenatal sex determination. Driven by material incentives or by guanxi (private connections), some health and family planning service providers continue to provide prenatal sex determination by ultrasound or other modern technologies, and more and more private practitioners follow suit.

At first, prenatal sex determination by ultrasound was available only in cities and in the more developed coastal areas. With improvements in communication and modernization of health facilities in rural areas, the practice has spread rapidly from city to country, from coast to inland areas, from plains to mountains, and from the more developed to less developed areas. Now even in very poor mountainous villages, people use ultrasound for prenatal sex determination (Chu 1997; Hardee, Gu, and Xie 2000). Evidence of the rapid diffusion of prenatal sex determination technology in China is provided by the inland spread of the abnormal sex ratio at birth. In 1986, provinces with the highest sex ratios at birth were mainly coastal and central areas, such as Zhejiang, Henan, Anhui, Jiangsu, Guangxi, Shandong, and Hebei (Hull 1990). In 1989, more inland provinces began reporting higher than normal sex ratios at birth, including Shaanxi, Shanxi, and Gansu (Zeng et al. 1993). By 1995, very few Chinese provinces had a sex ratio at birth within the normal range, approximately between 105 and 107 males

per 100 females (Peng and Huang 1999). Additional evidence of the fast diffusion is the continuous rise of the sex ratio at birth in China— from 111.3 in 1989 to 116.6 4 in 1995 (State Statistical Bureau 1997: 2).

Seventy percent of China's population lives in rural areas, and son preference has always been very strong among rural residents. The reported sex ratio at birth in 1989 was 109.9 for urban China and 111.6 for rural China (State Statistical Bureau 1993: 530–535). If the technology for pre-natal sex determination is equally available in rural and urban areas, it is more likely to be used by rural residents.

Data and methods

Given the sensitive nature of family planning and the illegal status of prenatal sex determination by modern medical technology in China, the challenge of this study was to collect reliable data on relevant practices.

For mutual interest, village leaders and villagers cooperate to keep in-formation related to family planning hidden from top-level officials. At the village level, everyone knows everyone else's business and there are no secrets in childbearing. The majority of rural Chinese spend their entire lives in the same village, with the same neighbors. As a form of relaxation and information sharing, rural Chinese, especially women, frequently chat with one another. During mealtime and in the evening, people often get together, gossiping about their neighbors' marriages, pregnancies, and childbearing. Therefore, I assumed I would be able to collect information on prenatal sex determination and sex-selective abortion if I could establish rapport with rural women and win their trust, provided I could convince them that the information I sought was only for research purposes and would have no repercussions on their lives.

Chinese villages are kinship based. A great many villages are named after local families. The kinship network plays a significant role in rural Chinese life. Neighbors and relatives help each other in major events: birth, death, marriage. When a child is born or someone gets married, relatives and neighbors send gifts. If a woman has a miscarriage or an induced abortion, her close relatives visit her and bring nutritious food such as eggs and brown sugar. In the absence of a formal banking system, the kin network also functions as a credit system. Relatives and friends borrow from each other during financial hardship, usually without charging interest. Rural folks maintain close relations with their relatives. Besides casual visits, visits are exchanged during the Spring Festival, the Mid-Autumn Festival, and the Dragon Boat Festival, which takes place on May 5th of the Chinese calendar. Therefore, I relied on "kinship networking" to collect information on prenatal sex determination and sex-selective abortion: rural residents interviewed their relatives, neighbors, their relatives' neighbors, or their neighbors' relatives.

In this survey, I took advantage of the fact that my parents are farmers. I grew up in a village and know the peasant life very well, so it proved to be easy for me to establish rapport with rural people and win their trust. Their openness to me was often plainly demonstrated during the interviews. For ex-ample, when asked whether they knew the sex of a fetus could be deter-mined by ultrasound B-scan, some would say, "Do I know it? I had it myself."

The survey was conducted during the Chinese Spring Festival of the Year of the Dragon (February 2000). The Spring Festival is a traditional Chinese festival for family reunion. People return home from all corners of the country to spend time with their families, relatives, and friends. Thus, it is possible to interview people who work in other places. It is also a time when people are supposed to eat and rest after a year of hard work. For every big family, there is one day (different for different families) when extended family members come together, including married daughters and grand-daughters visiting their own parents with their husbands and children. So women from different villages can be interviewed just by visiting one family.

My survey was carried out in rural central China. The study county is close to the national average in terms of socioeconomic development. It has a population of 1.1 million with 75 percent of

the population rural. Agriculture is the major industry. Farmers plant wheat and corn for grain, and tobacco, yams, and cotton as cash crops. The county is densely populated. On average, one farmer has only one *mu* (1/15th acre) of farmland and there is a huge agricultural labor surplus. Because residents cannot make much money from farming alone, they have to engage in other business to supplement the family income. Raising livestock is a typical sideline economic activity for women, and cargo transport is common for men. Town-ship or family enterprises, such as making wigs, paper, construction materials, cloth, or porcelain, also offer opportunities for gainful economic activity.

The county has an effective communications network. The county seat is 75 kilometers south of the provincial capital and 25 kilometers west of one station of the Beijing–Guangzhou railway. Motorcycles, bicycles, and buses are means of outside-village transportation, and televisions and telephones also connect the villages. Each village has at least one private clinic providing basic health care, primarily the diagnosis and treatment of common diseases, on a fee-for-service basis. Most rural women give birth at home. Trained birth attendants and family planning workers provide birth delivery and family planning services. Every township has one public hospital and one family planning service station, equipped with an ultrasound B-machine and other modern medical equipment. At the county seat, various types of hospitals and health centers—hospitals practicing Chinese or Western medicine, maternal and child health centers, centers for diagnosis and treatment of sexually transmitted diseases, and a family planning service station—provide services.

Following adoption of the one-child policy in 1979 as the national population policy, family planning regulations in the county changed several times. Now a one-son-or-two-child policy is in force. If the first child is a girl, couples can apply for a second-birth permit at a cost of about 4,000 yuan (about US$500). If the first child is a healthy boy, couples in principle are not allowed to have a second birth. But because of financial hardships faced by local governments, couples can have their second child officially registered after its birth, at a cost of about 12,000 yuan (about US$1,500). The fee is collected locally without the approval of higher-level family planning commissions. Various studies also show that local family planning offices benefit financially by collecting fines and fees from couples who violate the family planning policy (e.g., Qian 1997). Family planning commissions treat adopting a second child in the same manner as bearing a second child. Under no conditions are couples allowed to have a third or higher-order birth.

I used both a questionnaire survey and in-depth interviews to collect information. The questionnaire survey started in one village, spreading to over 100 villages in five townships of the county. In-depth interviews took place in six villages in three townships of the county.

The questionnaire was aimed at married women aged 20–44, with an emphasis on women in their 20s and early and mid-30s. This was because rural Chinese usually marry soon after reaching the minimum legal marriage age (20 for women and 22 for men), and most women complete child-bearing by age 35. Women younger than 35 grew up under the influence of the national family planning campaign and may have different fertility behaviors. But since ultrasound B-machines began to be widely used in China starting in the mid-1980s, women aged up to their mid-40s could also have been exposed to the technology and might have used it during their childbearing years.

As the primary investigator and survey supervisor, I trained seven rural women as survey interviewers. All had a high school education and they were told the purpose of the study. They were asked to interview their relatives, neighbors, friends, or their relatives' relatives, neighbors, or friends. I myself also acted as a questionnaire interviewer. By means of this kinship networking, 820 married women were interviewed in three weeks from 28 January to 18 February. One of my sisters, also a university graduate, helped me review the returned questionnaires.

To ease respondents' misgivings and win their trust, the respondents were told the

identity of the survey conductor (i.e., myself) and reassured that the survey was solely for research purposes. Later I found this to have been a wise decision. During the surveys, the first question respondents asked was why they were being interviewed and whether it had anything to do with family planning. They expressed much relief when they knew the purpose of the survey and the identity of the survey conductor, and found not strangers but friends and relatives. There may still have been some underreporting, but much less than in surveys conducted either by family planning officials or by members of local governments.5 In most cases, interviewers already knew how many children and abortions the respondents had had.

This was not a random survey and its findings cannot be generalized to the whole province, let alone China as a whole. Family planning regulations, the availability of modern technology, son preference, and fertility levels vary considerably from province to province, from county to county in the same province, and even from township to township in the same county (e.g., Short and Zhai 1998; Poston 1997). What is described in this article might be untypical of the practice of prenatal sex determination and sex-selective abortion beyond the confines of the survey area.

Besides gathering information using the questionnaire survey, I conducted in-depth interviews with farmers, village and township leaders, family planning managers and service providers, and medical doctors to understand how prenatal sex determination and sex-selective abortion were carried out, how the providers viewed such practices, and what could be done to reduce their frequency. I conducted the in-depth interviews concurrently with the questionnaire survey. I took notes during conversations. On average an in-depth interview lasted two hours, although an interview with a gynecologist lasted more than six hours. In all, I conducted in-depth interviews with eight rural women, five rural men, two family planning managers, three family planning service providers, one health manager, three medical doctors, one village head, and one township head.

General characteristics of respondents

Of the 820 married women interviewed, 7 percent were aged 20–24, 27 percent aged 25–29, 37 percent aged 30–34, 20 percent aged 35–39, and 9 percent aged 40–44.

Seventy-one percent had a middle-school education, 22 percent had primary education, and 6 percent had high school education or above. Only 1 percent had no schooling. These women were better educated than the national rural average. In 1995, 51 percent of rural women aged 20–24 had primary education, 32 percent middle-school education, 12 percent no schooling, and 5 percent high school or higher (State Statistical Bureau 1997:50–57). These data on educational status might be upward biased because some women might have reported a middle-school education without completing the full three years, or have reported primary education without completing the full five or six years.

Husbands (aged 20–54) received more education than the women did: 79 percent had a middle-school education, 12 percent high school or above, and 9 percent primary education. None of the husbands was illiterate.

The peak ages at first marriage were 20–22 years (66 percent). By age 25, 98 percent of the women were married. Twelve percent of the women got married before the minimum legal age of 20. For those who want to marry before the legal age, it is easy to obtain a marriage license from the township civil affairs office.

Sixty-six percent of women had both parents-in-law alive, 27 percent had either a father-in-law or mother-in-law alive, and only 7 percent had no living parents-in-law. These women may not live in the same household with their parents-in-law but keep close contact with them. Usually, they live in the same family compound. If parents-in-law are still able-bodied, they live in a separate household from their married sons and daugh-ters- in-law. Some are economically active; others have their adult children farm the land they own and receive a set amount of grain each year. Elders take care of their grandchildren. All elders have a degree of influence over their children's fertility decision making and

some have decisive power in this matter.

The average number of children ever born was 1.79: 1.00 male and 0.79 female. The average number of living children, whether own or adopted, was 1.74: 0.97 male and 0.77 female. As shown in Table 1, the proportions having three or more children increased with age. Among those over age 35, very few had only one child. In part the figures reflect the fact that younger women have not yet completed their childbearing. It is also likely that desired family size has fallen now that modern technology can satisfy the desire for one son with fewer births.

The sex ratio of births reported by the women in the survey was much higher than the biological norm of about 105–107. The sex ratio of children ever born was 125.9 and of living children it was 126.1. The sex composition of living children, shown in Table 2, reflects the practice of bearing children until at least one son arrives.

Rural Chinese use adoption both to complete their own families and to help relatives circumvent the strict family planning regulations by trying to have another birth. Of the 820 women surveyed, 16 reported one adopted girl and six reported one adopted boy. The majority of these women were over age 35 at the time of adoption. Younger women are few among adopting couples because they have not yet completed childbearing. Today, very few unwanted girls are available for adoption. Boys are rarely available for adoption because sons are especially highly valued.

Persistence of son preference in the wake of declining family size

Rural Chinese perceive sons and daughters differently. They view sons as members of their own family. Once a daughter marries, her parents no longer consider her a family member. A typical saying is "When you bring your daughters up and they are able to work and earn money, they leave you. Sons are different. They can bring in labor."

Son preference is very strong in the villages I surveyed. The felicitations offered during wedding ceremonies, the differences in birth celebrations, the tone and language used when people talk about sons and daughters, and the privileges extended to boys all convey different appreciation of sons and daughters. Relatives and friends prepare "dates (zao), peanuts (sheng), and sunflower or watermelon seeds (zi)" for newlyweds in the hope that they will have sons earlier (these foods combined have the connotation of having sons earlier). The birth of a boy is celebrated more lavishly than the birth of a girl. If a woman has a son at the first birth, her position in the family improves overnight. She is considered "very capable" by her in-laws and envied by her neighbors. Her voice becomes weightier in the family and in the neighborhood.

On the other hand, rearing a son is much more costly than rearing a daughter because parents have to pay the cost of their son's marriage in full. First, they must prepare a three-room house with a kitchen and a yard for each son. One such house costs at least US$2,000. The bride price and the wedding ceremony together cost another $2,000. Marrying a daughter out may cost her parents nothing. There is no dowry system in China. If parents are very poor, it is socially acceptable for them to give their daughters nothing at the time of marriage. But, no matter how poor they are, parents must provide a decent wedding for their sons. Given the huge cost, very few families can afford more than two sons.

In the survey many women responded they no longer believe "more children, more happiness," primarily because of financial constraints. The rapid increase of school fees and living costs limits the number of children families can support. "You cannot afford to have many kids. Everything is so expensive. When the next-door kids have this or that, mine want it too. It is not easy to earn money. You cannot have your kids poorly dressed or undernourished, or neighbors will laugh at you." Women also say that they do not want many sons either. "One son is fine, two sons are acceptable, but three sons will eat their parents." During my survey, many women said "it is not economically wise to have more than two sons." Similar findings are reported by other studies (e.g., Greenhalgh, Zhu, and Li 1994).

Family planning managers said local birth planning work has become much

easier in recent years: "Unlike in the past, rural folks do not want to have more children now. They voluntarily come to the family planning station for a pregnancy check every other month." Managers commented that prenatal sex determination and sex-selective abortion made family planning work easier: "In the past people had more children just because they wanted to have a son. Now they need not go this way. They can have a son with fewer births."

Knowledge of prenatal sex determination

Survey respondents were asked whether they knew the sex of a fetus could be determined by ultrasound B-scan, and, if they did know, where they obtained the knowledge, what was the earliest month for determining the sex of the fetus, and what was the reliability of the test result.

Eighty-four percent of women surveyed knew about ultrasound technology. Whether a woman knew the method did not vary by her age, but did vary by education and the sex of her first child. Among women with a primary education or less, 74 percent knew about the technology, while among those with a middle-school or higher education, 87 percent knew about it. Women were slightly more likely to know about the technology if their first child was a girl: 87 percent knew about it if the first child was a girl, compared with 82 percent if it was a boy. This may be because those who have had a girl actively sought information about how to have a boy with the next birth. Eighty-one percent of women had learned about the ultrasound B-scan from friends, relatives, or neighbors, 8 percent from mass media (television, radio, magazines, or books), 6 percent from medical per-sonnel, 3 percent from family members, and 2 percent from family planning service providers.

An ultrasound B-machine operator told me that the sex of a fetus can be determined in the third month of gestation or at about 100 days if it is a boy (the male reproductive organ can be seen), and in the fourth month if it is a girl. The later the test, the more accurate the result. Most respondents thought the test had to be performed much later than is actually the case. Fifty-eight percent of women said the earliest time to tell the sex of a fetus is the fifth month (using the standard nine-month definition of a pregnancy

6), 22 percent said the fourth month, 15 percent said the sixth month, and 5 percent said between the third and fourth month, or about 100 days.

Technically, the determination of fetal sex by ultrasound in the fifth month of gestation or later is almost 100 percent accurate (Wang 2000). Most women said the test was very accurate (43 percent) or accurate most times (32 percent). Five percent said it was not accurate at all and 3 percent said it was not accurate most of the time. During the in-depth interviews and questionnaire, respondents often told me, "It depends. If you have people [private connections], it is accurate." What they meant is the technology itself is reliable, and the key is whether the machine operator will tell the truth. Since prenatal sex determination by ultrasound is illegal in China, without close connections doctors in public hospitals or family planning stations may not tell clients the truth. They may first ask the sex of the client's current children and say something to please them, or just say "it cannot be seen clearly. The baby is facing the mother."

Now, many women become "smart" after being "cheated." If they do not have good relations with doctors, they either have several ultrasound B-scans in different places or go to doctors at private clinics. To win more clients and earn more money, personnel at private clinics always tell the truth but at a higher price. On average, public hospitals charge 25–30 yuan (about US$3–4) for an ultrasound test, while private clinics charge 50–60 yuan,7 which is not beyond the budget of rural Chinese families.

The practice of ultrasound

The women in the survey were asked how prevalent they considered pre-natal sex determination by ultrasound to be. Forty-five percent said "very common," 33 percent said "some people have it," 21 percent said they did not know, and only 1 percent said "very few have it." Many commented that "it is not very common in the first

pregnancy, but it is quite common in the second, and almost 100 percent if the first born is a girl."

The data collected in the survey concerning actual practice supported the women's assessments. Having an ultrasound B-scan during pregnancy was quite common, especially among women with second and higher order pregnancies; 39 percent of women had ultrasound B-scans during the first pregnancy, 55 percent in the second pregnancy, and 67 percent in the last.8 However, not all ultrasound examinations are for the purpose of determining the sex of a fetus. Some women had the procedure to check fetal position for a normal delivery. This is especially true for first pregnancies and among younger women.

The positive relation between order of pregnancy and prevalence of ultrasound B-scan has two explanations: some women had their first pregnancy before ultrasound was available; and some women used ultrasound to make sure their next birth would be a boy if their previous child or children were girls. For second and higher-order pregnancies, absence of a male child is the major predictor for an ultrasound B-scan. For example, if the first child was a boy, fewer than 40 percent of women had an ultrasound B-scan in the second pregnancy; but if the first was a girl, nearly 70 percent had it.

Over one-third of ultrasound B-scans were performed in private clinics (see Table 3). Given the higher charge by private clinics, it is very likely that women visited private clinicians to get "special returns"—information on the sex of the fetus. This explanation is supported by the differences in location of the first ultrasound B-scan by order of pregnancy. The higher the order, the more likely it is for women to visit private clinics and the less likely to visit family planning stations.

For the first pregnancy, the location of first ultrasound was roughly evenly distributed because almost all first births are within the prescribed birth quota, and pregnant women need not hide them from family planning personnel. Doctors and family planning service providers also tell women the true sex of the first pregnancy because they know women usually will not have the first fetus aborted even if it is a girl. In some places, fees for ultrasound are collected when couples apply for the birth permit and the service is provided either at family planning service stations or in hospitals.

If the first child is a girl, the second pregnancy is also within quota if the couple applies for a permit in advance, with three or four years' spacing between births. Therefore, they can have ultrasound B-scans in hospitals or family planning stations if they wish to check fetal development. But many women attend private clinics for ultrasound at higher cost rather than go to hospitals or family planning service stations. The only plausible expla-nation is that they want to know the sex of the fetus and private clinicians will convey that information. People who have a third or higher-order pregnancy usually want to have one son, and all higher-order pregnancies are out of quota by definition. Therefore, couples try to avoid family planning personnel and have an ultrasound B-scan at private clinics.

Obtaining prenatal sex determination

Of the women who had obtained an ultrasound B-scan, 94 percent had been told the sex of the fetus: 57 percent were reported to be male, 37 percent were reported to be female, and 6 percent were told the result was not clear or were not told the result (see Table 4). The implied sex ratio was therefore 153.5—a badly erroneous figure. One reason for this abnormal sex ratio is the intentional misstatement by service providers. Service pro-viders know some women will have the female fetus aborted in order to try for a son, so they will tell these women it is a boy even though it is a girl, or just tell them "it is not clear." In the survey, I was told "if you do not have close relations with doctors, you will not be able to learn the true sex or will even be given a false answer." Several women complained to me about the unreliability of the test. Female fetuses account for the majority of the category "don't know or not clear." But even if all fetuses in the "don't know" category were girls, the sex ratio based on reports from ultrasound examination would still be an

obviously erroneous 131.3.

A noteworthy phenomenon was the extremely high-determined sex ratio of the last pregnancy: 385.0. Very likely, some women had already had one or more female sex-selective abortions before this pregnancy.9 The phenomenon is evidence of the willingness to continue with pregnancies until a couple is assured of the birth of a son.

Helping ensure the birth of a son is a lucrative business in the local community. As soon as a woman's pregnancy is visible, her family, friends, or relatives say "go have a look." When a pregnant woman arrives at the county bus terminal, she will be approached and asked whether she wants an ultrasound B-scan. If she shows any interest, she is rushed onto a tri-cycle and brought to a private clinic. The tricycle rider gets paid by the clini-cians. Women who want to have a son will have at least two tests to ensure no "mistakes." On average, a clinic will receive 20–25 clients a day. A small ultrasound B-machine costs about 30,000–40,000 yuan (about $3,800–$5,000) and pays for itself in a couple of months. Some people set up ultra-sound B-machine clinics only for prenatal sex determination. Clinicians who are found to perform illegal prenatal sex determination by ultrasound B-scan are typically punished by a fine and confiscation of the machines. Given the high return from ultrasound B-scans, financial punishment alone cannot stop the practice.

In public hospitals and family planning stations, in theory, ultrasound B-scans for prenatal sex determination are not allowed, but the injunction "is not absolute," said one doctor. "How can you turn down the request of a good friend or a close relative? Moreover, doctors are also human beings; how can they resist the temptation of money and gifts?"

Besides the application of modern technology in prenatal sex determination, some charlatans provide costly nostrums to help women conceive sons. They tell women when to have intercourse, what foods to eat, and what herbs to take to "adjust the vaginal acid environment" so as to "reduce the viability of sperms that will conceive a girl" or "increase the viability of sperms that will conceive a boy." Women are given instructions to follow after intercourse. I was told of one prescription of a Chinese medicine that "can change the fetus into a male if it is taken within two months of conception." However implausible the efficacy of these prescriptions, their widespread use indicates the strength of the desire for sons prevailing in rural China.

Many women combine traditional and modern methods to try to have a son. They observe the traditional "instructions" strictly and then have ultrasound B-scans. Some women ask fortune-tellers whether and when they or their daughters-in-law will conceive a boy or girl, then they try all possible methods to ensure it is a boy. One woman told me she was "fated" to remain sonless. She tried all ways—following instructions, taking medicines, and having ultrasound B-scans—but instead of having one son successfully, she had four daughters.

Sex-Selective abortions

Not all female fetuses are at the same level of risk to be aborted. The rural women I surveyed do not think daughters are essential, but do not think they are all a burden either. "It is very good to have one girl. She can help her mother around the house." The majority desires children representing a balance between the sexes: 85 percent of women responded they wanted to have two children if there were no restrictions, and 99 percent of these women preferred "one boy, one girl."

Women were asked whether they agree with the proposition that "whatever measures are taken you must have a son." Forty-four percent of women chose the response "yes, absolutely" and 46 percent answered in the negative. In addition, women were asked "do you think daughters are unnecessary?" Fourteen percent agreed they are not necessary and 75 percent disagreed. However, when asked "if your first child is a girl and your second is a girl too, will you try a third birth for a son?" almost every woman said "yes, definitely." When asked "if your first child is a boy and your second is a boy too, will you try a third birth for a daughter?" very few women said "yes."

Rural women whose first child is a son usually take no measures to guarantee the sex of the second child: "Having another son is not perfect but is acceptable." They will not have a male fetus aborted in order to try for a daughter: "It is not worth the time and the money." But if the first child is a daughter, they take steps to ensure the second is a son.

Of the women surveyed, 23 percent had had one abortion, 5 percent had had two, and 1 percent had had three or more. This was slightly higher than the national average. In the 1997 Demographic and Reproductive Health Survey of China, 27 percent of rural women had had one or more abortions (Chu 2000).

Eleven percent of the women surveyed, or 38 percent of those reporting one or more induced abortions, said they had had one or more female fetuses aborted following ultrasound B-scans. Of these women, 86 percent reported one sex-selective abortion, 11 percent two, and 3 percent three or more.

Whether the fetus will be born or aborted after an ultrasound B-scan is related to the order of the pregnancy and the sex of the fetus, as shown in Table 5, and to the sex of previous children. The higher the pregnancy order, the more likely the fetus is to be aborted. For the same order of pregnancy, a female fetus is more likely to be aborted than a male fetus. A female fetus of any given order of pregnancy is more likely to be aborted if the family has one or more girls.

Sex-selective abortions are most likely to occur when the previous child or children are girls and the current fetus is female. If the first child was a girl, 92 percent of the female fetuses in the second pregnancy were aborted. If the first child was a boy, only 5 percent of female fetuses in the second pregnancy were aborted.

Sex-selective abortions after ultrasound scan are late-second-trimes-ter or third-trimester abortions, which involve risk to women's health. But many women believe the risk is worth taking. As one woman who had undergone two sex-selective abortions, one with life-threatening complications, stated: "When I saw the face of my son, I was overwhelmed with pride and joy. Finally, I have a son. I can raise my head high. I forgot all the sufferings from previous abortions."

Women's value judgment of sex-selective abortion

When women were asked their opinions about sex-selective abortions, 92 percent said it was not right to have female fetuses aborted, 5 percent did not know whether it was right or not, and only 3 percent said it was right. The typical answer was "it is destroying lives." The vast majority (93 percent) said sex-selective abortion represented unfair treatment of girls. Women's judgment of rightness or fairness was related to their practice of sex-selective abortion. Among those acknowledging they had had sex-se-lective abortions, 18 percent said the practice itself was right and 19 percent said it was fair to girls.

Even for women who had had sex-selective abortions, a very large proportion believed it was not right or not fair to girls. "But I had no choice...." Some women resorted to sex-selective abortions under pressure from the husband or parents-in-law, who care more about family line continuation than the women themselves do. But many women also want a son desperately. They believe it is their responsibility to the family and to the husband to have a son. One woman said, "I feel so sorry that I do not leave a 'seed' for my husband." Women feel especially strongly obligated to have a son if their husband is the only male child of the family.

Women also experience peer pressure to have a son. One woman re-marked: "Other women can have a son in the first birth or in the second birth. I felt so incapable and so inferior when I knew my second pregnancy was a girl again. I must have one son, no matter what measures are taken." Among rural families in China, a household without a son is commonly considered dishonorable.

Policy implications

The 820 women surveyed reported 301 induced abortions. Of these, 36 per-cent (109) were acknowledged to be female sex-selective abortions. It is possible to argue that the rising sex ratio at birth in the 1980s was primarily the result of the underreporting of female births; however,

with the wide availability of ultrasound B-scans for prenatal sex determination since the mid-1980s, and the high reported occurrence of female sex-selective abortions, the abnormal sex ratio at birth in the 1990s can no longer be taken as a statistical artifact.[10]

Before technology for prenatal sex determination became available, rural Chinese tried to ensure the birth of a son by having more children. As a result, more daughters were born than desired. During the survey, quite often women told me "if X were a boy, I would not have had Y." Over one-third of women aged 35 and older had three or more children. Restricted by the family planning program, they had the unwanted girls adopted out or hidden from officials and reported as "stillbirths" in order to try for a son. Studies on infant abandonment and adoption in China have suggested that baby girls with one or more sisters were the most likely to be abandoned or adopted (Johnson, Huang, and Wang 1998). Today, in the county I studied, female infant abandonment or infanticide is extremely rare. Rural families believe in fate: if they do something horrible, they will be punished by unseen forces. Besides, it is easy to arrange for the adoption of unwanted girls.

Now that reliable technology for prenatal sex determination is widely available, rural women I talked to have found an easier way of trying to ensure a son: having an ultrasound B-scan, arranging the abortion of un-wanted female fetuses, and seeking another pregnancy that might result in the birth of a son. Many women believe this is much better than having more children. There is no or lesser need to violate the family planning policy, to hide a child or pay family planning fines, and to have the unwanted girls adopted against one's conscience ("they are also my blood"). The Chinese do not consider the fetus to be a living person; they believe instead that a person's life begins with a live birth (Qiu 1987). One woman told me: "I did not hesitate at all to have my second pregnancy aborted when I knew it was a girl. I wanted a son. I felt no guilt at all. Why should I? I did not see her." In fact, in the past, because of very high infant mortality, an infant would not be considered a person until after the first birthday.[11]

Many women I talked to acknowledged the sex imbalance of new births resulting from the wide practice of ultrasound B-scan and sex-selective abortion. Thirty-six percent of women believed "more boys than girls had been born," 52 percent were not clear about the matter, and only 12 percent did not think more boys than girls were being born. Some daughterless families mentioned wanting to adopt a girl but being unable to find any for adoption. "There are not many girls born. Where to adopt them?"

Hull (1990) discussed the implications of rising aggregate sex ratios at birth in China, and Park and Cho (1995) investigated sex-ratio imbalances at the aggregate level and at the family level in South Korea. For China, of particular concern is the potential shortage of women in the marriage market, as a result of rapid fertility decline and the rising sex ratio at birth.

Some speculate that the abnormal sex ratio may be self-correcting and may have some positive aspects: "If men have difficulty finding mates, women may eventually enjoy the benefits of increased value for conjugal and reproductive functions, and this in turn may lead to a better social position for them and eventually to more balanced sex ratios at birth" (Park and Cho 1995: 75). It is doubtful whether such an economic law will take effect in the marriage market in China. Throughout Chinese history, female infanticide and gender discrimination against girls have produced a marriage squeeze (e.g., Lee and Wang 1999), but the status of women has not improved. Nowadays in the poor areas of China, a severe shortage of women in the marriage market exists because of the exodus of young women to marry in wealthier areas and because of gender discrimination. Yet women's position has not improved; instead they are subjected to being kidnapped by criminal gangs and sold into marriage to men desperate for a wife (e.g., Liao 1993). In 2000 alone, more than 19,000 perpetrators of woman and child trafficking were arrested (Xiao 2001). The situation is serious enough for the Chinese government to have passed decrees in 1991 and in 2000 to crack down on these criminals, for women's magazines and some provincial governmental

organizations to publish advice on how to avoid being kidnapped, and for some public security departments to set up hotlines for reporting such crimes.12 Trafficking in women is likely to in-crease as the squeeze in the marriage market becomes more pronounced.

Many rural families anticipate the shortage of marriageable women. Some families are acting now so that sons will not be left out in the competition. "I have to work hard to earn more money. In 20 years, boys of the less well-off families will find it very hard to find a wife." One woman said, "I will buy a girl for my son." In the county I studied, some women are provided by "intermediaries" to marry local men of poor families. These women usually come from Sichuan and Yunnan provinces. This practice is not considered illegal. Rather, it is believed a man has the right to keep a woman as long as he has paid the bride price.

As long as there is a strong preference for sons, as long as people do not want to have more than two or three children, as long as there is affordable modern technology for prenatal sex determination, and as long as abortion is available and is an accepted method of birth control, sex-selective abortion will be inevitable. That has been the experience in South Korea. That country has no coercive fertility regulation but it has one of the highest rates of sex-selective abortion in the world (Park and Cho 1995). The same is true for India (Patel 1989) and Taiwan (Chang 1993). Even if there were no draconian family planning program in China, the strong son preference among rural Chinese families and the wide availability of modern ultrasound technology and of induced abortion make prenatal sex se-lection inevitable.

What can China do to stop sex-selective abortion? More strenuous enforcement of the regulations forbidding prenatal sex determination and sex-selective abortion, and close monitoring of the uses of ultrasound B-scans at hospitals and family planning stations, particularly at private clinics, might change the situation. Service providers could be educated about moral and legal issues related to prenatal sex determination and sensitized to the consequences of sex-selective abortion. The public should be made aware of the future consequences of sex imbalances in the population at large. Medical personnel are forbidden to provide ultrasound B-scans for the purpose of sex determination, but very few women do not know the sex of the fetus after the test. It is difficult to prosecute service providers, who need only smile or frown to indicate the sex of the fetus.

In any event, given the principle that every child should be a wanted child, the legal and moral case for administrative measures seeking to sup-press a practice that reflects parental preferences is ultimately weak. The true solution to the problem of sex-selective abortion requires improvement in the status of women. This calls for a wide range of social, economic, political, and legal measures designed to promote gender equality and adoption of developmental strategies that favor gender equity.

Notes

1) Sex ratio at birth is defined as the number of male births per 100 female births. In sur-veys and censuses, birth data are collected by asking whether the respondents have given birth during the 18 or 12 months preceding the enumeration date, and the date, sex, and parity of the birth. Respondents tend differentially to underreport, unintentionally or intentionally, infants by sex who die shortly after birth, a practice that affects both the reported sex ratio at birth and the measured differential infant mortality by sex.

2) For analysis of sex ratios at birth or at young ages in China and their causes, see Ban-ister 1992; Coale 1991, 1992; Coale and Banister 1994; Das Gupta 1998; Gao 1993, 1995; Hull 1990; Johansson and Nygren 1991; Johnson 1996; Johnson, Huang, and Wang 1998; Li 1993; Li and Zhu 1999; Ministry of Health 1989; Ministry of Health and State Family Planning Commission 1986, 1993; Tu 1993; Zeng et al. 1993.

3) On 27 May 1999 Liaoning Province legislated, a "Regulation on Forbidding Prenatal Sex Selection." From 1 May 2000 the amended "Henan Province's Family Planning Regulations" banned sex-selective abortion. On 28 May 2000 Hainan Province

banned prenatal sex determination. On 1 October 2000 Guangxi Zhuang Autonomous Region enacted a "Regulation on Forbidding Prenatal Sex De-termination and Sex Selective Abortion." Anhui Province passed a similar regulation on 1 November 2000. Shandong and Fujian also enacted local regulations on prenatal sex selection. In Hunan Province, one of the family planning directives is to reduce the sex ratio at birth by five percentage points.

4) The latter figure refers to the sex ratio at age 0 because the sex ratio at birth is not available for 1995. Given the expected higher mortality of boys than of girls in infancy, this measure is lower than the sex ratio at birth.

5) It is becoming increasingly difficult to obtain accurate demographic data, especially birth data, in China. Serious deliberate misreporting has been found in the 1988 nation-wide two-per-thousand fertility and contraception survey (White 1991), the 1992 nationwide fertility and contraception survey (Zeng 1996), and the 1997 Demographic and Reproductive Health Survey (Guo 2000). All of these surveys were carried out by the State Family Planning Commission of China.

6) The traditional Chinese view of pregnancy as lasting 10 months is the same as the standard 9-month definition of a pregnancy. The Chinese count pregnancies as starting from the beginning of last menstrual cycle.

7) Charges for ultrasound B-scans vary among private clinics. Although the usual charge is 50–60 yuan, such clinics sometimes charge less than public hospitals.

8) "Last" pregnancy in this article means "last among third or higher-order pregnancies."

9) Ultrasound machine operators may report a female fetus as a male, but not report a male fetus as a female. Those women who are in fact interested in the sex of the fetus will have several ultrasound scans before making a decision to have the pregnancy terminated. During the field study, I did not hear any women express regret because of incorrectly having a fetus of the wanted sex aborted. I did hear regrets from respondents who bore a girl because they were led to believe the fetus was a male.

10) The women surveyed had borne 1,466 children: 817 males and 649 females. In addi-tion, 109 female and 7 male fetuses were intentionally aborted after ultrasound scan be-cause of their unwanted sex. Since sex-selective abortions after ultrasound scan usuallyoccur in the seventh month of gestation or even later, approximately one birth will be averted by one sex-selective abortion. If all these aborted fetuses had been born, the sex ratio of children ever born to these women would be reduced from 125.9 to 108.7, calcu-lated as (817 + 7)/(649 + 109). The sex ratio would be further lowered if one took into ac-count boys whose birth was made possible by women having previous female fetuses aborted.

11) Because of high infant and child mortality in the past, the typical response to a new-born baby in the study county is "not knowing whether it can become a person or not." Contemporary rural Chinese families have a very different response to having an abortion, even a third-trimester abortion, than to having the live birth killed immediately after delivery. The former is taken as a miscarriage or a stillbirth, the latter is considered as a crime of killing life.

12) There is a great deal of media coverage on trafficking in women in China, for example: People's Daily, 19 January 2001, p. 4; August 2000, p. 3; «http:// dailynews.sina.com.cn/ society/abduct/ index.shtml»,«http://fuxin. gov.cn/news/ 2000040508.htm», «http:// 202.84.17.82/ community/721600281.htm», «http:// news.yinsha.com/file/zhuanti/2000/ 05/ 26105844.html», «http://www.relala.com/ h0/police/dg/dg_xwg.htm», «http://www.xj. cninfo.net/new/20000417/china/ china3413. htm». In September 1991, the Standing Committee of the National People's Congress enacted a "Resolution on Severely Punishing Perpetrators of Women and Child Abducting and Trafficking," see «http://www.21cnlaw. com/law/xings/ xings015.htm». On 20 March 2000 the Superior Court, the Superior House of Procurators, the Ministry of Public Security, the Ministry of Civil Affairs, the Ministry of Justice, and the All-China Women's

Federation jointly issued a "Notice on Punishing Women and Child Abducting and Trafficking"; see «http://155.cycnet.com/vinyon/flfg/flfg/other/ xingshi.htm».

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Sex Selection Issues & Concerns

A compilation of writings

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CEHAT, in Hindi means “Health”. CEHAT, the research centre of Anusandhan Trust, stands for research, action, service and advocacy in health and allied themes. Socially relevant and rigorous academic health research and action at CEHAT is for the well being of the disadvantaged masses, for strengthening people’s health movements and for realising right to health care. Its insti-tutional structure acts as an interface between progressive people’s movements and academia.

CEHAT’s objectives are to undertake socially relevant research and advocacy projects on various socio-political aspects of health; establish direct services and pro-grammes to demonstrate how health services can be made accessible equitably and ethically; disseminate information through databases and relevant publications, sup-ported by a well-stocked and specialised library and a documentation centre.

We are a multi disciplinary team with training and experience in Medicine, Life Sciences, Economics, Social Sciences, Social Work, Journalism and Law. CEHAT’s projects are based on its ideological commitments and priorities, and are focused on four broad themes, (1) Health Services and Financing (2) Health Legislation, Ethics and Patients’ Rights, (3) Women’s Health, (4) Investigation and Treatment of Psycho-Social Trauma. An increasing part of this work is being done collaboratively and in partnership with other organisations and institutions.

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Eliminate inequality not women. Say no to Sex Selection

The practice of sex selection has changed many faces over decades from - female infanticide to the more recent pre-conceptional sex selection. With the older methods of eliminating the girl child still around, the misuse of advanced medical science and technology and unethical medical practice has provided many more options. The number of girls born every year is steadily declining - from 979 females per 1,000 males in 1981 in the 0-6 age group to 945 per 1,000 in 1991 and further down to 927 per 1,000 in 2001. It is alarming to note that this declining trend seems to be spreading across the country and is no longer confined to isolated geographical areas. The practice of sex selection is prevalent in the most economically affluent states as against the common notion that this practice confines only to the 'backward' areas. Sex selection in the present context is a complex issue with several stakeholders - doctors, the government machinery looking after the implementation of the Act, health and women's groups and civil society at large. Each has to play their part to deal with it at various levels. The Act lacks implementation like most laws concerning women's rights do.

Addressing the issue of sex selection and son preference has posed several challenges. It has been a long journey from the time the campaign against sex selection began to the present public interest litigation to examine the Pre-Natal Diagnostic Tests (Regulation and Prohibition of Misuse) Act and its implementation.

This publication is a collection of papers, articles and news reports on the issue. The purpose of this compilation is to bring together various points of view and voices that have shaped the sex selection debate to date. The writings in the volume are broadly divided into *four* sections.

'*Sex selection and the campaign'* traces the rising concern over sex selection across time. It puts into focus crucial debates that eventually led to the genesis of the campaign against sex determination. The section also comprises of papers studying the extent to which such a practice prevails.

'*Role of the State and the law'* deals with the role of state and the legal battle towards a ban on the practice from the formulation of the Maharashtra Regulation of Use of Prenatal Diagnostic Techniques Act, 1988 to the Pre Natal Diagnostic Tests (Regulation and Prohibition of Misuse) Act, 1994.

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'The political Economy of sex selection' looks at the social, cultural, economic and political aspects linked to the prevalence of such a practice.

Centre For Enquiry Into Health And Allied Themes

(Research Centre Of Anusandhan Trust)

CEHAT, in Hindi means "Health". CEHAT, the research centre of Anusandhan Trust, stands for research, action, service and advocacy in health and allied themes. Socially relevant and rigorous academic health research and action at CEHAT is for the well being of the disadvantaged masses, for strengthening people's health movements and for realising right to health care. Its insti-tutional structure acts as an interface between progressive people's movements and academia.

CEHAT's objectives are to undertake socially relevant research and advocacy projects on various socio-political aspects of health; establish direct services and pro-grammes to demonstrate how health services can be made accessible equitably and ethically; disseminate information through databases and relevant publications, sup-ported by a well-stocked and specialised library and a documentation centre.

We are a multi disciplinary team with training and experience in Medicine, Life Sciences, Economics, Social Sciences, Social Work, Journalism and Law. CEHAT's projects are based on its ideological commitments and priorities, and are focused on four broad themes,

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Health Legislation, Ethics and Patients' Rights

Women's Health

Investigation and Treatment of Psycho-Social Trauma

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- *Demand for Public Health Services in Mumbai*
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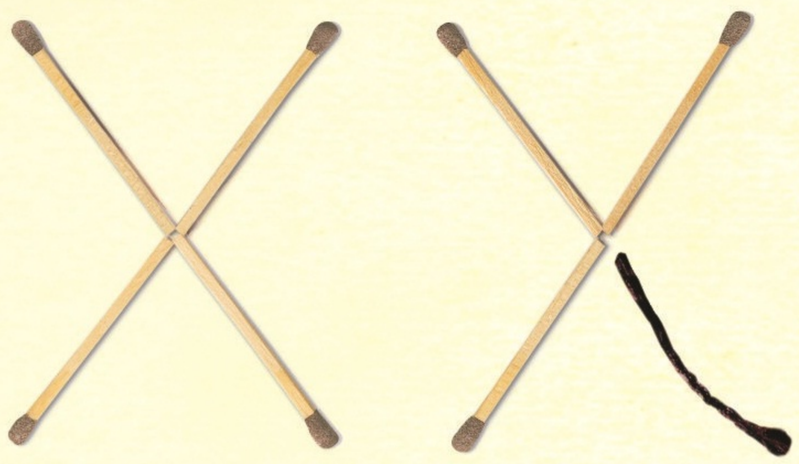

Eliminate inequality not women. Say no to Sex Selection

The practice of sex selection has changed many faces over decades from - female infanticide to the more recent pre-conceptional sex selection. With the older methods of eliminating the girl child still around, the misuse of advanced medical science and technology and unethical medical practice has provided many more options. The number of girls born every year is steadily declining - from 979 females per 1,000 males in 1981 in the 0-6 age group to 945 per 1,000 in 1991 and further down to 927 per 1,000 in 2001. It is alarming to note that this declining trend seems to be spreading across the country and is no longer confined to isolated geographical areas. The practice of sex selection is prevalent in the most economically affluent states as against the common notion that this practice confines only to the 'backward' areas. Sex selection in the present context is a complex issue with several stakeholders - doctors, the government machinery looking after the implementation of the Act, health and women's groups and civil society at large. Each has to play their part to deal with it at various levels. The Act lacks implementation like most laws concerning women's rights do.

Addressing the issue of sex selection and son preference has posed several challenges. It has been a long journey from the time the campaign against sex selection began to the present public interest litigation to examine the Pre-Natal Diagnostic Tests (Regulation and Prohibition of Misuse) Act and its implementation.

This publication is a collection of papers, articles and news reports on the issue. The purpose of this compilation is to bring together various points of view and voices that have shaped the sex selection debate to date. The writings in the volume are broadly divided into *four* sections.

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