WOMEN AND HEALTH

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ISSUES RELATING TO SEX DETERMINATION TESTING

Compiled by: Public Policy Division

Voluntary Health Association of India

SEX DETERMINATION TESTING AND THE PRIVATE SECTOR:SOME EXPERIENCES FROM DELHI.

An effort was made to ascertain the extent of involvement of private clinics, nursing homes and diagnostic clinics in conducting sex determination tests by employing amniocentesis and ultra sound in Delhi. For this purpose a preliminary survey of forty nursing homes and diagnostic clinis were selected randomly and the owners of these enterprises were asked if they do carry out sex determination tests and what are the methods they employ for this purpose. The survey revealed that 27 of these institutions were conducting sex determination testing. Of the 27 institutions performing this test, 24 of them used ultra sound for the purpose of sex determination. The cost of these tests ranged from Rs.800 to 1500 and the testing was done between three to six months of pregnancy. As far as amniocentesis is concerned only six institutions provided this testing. The cost of this test ranged from Rs. 800 to 4000 and was conducted from 8-11 weeks of pregnancy. There were only thirteen institutions which did not offer either of these services. The trend observed in Delhi broadly matches the findings of a similar study conducted in Bombay during the eighties. If anything, the number of these testing centres have probably increased due to the burgeoning of the private sector. As some activists have pointed out, amniocentesis is not the only technique for sex determination and that even ultrasound is being misused for the same purpose. This survey of private clinics in Delhi clearly shows that ultrasound is being more extensively used for the purposes of sex determination. Therefore it is extremely important that there be proper systems for registration of equipment being brought into the country.

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FOR THE WORKSHOP ON WOMEN AND HEALTH, HYDERABAD.

Sex Determination Testing:

(1) What are the technologies that are misused for sex determination?

(2) History of campaign against sex determination- women's groups and other organisations.

(3) The Bill that has been passed against Pre-natal Testing - What are its loopholes? What is the role women's and activist organisations can play in the proper implementation of this Bill.

(4) A preliminary survey of 40 nursing homes in Delhi during January '93 to ascertain if they use ultrasound/amniocentesis for the purpose of sex determination.

(5) The compilation of Public Policy Division on Amniocentesis.

(6) It is well established that sex determination testing is being carried out mainly in the private sector - What are the issues that need to be addressed?

* * * *

AMNIOCENTESIS AND FEMALE FOETICIDE
Misuse of Medical Technology

vibhuti patel

Murder of the female child is not new in India. This practice still continues, only the methods of committing such murder have changed. Such practices reflect society's attitude towards the female sex. The patriarchal male-dominated system has evolved modern methods to perpetuate women's oppression in today's socio-economic system. The author analyses the reasons for the popularity of one such modern medical method, amniocentesis, as a pre-natal sex determination test and argues that it is meant to exterminate women and perpetuate their oppression, she also emphasises the need to fight sexist abuse of this medical technique.

Amniocentesis, a scientific technique that was supposed to be used mainly to detect genetic deformities has become very popular in India for detection of the sex of a foetus. For that 15-20 ml of amniotic fluid is taken from the womb by pricking foetus membrane with the help of a special kind of needle. After seperating foetal cell from the amniotic fluid, a chromosomal analysis is conducted on it. This test helps in detecting several genetic disorders like mongolism, defects of neurotube in the foetus, retarded muscular growth, 'Rh' incompatibility, haemophilia and other types of abnormal babies. This test should be conducted on women above 40 years because there are higher chances of mongoloid children produced by such women. In some cases, a sex determination test is required to identify sex-specific deformities such as haemophilia, retarded muscular growth which mainly affect males.

Limitations of Amniocentesis

This test can give 95-97% accurate results. Thus it is not totally reliable. In Harkisandas Hospital and Pearl Centre, Bombay, where this test is conducted on thousands of women, it was noted that the test had affected foetus adversely to 1% of the total number of cases. Thus the test may lead to spontaneous abortions or premature delivery, dislocation of the hips, respiratory complications, needle puncture marks on the baby (Chhachhi & Sathyamala, 1983).

The test is conducted after completion of 16 weeks of pregnancy and within a week the findings are available. In our country, the facility of amniocentesis is available only in big cities like Bombay, Delhi, Chandigarh etc., hence patients from villages and small towns get the results by post; that takes one more week. By the time they decide to abort the foetus, it is over 18 weeks old. Abortion at such a late stage is quite harmful for the mother.

Popularity of the Test

The amniocentesis tests became popular in the last three years though earlier they were conducted in the government hospitals on an experimental basis. Now these tests are conducted for sex determination and thereafter extermination of female foetus through abortions, in private clinics and hospitals and government hospitals in many cities of India like Bombay, Delhi, Amritsar, Chandigarh, Baroda, Ahmedabad, Kanpur, Meerut etc. This perverse use of modern technology is encouraged and boosted by money-minded private practitioners who are out to make a woman, "a male-child-producing machine". As per the most conservative estimate made by a research team of Women's Centre, Bombay, based on their survey of six hospitals and clinics, in Bombay alone 10 women per day undergo test This survey also revealed the hypocrisy of "non-violent", "vegetarian", "anti-abortion" management of the city's reputed hospital - Harkisandas Hospital, that conducts ante-natal sex-determination test. Their handout declares the test as "humane and beneficial". The hospital has out-patient facilities and there is such a great rush for the test that one has to book one month in advance. As the management does not support abortion, they recommend women to various other hospitals and clinics and ask them to bring back the female foetuses after abortion to them for further "RESEARCH". (Abraham & Sonal, 1983).

In other countries, this test is very expensive and is under strict governmental control, while in our country this test can be done at between Rs. 80 to Rs. 500. Hence not only upper class people, but even working class people can easily avail this facility. A survey of several slums in Bombay showed that many women had undergone the test and after knowing that the sex of foetus was female, had undergone abortion in the 18th or 19th week of pregnancy. Their argument was it is better to spend Rs. 80 or even Rs 800 now than give birth to a female baby and spend thousands of rupees for her marriage when she grows up.

Controversy Around Amniocentesis

Three years back a controversy around Amniocentesis started as a result of several investigative

reports published in poodular magazines like *India Today, Eve's Weekly, Sunday* and other regional -language journals. One estimate that shocked everyone, right from planners and policy-makers to the academicians and activists was : Between 1978 and 1982, around 78000 female foetuses were aborted after sex determination test in our country. (TOI June, 1982).

The government and private practitioners involved in this lucrative trade, justify the sex determination test as measure for population control. Women have always been worst target for family planning policies. Harmful effects of pregnancy test, contraceptive pills, anti-pregnancy injections camps for mass-sterilisation of women with their unhygenic atmosphere are always overlooked by the enthusiasts of family planning policy. Most of population control research is conducted on women without giving any consideration to the harm caused by the research to the women concerned. Advocates for population control will continue cashing in on socio-cultural values that treat the birth of a daughter in the family as a great calamity and perpetuate modern method of massacaring female foetuses on a massive scale.

India has a legacy of killing female children (*dudhapiti*) by putting opium on the mother's nipple or by putting the afterbirth over the child's face or by illtreating daughters. (Desai, 1983). These days also female members of the family get inferior treatment as far as food, medication and education is concerned (Research unit on Women's Studies, 1981). When they grow up, there is further harassment for dowry. "Then, is it not desirable that she dies rather than be illtreated?" ask many social scientists. In Dharma Kumar's (EPW, June, 1933) words : "Is it really better to be born and 'left to die' than to be killed as a foetus? Does the birth of lakhs or even millions of unwanted girls improve the status of women?"

But what can be the long-term implications if such a trend continues ? Will it not aggravate the already disturbed sex-ratio ? There has been continuous decline in female/male sex-ratio between 1901 and 1971. Between 1971 and 1981 there was slight increase, but it still continues to be adverse for women.

Demographic Profile of India (In millions)
1901-1981

Year	Total Population	Male Population	Female Population	Total No. of women per 1000 men i.e. sex ratio.
1901	238	121	117	972
1911	252	128	124	964
1921	251	128	123	955
1931	279	143	136	950
1941	319	164	155	945
1951	361	186	175	946
1961	439	226	213	941
1971	548	284	264	930
1981	684	353	331	935

Source : *Census Report*, 1981, Series 1, Paper 1.

Here too, economists have their reply ready i.e. law of demand and supply. If supply of women is reduce, their status will be enhanced. 'Scarcity of women will increase their value (Bardhan, 1982). According to this logic, women will not be burnt alive because of dowry problem as they will not be easily replaceable commodity. But here the economists forget the socio-cultural milieu in which women have to live. The society that treats a woman as a mere sex-object will not treat women in a more 'humane' way if they are scarce in supply. On the contrary there will be increased incidences of rape, abduction and forced polyandry. In U. P, Haryana, Rajasthan and Punjab among certain communities, sex-ratio is extremely adverse for women. There a wife is shared by 'a set of brothers' (or some times even by patrilateral parallel cousins) (Dube, 1983).

To think that it is better to kill female foetuses than giving birth to unwanted female children, is very fatalistic. By this logic it is better to kill the poor rather than let them suffer poverty and deprivation. How horrifying !

Another argument is that in cases where women have one or more daughters, they should be allowed to have amniocentesis done so that they can plan a 'balanced family' by having sons. Instead of going on producing female children in the hope of getting a male child, it is better for the family's and the country's welfare that they abort the female foetus and have small and balanced families with daughters and sons. This concept of 'balanced family' also has a sexist bias. Would a couple with one or more sons undergo amniocentesis to get rid of male foetus and have a daughter for balancing their family ? No, never !

This frenzy of having a 'balanced family' ! At what cost ? How many abortions (between 16 to 18 weeks) can a woman bear without jeopardising her health ?

Time and again it is stated that women themselves enthusiastically go for the test out of their free will. It is a question of women's own choice. But are these choices made in a social vaccum ? These women are socially conditioned to accept that unless they produce one or more male child they have no social worth. They can be harassed, taunted, even deserted by their husbands and in-laws if they fail to do so. Thus their 'choices' depend on

the fear of society. It is true that feminists all over the world have always demanded "the right of women to control their own bodies/fertility and choose whether or not to have child/children and have facilities for free, legal and safer abortions." While understanding these issues in the third world context we must see it in the background of the role of imperialism and racism that aims at the control of "coloured populations". Thus : "It is all too easy for population control advocates to heartily endorse women's rights at the same time diverting 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 the 'desire' to have a male child'" (Chhachhi, and Sathyamala, 1983).

Meetings called by Women's Centre (Bombay) and various women's organisations in Delhi, discussed this problem at length and three positions emerged. 1. Total ban on amniocentesis tests; 2. Support to amniocentesis tests; and 3. Amniocentesis tests to be allowed under strict governmental control and only for detecting genetic abnormalities.

Most of the women's organisations feel that the 3rd position is most advantageous even if one accepts the fact that illegally, the tests will be conducted by unscrupulous people. To avoid this, women's organisations and other socially conscious groups will have to act as watch dogs.

The issue of amniocentesis once again shatters the myth of neutrality of science and technology. Hence, the necessity of linking science technology with socio-economic and cultural reality. Class, racist and sexist biases of the ruling elites have crossed all boundaries of human dignity and decency by making savage use of science. Even in China after 10 years of 'cultural revolution' and 'socialist thinking' sex determination test for female extermination are largely prevalent after the government's campaign for one-child-family began (Sunday, 1983). Chinese couples willy-nilly accept a system of one-child-family but the child has to be a male. This shows how adaptive the system of patriarchy, male supremacy is. It can establish and strengthen its roots in all kinds of social structures, pre-capitalist and even post-capitalists, if not challenged consistently.

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(Contd. from page 68)

I am unable to understand the thought process behind the omission of my name. Does Dhruv Mankad assume that because I am married to Binayak Sen, my contribution to a joint production is subsistence (= negligible = zero) ? I would be grateful if he could clarify what lies behind this e.g. of marxist male chauvinism - for we can only begin to advance towards correct action from correct analysis.

May I congratulate you on an excellently produced first issue ?

Ilina Sen
Dalli Rajhara

DHRUV MANKAD REPLIES :

I tender my sincere apology to Ilina Sen for not mentioning her name in the editorial perspective while referring to a joint article by her and Binayak Sen. The error occurred due to the fact that before writing the perspective, I had not seen the actual article referred to above. I knew about the contents only from discussions with Binayak at Calcutta and later with Anant Phadke, Manisha Gupte Awasthi, Padma Prakash, Amar Jesani at Pune. Till I saw the article in print in SHR, I was under the honest impression that it was indeed written by Binayak only. This is what lies behind "this e.g. of Marxist Male chauvinism".

Despite this apology, I do wish to state that Ilina Sen's protest' is petty and unprincipled. She has thrown wild allegations 'of Marxist male chauvinism' on my part without first giving me a chance to explain. This kind of immature reasoning based on mere presumptions - that too, incorrect ones, would lead us neither to correct analysis nor to correct action but only to bickerings and quarrels.

I am restraining myself in my reply with the intention not to extend this issue any further. I hope in future, such errors are avoided and if and when they do occur the reactions thereto are more responsible.

WORKING EDITORS' REPLY : The omission was our fault rather than Dhruv's, because we were responsible for checking the final proofs and were of course aware of the joint authorship. We regret the inadvertant slip.

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he girls continued to protest and vent on hunger strike, they were severely beaten up.

When the agony eventually came to an end. Archana could hardly spond to her new environment. was only when she sensed the are, the concern that she realis- d that here was another chance o live.

The International Mission of ope has been her home for the st three years. Now, she has reams of a home and a family. But before that she must be inde- endent.

Her sordid memories are tucked way in the inner-most recesses f her mind. She does not want to emember. And talks on one con- ition ; Would it help others ? Other innocent victimes who are anguishing in jails or government- un remand homes. For no fault f theirs.

What was actually meant to be safe custody' turned out to be two ears of misery in Presidency jail. For Archana, it seemed like an ndless sojourn in hell which she oes not want to remember. She alks on one condition : Would it elp other innocent victims who are languishing in jails or govern- ment-run remand homes ?

Twelve-year-old Shikha has now let her laughter mingle with that of the other children. Till recently, the bitterness had infected her entire existence.

After the sudden death of her mother, Shikha's world collapsed. Her father, an employee at the Delhi airport was away on duty. Her grandmother decided to get rid of the child. Shikha pleaded in vain. Her grandmother was convinced that she would be a burden. They would be better off without her. Shikha was sold to a gentleman who was leaving for Calcutta.

A week later, Shikha found herself in a new city. Filled with fear as to what he intended to do with her, Shikha ran away.

But the 10-year-old child was caught by the police. And then the all too familiar story: the guardians of the low took her into 'safe custody'. She was held captive in Presidency jail. She too, like all others, relates the horrors of the prison cell. Despite the government provision even basic necessities like soap and clothing were not allotted to the girls.

The officials apparently made the allotments on paper, while the girls just learnt to live with the degradation and constant denial.

Initially, the 10-year-old failed to comprehend. What was her crime, she once dared to ask. But in return she was beaten up. Her question remained unanswered. And she slowly began to accept the cruel treatment metedout to her.

Fortunately for her, the Supreme Court directed the state government to release all innocent children from jail.

No one can bring back to Shikha and her friends those lost years but the IMH is giving them another, chance. The bleak desolation is behind them. They stand with faltering steps on the threshold of a new universe, their eyes bright with hope.

Initially, the 10-year-old Shikha failed to comprehend, What was her crime, she once dared to ask, In return, she was beaten up. Her question remained unanswered. And she slowly began to accept the cruel treatment meted out to her. Now, at 12, free from the bleak desolation, she lets her laughter mingle with that of the other children.

AMNIOCENTESIS - A SCIENTIFIC FEMALE FOETICIDE TECHNIQUE ?

The living body is composed of ells, the basic units. The nucleus f the cell contains the genetic nformation passed from parents o child. In the cells of all humans here are 23 pairs of chromosomes umbered 1 to 23. The 22nd pair f sex chromosomes either XX or Y. All the cells of women carry XX chromosomes where as male cells carry XY chromosomes. The sperm can have either X or Y chromosomes while the ovum carries only X chromosomes. The fusion of sperm with ovum results either in male child carrying an XY chromoseme or a female child carrying XX chromosomes.

The human foetus lies in uterus contained in amniotic sac and surrounded by amniotic fluid. Cells from the foetus are passed into the amniotic fluid. These are collected by a simple method of passing a needle through abdominal wall of the mother after fourth month of pregnancy (amnio-

centesis). Earlier, the test used to be carried out in third trimester (the nine months of pregnancy are divided into three months). However, it is now carried out in second trimester most often after 16 weeks of pregnancy.

History :

Ammiocentesis was first advocated for diagnostic purposes in 1930 by Meenes etal in 1937, Aburel used it for midtrimester pregnancy terminations with hypertronic saline. In 1951, Rosa and Fanard described a method of foetal sex, determination by amniotic fluid (AF) cytology. In 1956 Bevis suggesied AF analysis in Rh immunisation. In 1965 AF studies were started for antenatal diagnosis of hereditory diseases by amniotic fluid analysis and bio chemical procedures done on cultured and non-cultured cells.

Technique for genetic diseases :

Amniocentesis is a technique to determine genetic abnormalities at the pre-natal stage (i. e. when the child is in the womb of the mother). Although other methods are available to determine genetic diseases or abnormalities, Amniocentesis is today the most widely used technique all over world.

There are approximately 1500 known genetic diseases. Most of these such as haemophilia are due to genetic mutations. Others like the Down's syndrome where there are three no. 21 chromosomes, instead of the normal pair and which occurs in one out of 200 births results from genetic defects.

Sex determination is essential only in cases of genetic diseases which are sex linked such as haemophilia, which cannot be diagnosed by other means. In such cases it is arguable whether after detecting chromosomal abnormality, abortion of foetus should be carried out or not.

During amniocentesis fifteen to twenty millitres of amniotic fluid are taken from the womb by pricking the foetal membrane with a special kind of needle. After separating a foetal cell from the amniotic fluid, chromosomal analysis is conducted on it. This helps in detecting several genetic disorders like Mangolism, defects of the neural tube in the foetus, retarded muscular growth, Rh — factor incompatibility, haemophilian and other types of physical and mental disorders. For detecting whether the foetus is boy or girl, the unculture or cultured cells from the amniotic fluid are studied under the microscope. If it is a girl, the X chromosome shows up as a dark spot against nuclear membrane of a cell. If it is a boy the Y chromosome shows up as a white spot using fluroscent techniques. The test is used routinely for women after 40 years of age. Since they are more likely to produce deformed children. A sex-determination test is required to identify retarded muscular growth which mainly affect male babies. This test is comparatively more hazardous than pre-selection and sex-determination tests such as Chlorian-villa-Biopsy (CVB) In 1% of cases of amniocentesis women may be induced to abortions, premature delivery, hip dislocations, respiratory complications or needle puncture marks on the baby.

Abusal of Amniocentesis

But Amniocentesis in India has become synonymous with sex-determination test. It is being used to first determine whether the unborn child is female or male and if female child then it is aborted. In other countries amniocentesis is very expensive and under strict Government contr[ol] unlike in India this test can b[e] done for Rs. 70/- to Rs. 500/- Hence not only upper middle clas[s] but even working class peopl[e] can avail themselves of th[e] procedure. The availing parent[s] argument being, it is better [to] spend Rs. 200/- or even Rs. 800/- now than give birth to fema[le] child and spend thousands [of] rupees for their marriage whe[n] they grow up.

The researches indicate that femal[e] infanticide was practised by Rajput and Jats during the previous centur[y] and consequently in 1870 female in[-] fanticide was banned. And over th[e] tast century science has not on[ly] quickened the force of death o[f] female child from born to unbor[n] child, calling into the questio[n] role of doctors and of scienc[e] and Technology. As per the censu[s] ratio of the year 1981. In Utta[r] Pradesh and its district Bijnar th[e] sex ratio were 886 and 863 fo[r] every 1000 males. Innumerabl[e] number of clinical services offering amniocentesis have appeared i[n] several places of north India durin[g] the past 10 years.

Amniocentesis is usually carrie[d] out in 16th week of pregnancy. For accurate determination of th[e] sex, culturing of the amniotic cells for 3 weeks must be carried. On occasions the test has to be carried out again. Chromosomal analysis without culturing the cells are subject to error in nearly 10—20% of cases. But if abortion is to b[e] carried out after culturing of th[e] cells then it would have to b[e] carried outside 20 weeks of pregnancy. But under MTP act a[l] abortions after twenty weeks are illegal. In order to avoid this a lot of doctors do not culture the cells for three weeks. There have also been reports of sex determination tests not being carried ou[t] at all. The patient is told, th[e]

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est has been carried out and she carrying a female baby. Written eports are hardly ever given to e patients. No reoords are kept f the test or the name of the atient or the reasons for carrying ut a sex-determination test. Thus ther inaccurate reports or absolu- ly bogus reports are made and sed as the basis of abortion. nce the sex of the child is certified be female given the dominant sychology prevailing in society nd family in parricular, the pressure to abort the female foetus.

Medically the only category of ases in which above sex determi- ation is necessary is where there e sex linked genetic diseases. order to avoid children having uch abnormalities, the MTP act lows the termination of pregnancy nder section 3(2) (ii) (where there substantial risk that child would uffer from physical and mental bnormalities). There is no other round for sex determination.

On the other hand a majority of octors feel by providing this service ey are doing humanitarian work. ome doctors feel that the test an effective measure for popu- tion control. The Indian Govern- ent's Dratt five year plan aimed achieve a Net Reproduction ate (NRR) of one (i.e. replacement mother by only daughter), For is objective also, sex determination nd sex pre-selection are seen as andy, for logic being that fewer omen means less reproduction.

The Government while refusing ban the test exposed its hypo- acy when it failed to provide cilities for amniocentesis to egnant women during the Bhopal as tragedy inspite of repeated quests by women groups and spite of many reported cases of rth of deformed babies as result poisonous gas· Thus it is clear is scientific technique is infact not used for humanitarian purposes nor because of empathy towards poor Indian women as has been claimed.

A forum was formed to ban SD and SP tests comprising of women's organisations, feminists, lawyers, scientists, researchers etc. The forum approached several members of legislative. assembly and of parliament to put forth a bill and in April 1988 the Government of Maharashtra introduced LC Bill Nos. VIII of 1988, In June 1988, this bill was unanimously passed by the Maharashtra Legislative Assembly and became an act.

LC Bill VIII requires regulation of use of medical or scientific techniques of prenatal diagnosis purely for purpose of detecting genetic or metabolic disorders or chromosonal abnormalilies or certain congenital or sex linked disorders and for prevention or misuse of pre-natal sex-determination leading to female foeticide ; and for matters connected there with or incidental there to. The acts purview is limited to SD tests and does not say anything about SP Techniques. It admits medical technology can be misused by doctors, by banning SD tests have taken away their respectability. Not only this but in the eyes of law both the clients and practioners of SD tests are the culprits. However, the act has many loopholes.

Two major demands of the forum, that no private practices be allowed to do SD test and that in no case should a woman undergoing the SD test can be punished, are not included in the act. On the contrary, the act intends to regulate them with the help of appropriate authority made up of two government bureaucrats from Indian Council of Medical Research, one Gynecologist, one Genetist and the representatives from voluntary organisations which is nothing but mockery of people's participation. Experiences of all such bodies established by government have shown that they merely remain paper bodies and even for this function they are highly inefficient, corrupt and elitist. Now an expert committee was formed by Central Government to introduce a bill applicable throughout India.

A.I.D's endeavours :

Since past few years the pros and cons of amniocentesis are being published in many news- papers and magazines but the focus had always been on northern India and greater emphasis was laid on its pernicious practices in clinics of metropolitan cities of Bombay and Delhi. The investigative team of AID felt that an investigation should be carried out at Madras as well and bring to focus the hidden realities of the city espe- cially with regard to amniocentesis. As a first step we approached the Government women and child Welfare hospital at Egmore. First day we were denied permission to meet doctors and were very bluntly and rudely told that we cannot approach a doctor without written permission from the Dean of the hospital. We again attem- pted to meet the concerned doctors the succeeding day and since the Dean was away we were directed to the next superior in - charge. The doctor was kind enough. to listen to our queries and requested us to meet the Genetist who would be in a better position to give us feed back to the information re- quired by us. The Genetist was very enthusiastic and explained us in depth about amniocentesis and further remarked that so far in Madras even the government hop- sitals have not acquired the equipment necessary for amnio- centesis and they were in the

process of acquiring the same. The cost factor of the equipment was mainly responsible in the delay in acquiring the same. She stated government hospitals at present use Sonography only for medical purposes. When we requested her to rationalise why amniocentesis had made deeper inroads when other tests such as Chlorion villa-Biopsy and Sonography could also determine the sex of the child, she replied that this has been a question probing the faculty of doctors as well but so far thay have not been able to arrive at satisfying conclusion. Further, she remarked that to her knowledge no such practice is going on in private clinics in Madras as well.

Our next step we approacyed several reputed private hospitals in Madras to interact with their doctors on this issue to gather their view points. But except for Apollo Hospital, all other hospital either jgnored our pleas or acted as silent spectators.

In Apollo Hospital Dr. Vasanthi, was kind enough to share her view points on amniocetesis. She affirmed that the hospital had the equipment necessary for carrying out amniocentesis test but was being used only for detecting genetic deformities and two or three cases had come to their hospital requesting them to conduct SD tests but were turned down. She acknowledged that SD tests are being conducted at few private clinics in Madras as in other parts of the Country and further these clinical facilities have so far been made available to the upper elitist groups only.

During the course of our National Workshop on Girl child and alternative Modes of Development conducted at Mullikadu - Dharmapuri district of Tamilnadu, we alloted one session for amniocentesis. To our surprise 90% of the participants all representing from rural parts of Tamil Nadu, Bihar and Orissa were not aware of such existing practices and few women approached us asking us to give more details and whether they can avail such facilities. This had been a rude shock to us and realised that in areas which are not so far under the baneful influence over emphasising and publicity has its negative effects as well. The media also plays a crucial role in this aspect. Our encounter with an young pregnant lady, Malar Kodi in Dharmapuri District of Tamil Nadu gave us another jolting experience. She came to know abour amniocentesis through the newspapers and was therefore very eager to know the sex of her child. In villages few crude practices exist whereby observing whether pregnant women sleeps towards her left side or right side and by seeing the enhanced beauty of the women during this particular time it is predicted that the women is carrying a male or female foetus. And was through this method it w predicted by village Dai that Ma Kodi was carrying a female foet She was eager to give birth t son and therefore wanted to authe ticate the sex of child throu this test. She approached a doct in the neighbouring village but t doctor was unable to furnish t details where she could under such test and coming to kn about the workshop she approach us with earnest hope if we co help her.

On closer interactions with as to why she was so despera to get rid of her foetus s narrated that in her family since p two generations if the first ch was male then the family's bu ness prospered well, but if it h pened to be a female than t family was buried in debts a therefore girl child would o bring misfortune. She was v unhappy that we too didn't p vide the substantial informati and failed to rationalise our log We only hope that such banef and over publicised efforts w not disturb many more Ma Kodi's whose otherwise life blissful.

[* This article due credits a given to Dr. P. Phantna Anand Grover and Vibhu Patel from whose articles t above article has been rep duced in concised form]

Child Marriage - A Boon or Bane?

(A case study conducted in Giridih District — Bihar)

MAHAVIR KUMAR

The patriarchal society in India cannot allow women the right to sexual self-determination for several reasons. The prime reason being the necessity to produce legitimate male legal heir, purity of caste, complete control women and position of women liability whlch is imperative. Th are always cautiously watched l the honour of the family wou be tarnished. The girls are co sidered transitory beings and th are sold with virginity being t commodity, The anxiety to g

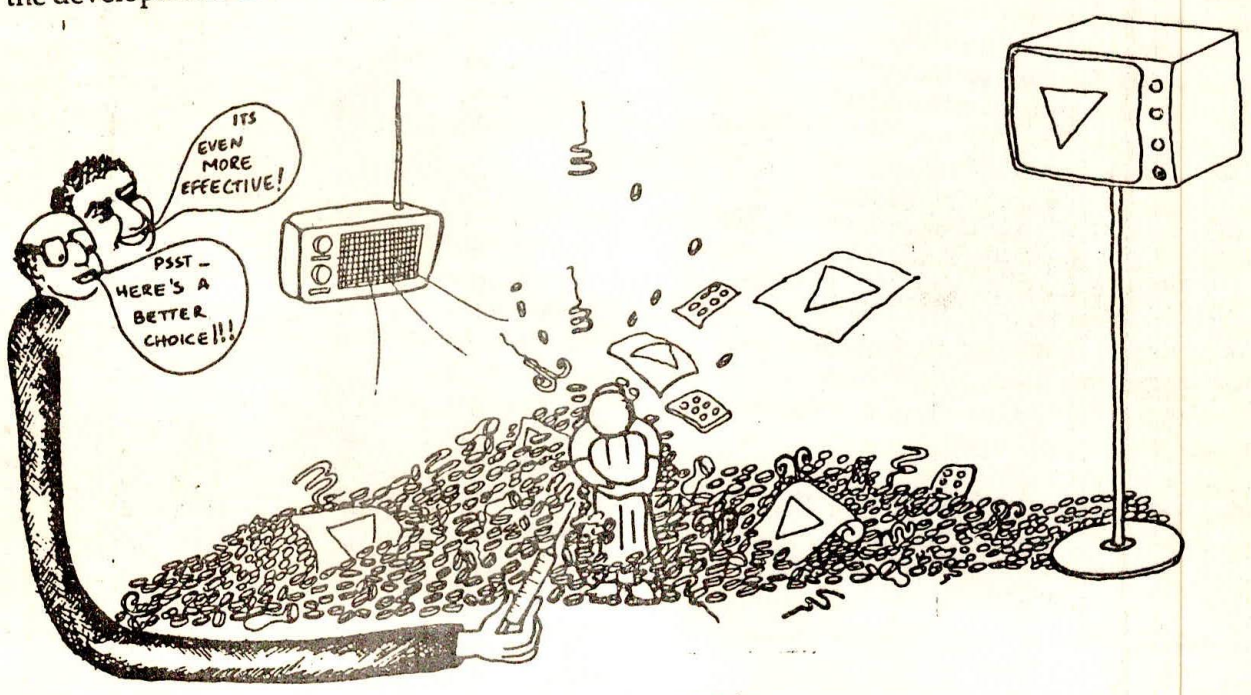
Ethics of Contraceptive Research

Women activists in South Asia are concerned about the way in which testing of hormonal contraceptives, such as the Net-En injectable, is being carried out. Women who participate in testing are usually poor women who are not aware of the effects of the technology they are trying. Vimal Balasubrahmanyan of India comments that the concept of informed consent for participating in clinical trials is practically ignored in medical research programmes. If there is any token consent it is certain that not enough information is given to make it genuinely informed consent as it is understood in the West. Elitist medical researchers generally argue that informed consent as a concept is not feasible when the subjects are illiterate and that in any case all medical experimentation is only being done for the good of the people at large.[62]

Analyst such as Cary LaCheen contend that the development of contraceptives including research testing, is directed by the goals and priorities of the population-control establishment. '...one of the most significant links between population-control programmes and the contraceptive industry occurs in the initial stages of contraceptive development, long before the contraceptives reach the villages of Pakistan and Bangladesh.'[63] The interests and priorities of population-control organizations and women are not the same. Hormonal contraceptives are said to be a big money-maker in the contraceptive market. In 1983, USA oral contraceptive market, for example, was US$520 million and the world-wide market has been estimated at US$700 million to US$1 billion.[64]

// NEW REPRODUCTIVE TECHNOLOGY

In the Asian and Pacific Region, two new areas of social control over women's reproduction have caused particular concern among women activists and researchers. One issue is the use of medical technology

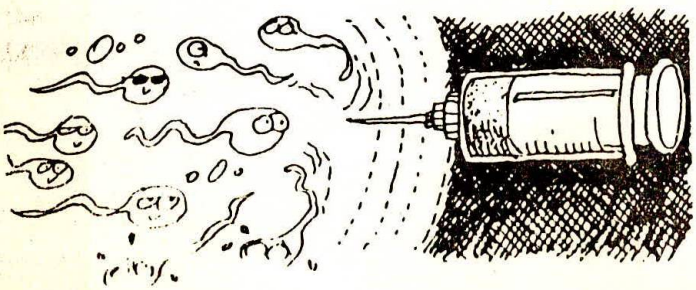


Public Policy Division
Voluntary Health Association of India

to determine the life or death of a fetus depending on its gender.

Sex-determination and sex pre-selection tests using amniocentesis have gained popularity in India, to the great concern of women activists and researchers. Information here on the situation in India is derived from one of the main writers and activists, Vibhuti Patel. The procedure of amniocentesis involves the taking of fluid from the amniotic sac surrounding the fetus and analysis of the fluid to reveal genetic abnormalities and the sex of the baby. This has complications and some risks, including risk of infection, fetal and placental trauma, and the possibility of spontaneous abortion of the fetus. Amniocentesis is a procedure previously only used when fetal abnormality or other problems were suspected.

In India, the unequal status of and social attitude to females have resulted in the use of amniocentesis for sex-determination tests, with the results of the tests being used by people to determine whether or not to abort the fetus. It is female fetuses that are being aborted generally. The spread of sex-determination tests in urban and rural areas in India has led to abortion clinics being set up in Bombay and Delhi, and even in small towns. Women's groups have protested strongly against the practice. Sex-determination tests and clinics are continuing as unscrupulous medical professionals exploit social attitudes towards women to make a profit.



The implications of the tests are profoundly disturbing. The tests result in the destruction of the female fetus; medical practitioners are profiting from the practice caused by social attitudes to women; a previously rare and expensive test has been made cheaper by the medical profession (the tests cost Rs.200-500), bringing amniocentesis within the reach of poor people who are now using the tests. (It is interesting to note that the medical profession is not adverse to popularizing use of medical technology and making it cheaper, where accessibility will result in greater personal profits.) The number of female fetuses aborted between 1978-83 as a result of the tests in one report is estimated at 78,000.[65]

There is implicit government support for the sex-determination tests which achieve population control by the simple fact that fewer female children will supposedly result in fewer births. The government has banned the test only in Maharashtra State in 1988. In contrast, after the Bhopal disaster when toxic gases were likely to cause fetal abnormalities, the Indian government is reported to have refused requests from women's groups to do amniocentesis tests.[66] Reports have been made of deformed babies being born after the Bhopal disaster. The use of amniocentesis for sex-determination and female abortion succeeds in refin-

ing and making more efficient the traditional practice of killing female children (*dudhapiti*).

The use of sex-determination tests reinforces social attitudes towards women. Activists have argued that women are not to blame for using the tests. Society is to blame for negating female life so that such traditional and 'modern' practices are forced on women and people.

Use of amniocentesis is reported to be prevalent also in the Republic of Korea. In the conservative city of Taegu, 80 per cent of hospitals had already in 1986 installed the expensive supersonic wave machines which detect the gender of fetuses.[67] Son preference is deeply rooted in Korean culture, even though family planning programmes are trying to change this attitude through public education.

> For this reason, people have undergone various methods to assure the birth of male children such as visiting fortune tellers, alkalifying one's body, taking medicine, undergoing amniotic fluid check [amniocentesis], or supersonic wave check and abortion.[68]

In Australia, and some other countries like Japan, Singapore and Malaysia among others, a technological response to infertility in women (intra-vitro fertilization or 'test tube babies') has given rise to a range of reproductive technologies that have social, legal and moral implications and could affect women's status and reproductive rights. There has been little written in Asia on this area.

STRATEGIES AND ACTION

Women's groups in India, Bangladesh, Thailand, the Philippines and Australia are known to be taking action to gain more reproductive rights for women in controlling their own fertility. Strategies developed include:

- Campaigns and demonstrations against unsafe contraceptives and new reproductive technology in South Asia and New Zealand;
- Research projects to document medical practices;
- Public education to discuss family planning practices and contraceptives in Thailand;
- Setting up birth control services for women from a women-centered perspective in Bangladesh, Philippines, India and Australia.

This is a new area of concern in the mid-1980s for most countries of the Region excluding Australia where action began in the mid-1970s.

Case Studies of Action

The following case studies document the way in which women's groups have strategized and acted in order to gain more control of reproductive processes. Focus is on Asia, as materials for this section have mainly been sent by this region. This case study of the still-in-process campaign against sex-determination and sex pre-selection is given by Vibhuti Patel, of the Women's Centre, Bombay, one of the initial groups which planned the national campaign.

Campaign Against Sex-Determination and Sex Pre-selection

In 1982, Women's Centre conducted a small survey on the incidence of sex-determination tests in the city of Bombay. Women activists had noticed bill-boards and advertisements of the test in the railway stations and in the compartments of the suburban trains. The research findings from three government hospitals, one big private hospital and two small suburban clinics confirmed that amniocentesis tests leading to female foeticide was a widely prevalent phenomenon in the city of Bombay. Two meetings organized by the Centre generated debate among feminists who felt that concerted efforts should be made to stop the abuse of scientific technology for sex-selective abortion.

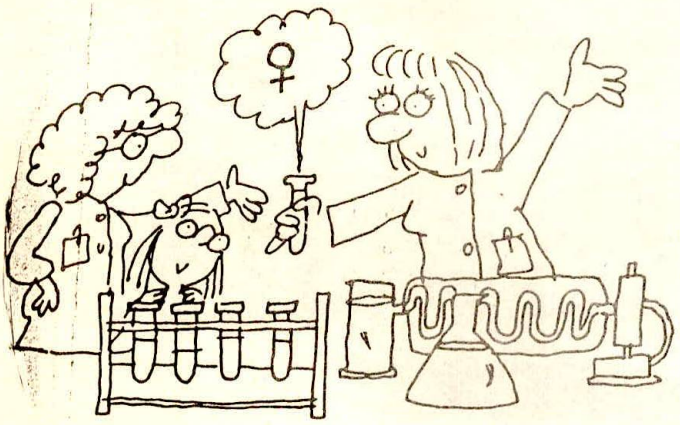
Around the same time, the national dailies carried advertisements of the New Bhandari ante-natal sex-determination clinic. And for the first time, women's groups in Delhi (*Saheli*), Bombay (Women's Centre), Calcutta (*Sabala*) and Pune (*Nani Samata*

Campaign (cont...)

March), organized protest actions against it. Research institutions such as the Research Unit on Women's Studies (Delhi) and Voluntary Health Organization of India (Delhi) also registered their protest. The Medico Friends Circle and the People's Science Movement came out openly against the 'highly educated', enlightened doctors and technicians perpetuating the status quo. ...

The debate on sex-determination tests has generated a lot of controversy among academicians and policy-makers. Most women's groups feel that amniocentesis, C.V.B., sonography and fetoscopy should be permitted only under strict governmental control and only for detection of genetic abnormalities. We are also aware of the fact that even then, unscrupulous doctors will illegally conduct the tests...

To consistently campaign against the notorious activities of money-minded doctors and the antipathy of the government towards increasing female foeticide, Forum Against Sex-determination and Sex-preselection was formed in Bombay in March 1986; doctors, scientists, lawyers, researchers and women activists are dealing with this issue through their talks, research-based papers, media coverage, poster campaigns, petitions, exhibitions, files, publications and slide shows and *dharnas* [demonstration] in front of the hospitals conducting the tests.



As a result, the issue has gained nationwide publicity. Concerned groups in Madras, Baroda, Bangalore, Mysore, Delhi, Calcutta, and Pune have created hue and cry. Mrinal Gore and two other legislators have submitted a private bill in the legislative assembly of Maharashtra. Despite its earlier antipathy, the government of India has responded favourably. In March 1987, it appointed an expert committee to study the recommendations of the expert committee of Maharashtra state and to propose comprehensive legal provisions to stop misuse of sex-determination tests by mid-May 1987. The expert committee appointed by the government has completed its work and recommended that sex-determination tests should be banned for private practice and can be used only for the identification of genetic deformities in select government identified hospitals under strict vigilance. In the monsoon session of parliament, the government was planning to introduce a bill

.... The Forum organized a parents and daughters demonstration. It was inspiring to see little girls leading the demonstration with flags in their hands. There were daughters of three generations protesting against extermination of women in the name of sex-determination.

Vibhuti Patel
'Action Against Sex-Determination and Sex Preselection'[69]

Sex Determination tests don't just kill girls

Eliminate inequality, not women.

Women's Centre

The Maharashtra parliament later approved the bill in May 1988 to restrict the use of amniocentesis for sex-selection purposes. A new act (Maharashtra Act No. XV of 1988) was passed. The campaign has now broadened to demand central rather than state legislation, as well-off couples can easily travel interstate to obtain the procedure.

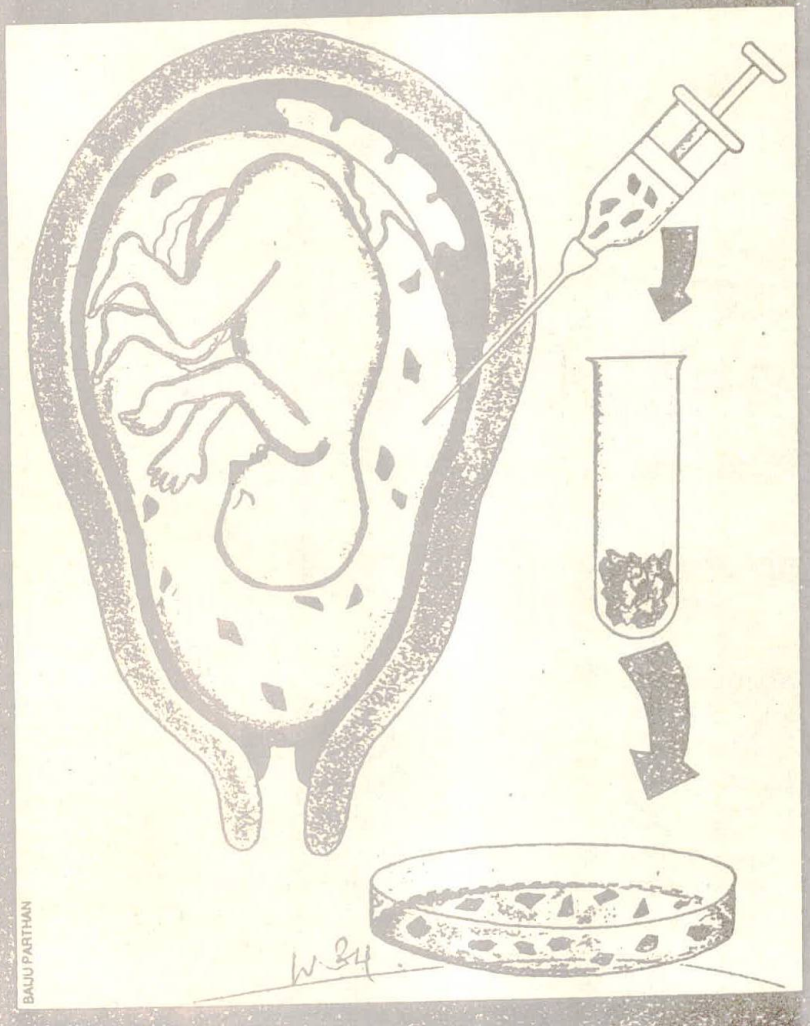
The latest update in December 1988 from the Forum Against Sex-Determination and Sex-Preselection and *Saheli* Women's Resource Centre in New Delhi notes that:

> In spite of public protest, the alarming rate at which new reproductive technologies are penetrating the core of Indian society is really nightmarish. Sex determination is only one menace... Since all these techniques are now internationally patented, and big money is involved, we need to build international resistance on these issues. It is time for all concerned individuals to pressurize the government to take a principled stand on science and technology related to reproduction. The government must show the political will to create effective and innovative ways to monitor and regulate these technologies. Women's organizations, consumer groups and human rights organizations need to urgently pool their resources to monitor these technologies and act as a watchdog.[70]

~~Campaigns on Contraceptives~~

~~New Zealand~~

~~In New Zealand, Fertility Action, a women's health group, organized a campaign in 1984 against the injectable contraceptive Depo-Provera. They wanted a study by the manufacturer, Upjohn Company, to be~~



AMNIOCENTESIS

SHOCKS • BILL TO BAN SEX TESTS • PYORRHOEA

AMNIOCENTESIS

RICHA S. CHANDRA

Amniocentesis has received bad press as a sex-detection test but it is much more than that. It can be used to discover and in some cases to treat inherited disorders

EVERY couple wants a normal healthy baby. Sometimes nature balances the odds against this. In such cases, parents are naturally apprehensive about whether or not their children would inherit the defect. Amniocentesis is one of the methods by which certain genetic diseases can be detected at a stage early enough to terminate the pregnancy if the parents want to.

Amniocentesis

The term amniocentesis originates from two Greek words—*amnion* the sac containing the foetus and *kentesis* or puncture. In general, it benefits older mothers (women over 35 years) and people with a family history of genetic defects. It can also be used to detect the sex of a foetus, an aspect that is widely abused in many parts of India.

Amniocentesis is merely a technique for withdrawing foetal material for study. It does not give any indication whether a genetic defect is present or not. Defects come to light only after the material withdrawn by amniocentesis is analysed by procedures known as karyotyping (chromosome studies), direct analysis of the amniotic fluid, enzyme studies and DNA (deoxyribonucleic acid) analysis. The procedure chosen for analysis depends on the type of defect suspected.

Amniocentesis is performed between the fourteenth and sixteenth week of pregnancy. (Another technique, chorion villus biopsy, can be performed even earlier, in the first 12 weeks or trimester of pregnancy.) Amniocentesis is carried out after ultrasonography (echosounding) which locates the placenta by means of sound waves. The procedure consists of inserting a sharp, 7-15 cm long needle attached to a syringe through the abdominal wall into the uterus. A small amount (about 30 ml) of amniotic fluid is withdrawn. It contains mainly urine and cells sloughed off from the skin, respiratory and urinary tracts of the foetus. This liquid is centrifuged (spun at high speed), so that the foetal cells settle down. These cells are then introduced into flasks containing appropriate nutrients and other chemicals which sustain their growth. After about two weeks of growth, the cells are further processed for analysis of genetic defects.

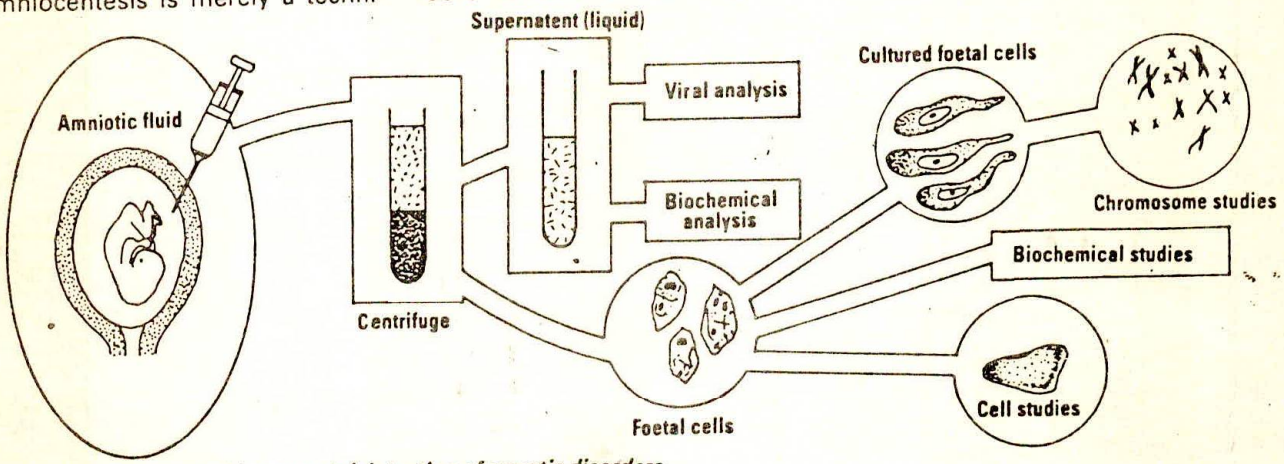
The technique is safe in experienced hands, though there is some risk (1 in 100) of inducing a spontaneous abortion and the foetus could also be punctured.

Normal and defective genes

To understand what comprises a genetic defect it is necessary to know what is normal. Each cell in the human body contains 46 chromosomes in its nucleus. Chromosomes are arranged in 23 pairs. Each member of a pair is inherited from one of the parents at conception. Of these, 22 pairs are common to both sexes and are called autosomes, while two (one pair) are sex chromosomes. Normal females have two X chromosomes as their sex chromosome complement while normal males have one X and one Y chromosome.

Each chromosome contains several thousand genes. Simply put, a gene is a blueprint for development. Each gene is a sequence of three DNA molecules. So chromosomes are made up of genes which are in turn made up of DNA.

The group of three DNA molecules (codon) which represent a gene, contain information for forming an amino acid (small fraction of a protein). The DNA content of a human cell contains enough genes to encode 1 million proteins. However, only a small fraction of this (3 to 5 per cent) actually do form proteins. These are known as structural genes. What the



BAIJU PARTHAN

How amniotic fluid is used for prenatal detection of genetic disorders

of the DNA (which is non-coding) ...es, is not clear as yet.

Structural genes 'express' themselves to form amino acids which are joined together to form proteins. Proteins, in a sense, form the basis of life. They are present in blood, muscles, skin, hair—in fact in every living cell. Each protein produced in the body has a specific role to play.

If a protein has a faulty structure it functions abnormally. The repercussions of this can be far reaching and serious enough to cause, among other conditions, mental retardation and even death. The faulty structure can be traced back to a defective amino acid which can in turn be traced back to a defective gene or a defective chromosome.

Genetic disorders

Genetic diseases fall into three categories: chromosomal, Mendelian and multifactorial disorders.

A. Chromosomal disorders occur when there are less, more or abnormally arranged chromosomes. Most autosomal disorders are lethal, resulting in spontaneous abortions.

Down's syndrome or mongolism is a chromosomal disorder in which there is an extra copy of chromosome 21. Affected people have characteristic mongolian features and are mentally retarded.

Sex chromosome imbalances have relatively milder clinical manifestations. For instance, Klinefelter's syndrome shows itself in the form of poorly developed gonads and a feminine body. It is due to one or more extra X chromosomes in males. Another sex chromosome defect, Turner's syndrome is due to the absence of the second X chromosome in females. Affected women have under-developed sex organs, a webbed neck and certain heart defects.

Karyotyping or chromosome studies of cells collected by amniocentesis can be used to detect chromosomal abnormalities.

B. Mendelian (or simply inherited) disorders arise when a person possesses a single gene which is mutant (changed) as compared to the same gene in normal people. The disorders may be:

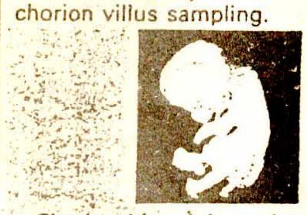
i) autosomal dominant which means that the individual shows signs of this defect even if only one gene (from a chromosome pair) has this mutation or change.

ii) autosomal recessive where the defect becomes obvious only if both genes (in a chromosome pair) have the mutation.

iii) X-linked which means that the genes responsible for the disorder are on the X chromosome. As a result of this, the risk of getting such a defect and the severity of the defect differs between the sexes. (Since males have only one X chromosome while females have two X chromosomes, one of which could be normal and compensate for the defective X chromosome with the mutant gene.)

CHORION VILLUS SAMPLING

THE past two decades have witnessed a virtual explosion of biotechnological advances which have affected every aspect of human existence. It is now possible to diagnose hereditary diseases and congenital defects in an unborn foetus as early as seven weeks after conception. This is done by a technique called chorion villus sampling.



Chorion biopsy is performed in the first seven to eleven weeks of pregnancy under strict aseptic conditions. A plastic cannula (small tube) 21 cm long and 1.5 mm in diameter is passed through the cervix upto the edge of the amniotic sac and a few chorionic cells which occur at the site of future placenta, surrounding the sac are aspirated (removed by suction). The cells are collected in a special fluid and sent to a laboratory for culture. Examinations of these cultured cells give information about the growing foetus, besides revealing the sex. To facilitate aspiration, the gestational sac is visualized using an ultrasound machine.

Chorion biopsy has certain advantages over amniocentesis. Since the procedure is done early in first three months of pregnancy the waiting period is less, the pregnancy is not yet obvious to others and the social and psychological stress is less. This allows early and safer termination of pregnancy if indicated.

Such a procedure is not without risks. There is a 4 to 12 per cent chance of precipitating a spontaneous abortion. The genetic diagnosis may be wrong in 4 to 6 per cent of cases. There is also a risk of introducing infection. However with experience these risks have been reduced to a minimum.

AJIT M. VIRKUD

Marfan's syndrome shows autosomal dominant inheritance. A classical case is Abraham Lincoln. He had the characteristic tall, thin frame, extremely long slender fingers (spider fingers or arachnodactyly), a congenital weakness of the connective tissue showng itself as hyperextensible joints and a heart weakness (aortic aneurism). It is said that Lincoln (who suffered the severe, acute chest pain that the heart abnormality causes), would have died within the year of his assassination from a rupture of the aneurysm, even if John Booth had not shot him.

Thalassemia, a disorder of the haemoglobin, is an autosomal recessive disorder. It is also known as Cooley's anaemia. The word *Thalassa* refers to the Mediterranean Sea since the trait is commonly seen among people in that region. In India the gene is highest in the Lohana community (10 per cent) from Kutch and Sind, according to an Indian Council of Medical Research study. The thalassemia gene confers some resistance to malaria. The red blood cells in affected people are very fragile and most are destroyed in the bone marrow before ever reaching the peripheral circulation. Children rarely survive beyond the age of 15, dying of liver or bone marrow failure (caused by the accumulation of large amounts of iron released from the ruptured cells).

Haemophilia and colour blindness are X-linked. Haemophilia is a defect in the blood-clotting mechanism and affects many individuals in the royal families of Europe.

Amniocentesis can pick up Mendelian disorders when there are laboratory tests available for quantification of the normal protein (which should be produced but isn't) or detection of the abnormal protein. In cases where the protein itself cannot be detected, the DNA can be studied using a technique known as DNA hybridization.

C. Multifactorial disorders: These disorders include essential hypertension and cleft lip and are caused by an interaction of genetic and environmental factors. The risk of transmitting the condition to one's children and grandchildren is less than in simple gene disorders. Amniocentesis is generally less useful for diagnosing these disorders.

Techniques used after amniocentesis

After amniocentesis, the foetal

Continued on page 65

ontinued from page 61

material may be subjected to several tests each designed to detect specific kinds of defects. These tests may be broadly classified as:

1. Direct analysis of amniotic fluid: If the substance which indicates the presence of a genetic defect (for instance, a faulty protein) is present in the amniotic fluid, then a study of the fluid itself may be diagnostic. For instance, neural tube defects may be indicated by the presence of λ-fetoprotein. This substance is produced in the foetal liver at the sixteenth week of pregnancy and excreted into the amniotic fluid when the foetus urinates.

2. Karyotyping or chromosome studies: By this procedure the number and structure of the chromosomes are studied under a microscope. Chromosomes differ on the basis of their size, the location of a centromere (which divides the chromosomes into arms of equal or unequal length) and the way in which they absorb a specific colouring agent known as the Giemsa stain. X chromosomes look different from Y chromosomes and both can be identified—thus the sex of the child can be known before birth. If an X-linked defect is suspected, by knowing the sex of the foetus one can know if it is affected or not. Down's syndrome and other chromosomal abnormalities are spotted by karyotyping.

3. Enzyme studies: Enzymes are proteins which allow certain specific reactions in cells to occur. If the enzyme is defective the reaction will not take place. Certain enzymes play a critical role in the body. If they are defective, the consequences are serious. For instance, deficiency of an enzyme known as glucose 6-phosphate dehydrogenase leads to anaemia, as the red blood cells rupture very easily. If another enzyme called tyrosinase is deficient the person will be an albino.

Enzymes studies estimate the quantity of particular enzymes in the amniotic fluid and accordingly it is possible to know whether or not the foetus has a genetic defect.

4. DNA analysis: This method deals with the actual material of life, the DNA itself. It is used to diagnose genetic diseases due to mutations (changes) in the DNA by pinpointing the exact place where these changes occur.

Hybridization: Normal DNA exists as two tightly-coiled strands. One of these strands is separated and labelled with a radioactive material to become a DNA probe. These probes are mixed with DNA strands obtained from the foetal material. If the probe and the foetal DNA 'recognize' each other and pair off a hybrid DNA molecule results. The number of hybrids formed is checked out and this gives an indication as to whether the foetal DNA is abnormal or not. This method allows detection of a single abnormal gene among thousands of normal ones.

A specific disorder known as λ-i-antitrypsin deficiency, which leads to fatal respiratory disorders in childhood, can be detected by this method. The method cannot be used for diseases where the site of the defective gene is not known (as in Huntington's Chorea, a disease leading to premature death through repeated respiratory infections).

B. Restriction Fragment Length Polymorphism (RFLP)

Another technique in DNA analysis is restriction fragment length polymorphism (RFLP) and genetic linkage analysis. This method is used to detect sickle cell anaemia in thalassemia. It looks for what are known as genetic markers or genes responsible for obvious differences such as various feather colours in poultry or variants in the ABO blood groups in humans. Markers chosen must also be present near the defective gene which is being studied. So by detecting the marker, the abnormal gene is identified.

Thus amniocentesis is not merely a sex determination technique. When performed along with other procedures it is a powerful tool for detecting genetic defects. All genetic defects are not life-threatening and some can be treated with encouraging results.

A case in the point of phenylketonuria, which occurs (because of the absence of the enzyme phenylalanine 4-monoxygenase). If untreated it results in severe mental retardation. However, if a child with this defect is fed on a special diet from birth, the child grows normally. Thus, genetic testing has immense potential for constructive use or abuse. The choice is ours. □

C.D.S. LAKSHMANAN

Do you have bad breath? Something even your best friends can't tell you! Only your tooth brush knows for sure. Regular dental check-ups and proper care is the only answer

Doctor, what is pyorrhoea?

Pyorrhoea is discharge of pus in pockets formed between the gum and the tooth. Here bacterial growth gets activated, and causes infection and inflammation of the gums. Commonly called a peridontal disease, pyorrhoea is a disease of the teeth-supporting structure. That is, it eventually upsets the integrity of the structures between the gums, roots of the teeth and the bone. As the condition worsens, it results finally in the loss of tooth.

What role does bacteria play?

Normally, all kinds of bacteria are found in the mouth. Bacteria come under two groups—those which thrive in the absence of air and those which thrive in the presence of air (aerobic). In gum diseases, anaerobic bacteria are found. When present in the mouth anaerobic bacteria may activate the inflammation of gums.

How do you diagnose pyorrhoea?

Initially, there is a deposition of plaque on the teeth. Plaque is an accumulation of debris on the teeth where bacteria proliferate. (Though many plaque solvents are available in the market, plaque cannot be removed unless the teeth are scaled thoroughly and the patient is given instructions on proper cleaning of the mouth). This is followed by gums, pus formation and swelling, foul smell or bad odour in the mouth and destruction of the bone around teeth. It is then that the patient comes to the dentist complaining of bleeding while brushing, bad odour in the mouth or of a pale yellow discharge when the gums are pressed. All this leads to gum margins receding and damage to soft tissues and bone surrounding a tooth. The tooth looses its support and begins to shake. It requires to be removed when the condition worsens. It is possible to see, with the help of a probe, that the attachment between the gum and the tooth has developed a gap, forming a pocket.

What causes poyorrhoea?

The causes are many. It can start with normal gum inflammation known as stomatitis which a patient can get from contaminated glasses used by others who have the disease, and also from contaminated tooth brush exposed to infectious bacteria, cockroaches, flies, etc.

Diabetes, indigestion, constipation, lung diseases, infections in the nasal passage and throat etc can also cause bad breath.

In women, hormonal changes in the body are often related to gum problems. Hormonal changes could aggravate gum injury, there could be bleeding of the gums and there could be rapid deterioration of dental health. These changes could take place during pregnancy and at certain times during the menstrual cycle.

Inflammation of gums can also be caused when there is no proper adjustment and correlation between the upper and the lower teeth. This leads to irregular pressure on certain teeth. You must have noticed that children or adults, who have protruding upper teeth not in contact with the lower teeth (called wrong bite), cannot breathe through their nose when asleep. They breathe through their mouth which causes the saliva to dry up, giving rise to plaque formation and activation of bacteria.

At what age is pyorrhoea more common?

COLOUR MAGAZINE
The Telegraph
28 OCTOBER 1990

Over 25 lakh female foetuses are aborted every year because the parents want only male children

Originally designed to detect genetic disorders and for diagnosis, most doctors are now using amniocentesis and ultrasonography solely to determine the sex of the foetus

The lure of the fast and easy buck has led to an explosion of sex determination and abortion clinics. Their favourite catchline is: "Pay Rs 500 now rather than Rs 5,000 later"

■ So far, only one state, Maharashtra, has passed legislation against pre-natal sex tests. But even that is full of loopholes: in two and a half years, just one complaint has been lodged

BOY OR GIRL?

It must be the oldest cliche in the world, but the tension wound up in the question, "Boy or girl?" would reduce Alfred Hitchcock to one big yawn. The heart misses a beat when the lady misses her period. The gynaecologist examines her, prescribes the urine test—and the coil begins to wind itself in the guts. The test confirms that the lady is expecting and the gynaecologist's congratulatory advice is the first round of silent applause you hear for the goodness of God.

The mother feels the movements of the little one inside and the father gets the greatest kick; the crosswords are no longer done together, they have been replaced by the jotting down and cancelling of two separate lists of names: the boy's and the girl's. The blue and the pink woollen balls are all over and so is everything else in two separate colours.

By the time the mother is in her sixth month, the old wives confidently predict the sex of the little one by the amount of weight she is putting on or the vertical line down her swollen belly and the younger friends assure the parents-to-be that it will be a girl by the glow on her cheeks (more by heads-or-tails, actually). The question uppermost in everyone's mind by the ninth month *is* the oldest cliche in the world. Very very few are concerned more about the welfare of the new arrival than its sex. Rare is the father who paces the floor outside the labour room or operation theatre not wanting to know what the nurse will come out and tell him first. Then, the multiple explosions of strung-together Diwali bombs go bang-bang in the head and suddenly the prolonged pleasure of the Great Mystery is over. You know what the next set of nappies will be: pink or blue.

Science, however, is a double-edged sword. While it can unravel many Great Mysteries, it can also take over life completely so as to make the personal computer the father of man.

In the West, the inexorable juggernaut devised a test called amniocentesis some 30 years ago, mainly for the detection of genetic defects. Amniocentesis involves the insertion of a hollow needle into the uterus of a pregnant woman to draw out a sample of the amniotic fluid in which the embryo is suspended. This fluid is tested for foetal abnormalities, specially in the cases of expectant mothers who are above 34 years. The test is vital to determine the possibilities of mental retardation, haemophilia or chromosal abnormalities in the child; the chances of a woman above 34 having a mongloid baby are also higher.

> The need to know the answer while the mother is carrying has led to a boom in the sex determination test business. And, of course, to a mass murder of female foetuses...

But the bad news is that amniocentesis is now used primarily to determine the sex of the foetus and, shocking as it may sound, murder the innocent, helpless foetus if it happens to be female. At least one popular textbook of obstetrics denounces its use for sex determination, saying, "...amniocentesis...should not be offered for such trivial reasons as choosing the sex of the offspring."

In India, however, the earlier the female can be done in, the better. And what better way than foeticide? Amniocentesis for sex determination with the sole idea of aborting the foetus if it is female has been a regular practice for more than a decade now in a country where even the "broadminded" man and "liberated" woman is over the moon with joy if it is a boy and at best gulps with much bravado, "I always wanted a girl; they are much cuter." Ask the female nurse whose monetary gains outside the operation theatre are not according to the success of the delivery or Caesarian section or to the wellbeing of the mother and child, but according to the 'colour' of her announcement. Pink or blue.

Sex determination tests were widely done in Bombay, unquestionably the most 'modern' of our cities, and there was a rampant growth of such clinics in the smaller cities of Maharashtra in the decade preceding 1988. According to R.P. Ravindra, a member of the Forum Against Sex Determination and Sex Pre-selection (FASDSP), these clinics were a dime-a-dozen in places like Dhule, Jalgaon, Amravati, Nashik and Nagpur.

A study by Dr Sanjeev Kulkarni of the Foundation for Research in Community Health was commissioned by the secretary to the Maharashtra government's department of public health and family welfare. The study, *Pre-natal Sex Determination Tests and Female Foeticide in Bombay City*, discovered that most gynaecologists performed amniocentesis solely for sex determination and even when they were done for the detection of genetic disorders, they formed a very small percentage. A near 100 per cent of the 15,914 abortions done during 1984-85 by a well-known abortion clinic in Bombay were undertaken after sex determination tests. There are truths, shocking truths and statistics like this.

The turnover of a diagnostic clinic on Rafi Ahmed Kidwai Road in central Calcutta ran into Rs 10 lakhs in a single month of 1987 after it started amniocentesis for the first time. Of course, in the subsequent years, its *annual* turnover was barely Rs 10 lakhs. The reason was simpler than one would think: almost every pathological laboratory in the city took the cue from the young, enterprising Dr Piyush Aggarwal of the central Calcutta clinic, and the fast buck was quickly split. It wasn't as if Dr Aggarwal's clinic ushered amniocentesis into Calcutta; the unique feature was that he introduced the test exclusively for the purpose of sex determination. His publicity literature spoke of amniocentesis solely as a test for determining the sex of the foetus.

In Calcutta, again, a women's organisation donated a foetal monitor to a hospital and the doctors there officially claim that it only informs them of the wellbeing of the foetus. But since the monitor also indicates the sex of the foetus, it is a foregone conclusion what it is used for. The doctor supervising the monitor says: "We *never* tell the parents the sex of the foetus." But it is reliably learnt that a section of the hospital staff makes private deals with the parents.

All arguments against this misuse of amniocentesis are countered by vehement statements such as Nivedita Chakraborty's. "Since I already have a daughter, why should I not be given the choice of having a son?" she asks angrily. "Maybe we will manage to pay the dowry of the first daughter; the second will probably die in a stove accident after marriage, anyway."

Many doctors also ethically justify amniocentesis and subsequent abortion as long as it is done within 20 weeks of

Chandu Mhatre

Amniotic fluid being withdrawn from a pregnant woman

pregnancy, that is, merely the medical safety part. Sangeeta Poddar, a mother of three daughters, heard about this test when she was carrying again. "Both my husband and I did not want another daughter. A male child was also necessary to run the family business."

And, then, the rasping query of Malini Kumar, 25, married and resident of the posh Ballygunge Circular Road area of Calcutta: "Cut the drama, *yaar*. Why should I not have the right to decide the sex of my child if I can have the right to decide whether or not to have a child?"

After nearly 10 years of relentless campaigning by various concerned groups including the FASDSP, the state government in Maharashtra enforced the Maharashtra Pre-natal Diagnostic Techniques Act, 1988 (May 10), thus making that state the first in the country to legislate anything of the kind. In effect, it attempts to regulate the use of modern medical technology in India. On January 2, 1989 the State Appropriate Authority (SAA) and the State Vigilance Committee (SVC) were set up, but so far only 14 have applied to the SAA for registration to conduct pre-natal sex determination tests for the limited purposes permitted under the Act. The SVC, too, has had just one complaint lodged with them so far: about a doctor in Bombay continuing such tests, according to the Maharashtra state health department. It does not mean that the picture has become rosy; groups which fought for and won a legislation against these tests contend that they are still going on to a large extent.

Dr Sanjeev Kulkarni's study found that the cost of the amniocentesis ranged from Rs 70 to Rs 600 and though most doctors admitted that their "market" was largely the upper income groups, advertisements like, "Pay Rs 500 now than Rs 5,000 later," did help to convince people that a sex determination test and abortion were a pittance compared to the cost of marrying off a daughter.

Medical techniques like amniocentesis, chorion villi biopsy (CVB) and ultrasonography were blatantly misused, like radars to identify the 'enemy' and destroy her. The Erikson Method, which entails the separation of the chromosome and artificial insemination, was also practised by five doctors in Bombay before the ban, some women's groups allege. In fact, Dr Erikson, the pioneer of this method was invited to Bombay by a local doctor.

At that time, apart from such clinics and abortion centres, there were at least 30 laboratories doing chromosal analysis, and half of them were in Bombay alone.

After the Act came into force, the whole gamut of sex determination tests were supposed to be thrown out of the purview

of private hospitals and clinics and be confined only to government hospitals. There will, of course, be loopholes and the SAA does give permission to conduct these tests for "limited purposes" like detecting genetic disorders. How limited the purpose will be is anybody's guess, allege the women's groups.

Says Ahilya Rangnekar, the Maharashtra CPI(M) leader: "This limited purpose application can be misused. The tests are going on—maybe, not openly." Rangnekar, whose Shramik Mahila Sabha campaigned against the tests, had conducted a survey six months ago and discovered 17 cases of abortion, in each case the woman admitting that she was aborting "because the distance between the first and second child is too small". Rangnekar also discovered that in each of the 17 cases, the first child was a girl. The women, when contacted, said they were "very progressive" and would not dream of aborting just because it was a female foetus. Their mothers-in-law, however, gave a clearer picture. When Rangnekar questioned them, they countered, "What will we do with a second girl?"

The Marxist MLA was convinced that unless the campaign among the women was effective, there could be no change in the situation. "There is this feeling that unless there is a son, there is no chance of going to heaven," says Rangnekar.

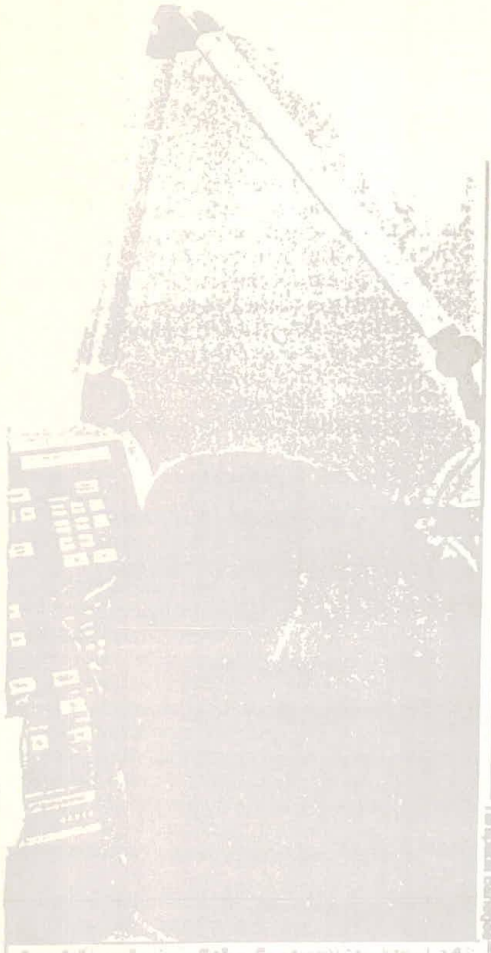
Foetal monitor, which can be used for sex determination

An ultrasound scanner to determine the

The efficacy of the legislation in Maharashtra is extremely doubtful when you take a look at those being punished for violations. Just one complaint has come in so far. And those found guilty are liable to get terms not exceeding three years rigorous imprisonment and fines of Rs 5,000. The health department says that the SVC cannot act in the absence of complaints and there has been only one since June 1988: "This is a good excuse for the government. It thinks the people should come forward and give evidence," thunders Tara Reddy, general secretary of the Maharashtra branch of the National Federation of Indian Women. "What is the government machinery there for if it can't find out?"

Reddy claims that the ban was clamped under pressure from women's groups including her own, but feels that it has remained all paper-ink-and-file. She gives an example of some clinics in Kolhapur which have been openly advertising the tests despite the ban. "There are very obvious notice boards outside these clinics. We went in a delegation to the Kolhapur collector and brought it to his attention. But there was no action. And the government doesn't seem interested in taking action. Unless there is strict implementation, nothing will happen.

"What happens is that tests are done at the government centres and the abortion is done elsewhere after 15 days so that the



Tarapada Banerjee

health and sex of the foetus

nexus can't be established. Abortion is one's right, and the tests are allowed for some purposes; so the chain continues to operate resulting in female foeticide."

There is another angle to the Act in Maharashtra. Sex determination clinics began farming out in neighbouring states like Gujarat, Madhya Pradesh, Uttar Pradesh and Goa. Members of the FASDSP in Ahmedabad said that 50,000 sex tests were recorded in 1987-88, specially in the south Gujarat areas bordering Maharashtra. This was around the time the Maharashtra government announced that it would introduce a Bill banning amniocentesis and other foetal tests.

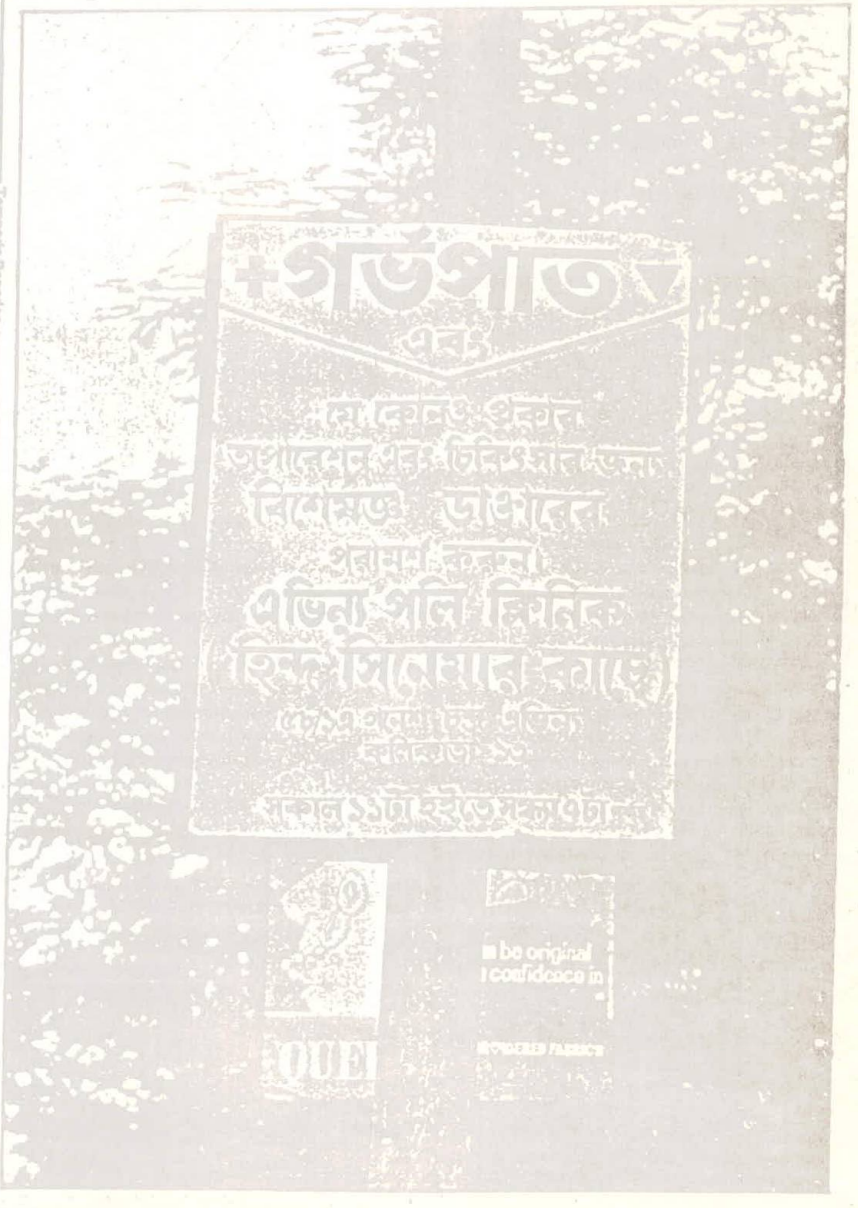
Some doctors like Dr Datta Pai, director of Pearl Centre in Dadar, Bombay, were conducting these tests for six years before the ban spoilt it all. Among the reasons for Dr Pai giving it up was that he was appointed a member of the state committee formed to study sex determination methods and work towards legislation. But Dr Pai feels: "Happy and wanted children is what we desire. Low-profit, no-loss clinics must be set up. There are 200 million orphans in our country. Who cares about them? Abortion is permissible in India, but the laws don't say anything about the sex of the foetus. The idea of no more than two children per couple has to be communicated to the people. Unwanted babies must be aborted. I'm a strong protagonist of sex determination tests."

Another doctor, who prefers to remain anonymous, goes one step further. According to him amniocentesis gives 97 per cent accurate results, but with chorion villi biopsy it is 98 per cent. And CVB is an aesthetically better procedure. "I'm waiting for the opportunity to use the business principle of lower margin of error. Earlier I could have advertised this for mothers who wanted male children," he says blandly. "Now it will have to be the less effective word-of-mouth publicity."

A pathologist, who has set up his clinic in one of the elite areas in central Calcutta, requested anonymity for fear of earning the wrath of his gynaecologist friends and losing references. "I'm personally against amniocentesis used solely for determining the sex. But I have to comply with the request of the gynaecologists." Unlike most other pathological laboratories in the city, however, he does not accept cases directly.

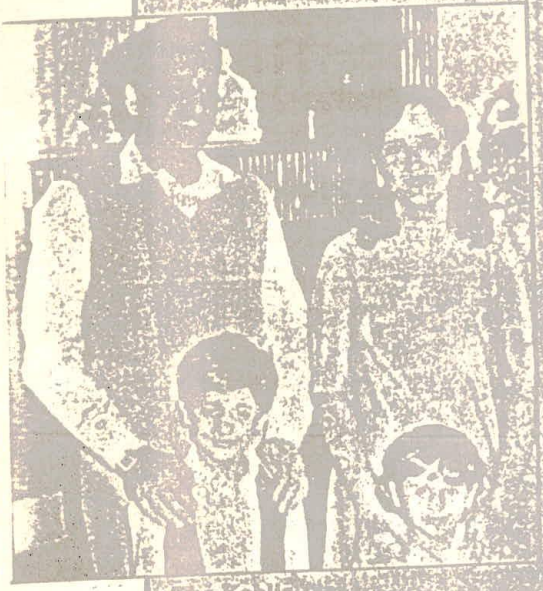
Another pathologist confirmed that amniocentesis was not possible without the direct interest of the gynaecologist. "Ten cc of fluid is required for the test and it is difficult to extract this fluid without the help of the gynaecologist. If there are any traces of blood in the fluid, the result will be inaccurate."

Selling abortion



Tarapada Banerjee

CREATING A BOY



The Kohlis

"Plan your family. Pre-determine the sex of your child without medical test or aid. Consult Mrs Kohli, 5/1 Russell Street, Calcutta-71." This advertisement appeared in the classified columns of the city-based English dailies between mid-1987 and early 1988. Then, all of a sudden, it stopped. The newspapers had decided enough was enough. They did not wish to be party to any form of advertising that might encourage the unethical practice of aborting the female foetus.

But Kiran Kohli's business continues. She and her husband Arvind Kohli, who assists her, argue: "What we give the couples is conception advice. We ask the couples for their dates of birth and details of the wife's menstrual cycle and after making certain calculations we tell them exactly when to conceive to have a boy or a girl. This is basically helping the couple to pre-plan their family. Though we have the expertise, we do not determine the sex of the foetus after it is conceived. Therefore, the question of encouraging abortion does not arise."

Mr Kohli, who does most of the talking, claims that till date they have done 30 cases with 100 per cent success rate. However, out of these 30, only two wanted daughters," he admits. "But we have never come across a newly-married couple. Those who have come to us already have two daughters."

The couple describe their system of "neo family planning" as "very old wine in a new bottle." Says Mrs Kohli: "The system adopted by us is highly sophisticated. It is time-tested, and probably as old as 2000 years. I have a chart which I have decoded after consulting a lot of old books. I calculate the data provided to me by the parents on the basis of this chart and tell them when to conceive."

Asked how she got the chart, Mr Kohli replies: "We were in a joint family. It just came out of one of the files. But how it came there we do not really know." Pointing towards his wife he says: "It took two years for her to decode it."

So what is this chart all about? Mr Kohli pauses and then, like a true businessman, says: "It is a secret. Yes, it is our trade secret. To give you a little hint, it seems to be from West Asia. There are certain words in Persian. I wouldn't like to say anything more on this."

Mrs Kohli says she first experimented with the chart among her family members as a hobby—with 100 per cent success. Then she started doing it professionally in 1987. Now we have even started getting repeat cases. She charges Rs 500 per case, says Mr Kohli.

M.D.

Care has also to be taken not to harm the foetus while extracting the fluid and often an ultrasonogram is recommended to ascertain the exact position of the foetus prior to the extraction. In fact, the sex of the foetus can be determined in the ultrasonogram and amniocentesis done as a confirmatory test.

Doctors admit that there are three major risks in amniocentesis: (1) trauma to the foetus, to the placenta, to the umbilical cord or to maternal structures; (2) serious infections; and (3) miscarriage or premature labour. There is also the possibility of causing haemorrhage to the placenta and the amnionic sac perforation of the placenta may lead to significant transfer of foetal blood to the mother which may ultimately cause haemolytic disease in the foetus. Therefore, location of the placenta through ultrasonography is also recommended, but many doctors skip this if they want to cut costs for their cases. Most pathologists who take up cases directly also avoid ultrasonography before amniocentesis for the simple reason that the first test might provide sufficient knowledge for the parents and they might not return for amniocentesis.

Ultrasonography is accurate only after 20 weeks of pregnancy while amniocentesis can predict the sex of the foetus with sharper accuracy in the 12th or 14th week. Aborting in the 20th week is fraught with greater risks than in the 14th week and according to the law, too, abortion is permissible only within 20 weeks of pregnancy. Many doctors are of the opinion that abortion even after the 12th week is risky.

The Medical Termination of Pregnancy Act lays down several grounds on which abortion can be done; but as with most laws, there are as many loopholes as there are grounds. Most parents who want to kill a female foetus allege that the pregnancy was a result of contraceptive failure. The pathologists and radiologists alter the medical reports to say that the mother was suffering from disease which threatened the health of the foetus and the child may have been born abnormal or that carrying the foetus was a danger to the mother's life.

In India, nearly 60 lakh abortions are carried out every year; of these, only about 10 lakh in licensed clinics. As many as 25 lakh foetuses are destroyed because they are female. The effects of such large-scale female foeticide are telling: In 1921, for every 1,000 men there were 972 women. When the last census was taken, in 1981, the number of women per 1,000 men had come down to 933. In West Bengal, the situation is still worse—the male-female ratio in the 1981 census was found to be 1,000:911.

In 1971, the total number of men in the country exceeded the total number of women by 1.99 crores. By 1981, the difference had grown to a staggering 2.38 crores. Such frightening imbalances are, in turn, certain to lead to even greater social problems.

A spokeswoman of the Missionaries of Charity says: "If there can be an anti-dowry Act, why can't the government bring in national legislation to ban sex determination tests? Side by side, the aborting of female foetuses should also be checked." Another social worker attached to a government family planning clinic adds: "Every couple should be asked for a declaration stating the reason for seeking abortion. If the reason is found to be false, there should be a punishment clause." An expectant mother said: "Not banning sex determination tests in the country means the government is encouraging cold-blooded murder. It is female foeticide by the government."

Anil Grover with Lekha Dhar and Monimoy Dasgupta

BAN FEMALE FOETICIDE

SUNITA Chaturvedi was 21 when she became pregnant for the third time. Already 'burdened' with two daughters, aged three-and-a-half and one-and-a-half her husband Girdhari, and her in-laws were anxious to know the sex of the third child. It certainly was not going to be a girl again, they had made up their minds. It would have to be a boy this time. If, unfortunately, it turned out to be female, they would get rid of it, they told a bewildered Sunita.

Having heard of the flourishing trade in amniocentesis in Bombay, they decided to come here from Mathura, where they lived, to find out the sex of the the unborn child. They arrived in June '86, when Sunita was about four-and-a-half months pregnant, and consulted Dr. Meenaxi Merchant at an Opera House nursing home. Dr. Merchant performed the, amniocentesis test and on finding that the foetus was female, advised Sunita to undergo abortion under the Medical Termination of Pregnancy (MTP) act.

The abortion was done on July 15 by the suction method or dilatation and evacuation method. Sunita was discharged the same evening and was advised to take ampicillin and pain killers.

Sunita returned to Andheri where she was staying with some relatives. The following day, she developed pain. On July 17, Dr. Merchant was informed of the incessant pain and she advised Sunita to continue with the pain-killers. That night, Sunita's condition became worse. She suffered from breathlessness, palpitation, severe pain and general weakness.

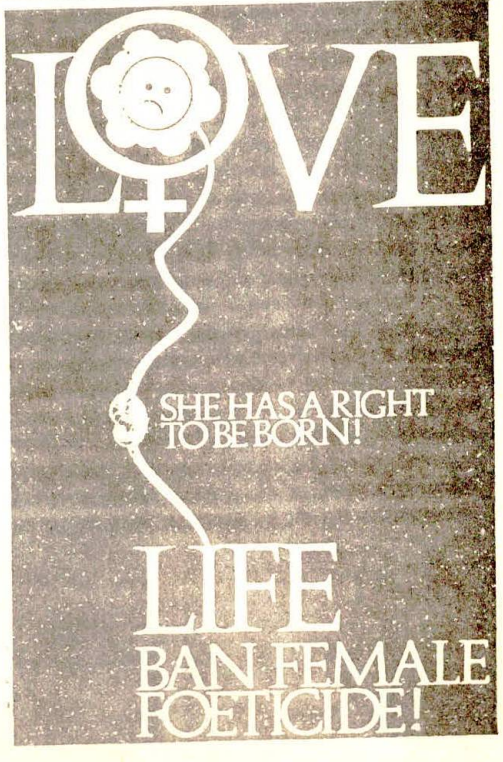
The following morning (July 18), both Dr. Merchant and Dr. Rajani Arya in whose clinic the abortion was performed, were contacted and they asked the relatives to bring Sunita over to the clinic.

Sunita and her relatives immediately left in a taxi, but on the way Sunita became unconscious. The frightened relatives took her to the nearest hospital, (Nanavati) where she was admitted.

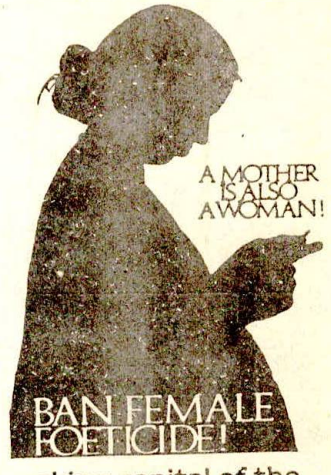
Sunita died on the 19th. The cause of the death was given as penetration or blunt injuries to the abdomen associated with post-operative rupture in that region or due to the injury while doing amniocentesis.

Consequently, Mahila Dakshata Samiti has filed a writ petition in the Bombay High Court seeking to prohibit amniocentesis or any other sex determination test from being carried out and the selective abortion of the female foetus. The petition, filed as a public interest litigation, also seeks to punish those who had indulged in the illegal practice resulting in the death of Sunita.

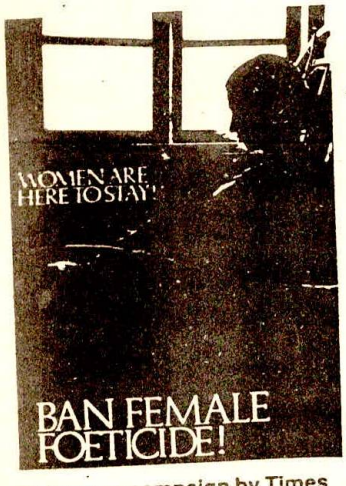
The petition raises some vital questions. It points out that under the MTP Act, while one medical practitioner is allowed to give an opinion in favour of abortion, if the pregnancy is less than 12 weeks, two medical practitioners must give their opinion if the pregnancy is more than 12 weeks but less than 20 weeks. The rules also provide that while abortion



Though amneocentesis should be performed only after 16 weeks of pregnancy, doctors making capital of the obsession for a male child exploit the weakness of society thus perpetuating the gruesome practice of killing female babies even before their birth



A 21-year-old woman died recently after undergoing the amniocentesis test and abortion to get rid of a female foetus. Mahila Dakshata Samiti, a charitable organisation, has now filed a writ petition in the Bombay High Court seeking to prohibit amniocentesis or any other sex determination test from being carried out and the selective abortion of the female foetus. It also seeks to punish those who had indulged in the illegal practice, resulting in the death of the young woman. In a society obsessed with male children, the Samiti says, women are forced to undergo abortions when the foetus is found to be female. The government has failed to take stern action despite several appeals to forbid the test from being used for this barbaric practice. The petition has been filed to prevent recurrence of such gruesome crimes. SAROJ NATARAJAN reports



This press campaign by Times artist Nana Shivalkar was displayed at the 1986 Ashok Jains Awards for National Awareness Advertising

before 12 weeks can be performed by dilatation and evacuation or suction method, abortion between 12 and 20 weeks must be done by other safer methods.

Yet, the petitioners point out, the abortion on Sunita,who was over 20 weeks pregnant, was performed by the suction method, which is unethical and constitutes grave negligence on the part of the medical practitioners. Sunita's discharge the same evening they add, was an act of further negligence.

The petition urges that all relevant documents and reports at the nursing home relating to amniocentesis and abortion and papers and death register at Nanavati hospital, where she died, be seized. The petition also prays for a directive to the Maharashtra Medical Council and the Indian Medical Council to enquire into the matter of the death of Sunita as well as the doctors conducting the sex tests, especially Meenaxi Merchant and Rajani Arya, and debar such unscrupulous doctors for encouraging such practice of eliminating a female foetus.

The petition has also sought by way of interim relief, prohibition of amniocentesis or any other sex determination test from being carried out pending the final order. But the court has not granted it because the government counsel promised to produce the relevant documents.

"Amniocentesis, a method used to detect genetic abnormalities or deformities, is being misused to find out the sex of the foetus, leading to selective abortion of the female foetus," says Sudha Varde of the Mahila Dakshata Samiti. "Though the test should be performed only after 16 weeks of pregnancy, doctors making capital of the obsession for a male child, exploit the weakness in society, thus perpetuating the gruesome practice of killing female babies even before their birth," she adds.

Moreover, she points out, termination of pregnancy is to be done under certain circumstances to save the life and health of the pregnant woman or child. 'However, the provision of the act is misused by many unscrupulous doctors and misguided members of society to eliminate a female foetus by using sex determination tests," she points out in the petition.

The MTP Act does not aim at abortions for getting rid of female foetuses, she avers, adding that notwithstanding the provisons of the act, no person has a right to take away the life on the basis of sex and it is discriminating and violative of Article 14 of the constitution.

Meanwhile, a bill has been introduced in the state assembly by Mrinal Gore (Janata), Shyam Wankhede and Sharayu Thakur (both Cong.) seeking a ban on amniocentesis leading to selective abortion of the female foetus. A similar bill has also been introduced in the Lok Sabha by Sharad Dighe (Cong.). It seeks to amend and MTP Act to prevent abortions being done with a view to eliminate female foetuses.

The state government has also appointed a committee to examine the legal implications of the existing provisions like the MTP Act, the IPC and the Cr. P.C., their adequacy and recommend additional safeguards if necessary. It will also examine the present physical provisions (like the number of clinics, hospitals) available for performing amniocentesis, if this test could be regulated, and if so, how. The committee will also suggest a way of educating people on the medical and social ills existing in society.

Asked why Dr. Pai, who blatantly promotes the test, was also taken on the committee, an official of the health department said the objective was to include people with different shades of opinion on the committee.

It is interesting to note that the Foundation for Research in Community Health, a city-based voluntary organisation, which has been asked by the government to collect data on this, had earlier sent circulars to the government and civic health departments to find out the number of public hospitals conducting the test. Ironically, the replies sent said 'amniocentesis facilities are available in all the hospitals'.

Bio Medical Interventions: Young Women's Future Choice or Control?

Wendy Harcourt

Public Policy Division
Voluntary Health Association of India

Wendy Harcourt examines the issue of the rapid introduction of reproductive technology in both the North and the South by critically examining the way in which medical intervention is developing. She argues that in considering future choices for young women, medical intervention should be developed along the lines determined by women themselves rather than being left in a scientific ethical vacuum.

Young women are now offered a potentially far greater range of medical choices to exercise control over their fertility, the timing of pregnancy and reproductive health. In this article I would like to raise some questions about the implications of these new possibilities by examining the medical intervention in reproduction from two aspects. First the debate (largely in the North) around the not-so-unambiguous benefits reproductive technologies have brought to individual women. And secondly, the social and political implications of an uncritical acceptance of these technologies for developing countries. In looking at young women's future role as mothers and workers, these issues of medical choice or control are critical to promoting an equitable development which empowers all people in the future.

Defining reproductive technologies

Test tube babies, amniocentesis, the "pill", family planning, medical delivery are all increasingly familiar terms of 20th century reproductive technology. Though reproductive technology is an ancient concept and practice - women in all cultures and ages have sought to prevent or increase their fertility - we have seen in the 20th century an increasing number of scientific and medical techniques to intervene in the "natural" processes of pregnancy and birth.

Reproductive technologies can be divided into four categories:[1]

1. fertility control (technologies preventing conception: i.e., family planning, the "pill", interuterine devices, sterilization);

2. management of labour and childbirth (the technologies monitoring and controlling the process of labour and delivery: i.e., medicalised childbirth, hospitalising of childbirth, foetal heart monitoring, instrumental and caesarean deliveries);

3. health and genetic characteristic of foetuses and newborns (the techniques for neonatal care, experiments for human genetic engineering, i.e., amniocentesis, human cribs);

4. conceptive technologies (promotion of pregnancy through techniques for reversing infertility: i.e., *in vitro* fertilization, surrogate motherhood, "test tube" babies, embryo transfer and artificial wombs).

In each of these four areas, Western science has established a domain of expertise which has determined the present reproductive process in the North and the lines along which third world governments and multilateral agencies have and are developing. Given the often unchallenged dominance of this medical discourse we need to clarify further the assumptions underlying the uncritical use of reproductive technology.

First, the aura which surrounds modern medical and scientific discoveries obscures the complex ethical, political and social field in which medical science is embedded. Removed from every day life in laboratories and hospital clinics, medical innovations appear to be outside of the ordinary person's comprehension despite the importance medical intervention plays in modern society. One reason there is so much controversy and debate over aspects of reproductive technology is that scientific technology is, like any other social process, formed in a social, historical and cultural context. This is even more so in an

area dealing with such socially significant events as pregnancy and birth. However, in our 20th century rational discourse of science which divorces scientific facts and progress from social and ethical questions, we are too often confronted with innovations in scientific technology which are adopted without reference to the wider social and ethical milieu.

When one looks at the effects that new technologies have had on individuals and society we can see that the medicalisation of child birth, the wide spread use of contraceptive devices, the large number of routine medical interventions in childbirth have had direct implications for changes in religious, moral and social behaviour. Despite the hi-tech cleverness, the choices to use these innovations cannot be safely made in a scientific vacuum. This, however, is precisely what some critics argue has been done.

The first part of this article takes up the debate surrounding reproductive technologies by examining how, for individual women, particularly in the North, reproductive technologies have been introduced without enough awareness of the social issues, resulting in some ambiguous benefits for women.

Ambiguous benefits

Two polarities have emerged in recent assessments of the impact of reproductive technology. The first, as claimed by the majority of its practitioners, is that reproductive technologies offer parenthood to those who would otherwise be unable to have children, fertility control for those not wishing children, the previously unthought of choice of whether or not to bear chromosomally abnormal children, and safer, more controlled childbirth with a far higher chance of premature and neonatal survival. In this view, reproductive technology is a triumph of science over nature and offers boundless possibilities for science and the women who are its beneficiaries.

The opposite view has also emerged of the dangers of medical science stepping beyond ethical bounds and public control. The right-to-life campaign in response to abortion, the public reaction to surrogate mothering, the "legal rights" of "orphan" embryos and "brain-dead" women being delivered of children are examples of this view. [2]

Somewhat ironically, feminists have also joined the debate from a negative viewpoint,[3] though their arguments have a more acute focus on the impact of medical technologies on women's lives than on the ethical dilemmas. They argue that far from offering women more possibilities, present reproductive practice is a restrictive, indeed repressive practice. In this critique, (male) medical science is seen as victimizing women; using them as vehicles for experimentation and reproductive technology is characterised as an attempt by men to reappropriate women's unique source of power: reproduction.

My view shares none of these positions though it is guided at least in part by the challenge raised in the feminist critique. Instead, I enter the debate by raising a different question as to whether reproductive technologies are signs of triumphant progress or misogynist repression. Given the high-powered development of reproductive technologies, I would begin by asking the basic question: who decides what for whom?

Reproductive technologies have the potential to give women a greater control over their fertility. The "pill", heralded the so-called "sexual revolution" in the 1960s, as well as an easy way to space families, challenging many religious and cultural norms. Techniques to produce fertility offered the chance for previously infertile parents, or women not in heterosexual partnerships, to have "biological" children. Medical techniques in childbirth have allowed once dangerous complications to be handled routinely.

The rider is that all of these advantages were ushered in by a medical science whose aim was not so much to improve women's life choices, but rather to perfect techniques which often ignored the patient as a holistic subject. Medical science has constructed the modern notion of the patient as a clinical subject which treats the body, removed from the patient's individuality and social background, to be studied as an anatomical object affected by disorder and disease. The doctor's assessment of the patient does not take into account the social environment, nor the patient's perception of the disorder.

This medical "gaze" has enabled a certain type of medical treatment to become dominant, one which is based on expert knowledge and interventions performed in a clinical environment. The medical setting is not designed to take into account the diverse backgrounds of individuals but rather to diagnose and treat disordered bodies regardless of personal differences or social context. Social events such as birth are strictly monitored in clinics far removed from the home environment, with the woman being treated as a patient rather than as an individual mother experiencing an important life event. In fact the medical domain, as recent literature[4] suggests, constructs the reproductive body as if it were a mechanism removed from everyday life.

This medical way of viewing the body leads to medical interventions treating pregnant and birthing women not as individuals with choices but rather as socially undifferentiated medical cases. This is a medical approach not limited to women, but with the peculiar consequence that fertility, pregnancy and birth are seen as medical events with the foetus (and eventual child) treated as a foreign object in the women's body (in medical texts the foetus is not infrequently described as a tumour).[5]

This way of approaching birth, with the accompanying reproductive technologies, has lead to increasing intervention in the birth process which focuses on the female body removed from any social or cultural context. Many thousands of dollars are spent on techniques which focus on foetal health and the newborn rather than on the overall health and well being of the mother in a "normal" pregnancy. Scientific curiosity and innovation does not necessarily have general social welfare as an aim. Meeting ordinary women's needs — access to health care, education — is not one of the "spin offs" of medical experimentation.

The resulting ambiguity of this approach for women is that while reproductive technologies appear to offer benefits, medical practice and policy, as its stands, does not allow for women's greater understanding or knowledge of their own bodies, but rather treats the female body and its needs as removed from everyday life, to the extent that pregnancy is seen as a disease to be monitored and hospitalised, with the foetus a foreign object that can be safely explored, handled and ultimately removed.

In thus describing the medical way of seeing, I do not wish to ascribe to doctors any lurking misogynist motives, but rather to show how the medical model as applied to reproductivity has lead to a curious set of ambiguities which could well mean that the prospective modern mother can actually be less in control of the birthing process than before reproductive medicalisation. She is subject to treatments and procedures which are not well explained and do not allow her real choices. In fact, as has been well documented,[6] ignoring women's responses has lead to reproductive technologies being tried out well before their safety has been proven. Indeed, techniques still in practice today produce side effects and difficulties for the women- both physiologically and mentally - which have been disregarded in medical assessments of success.

On an individual level then, reproductive technologies while leading to some benefits have produced at least a questionable set of medical practices for individual women. Cases of brain- dead women "delivered" of children, routine uncomfortable and perhaps unnecessary foetal monitoring, inadequately tested use of the "pill", thalidimide or other drugs where reported side effects are ignored long painful procedures with very low success rates for *in vitro* fertilization, have all been reexamined from a social context and found wanting - even if the medical techniques themselves may be classed as brilliant in the laboratory.

From this analysis, we need to think not only about the viability of the techniques themselves, but also about their social implications. Who operates them and who controls their use? Who is responsible for their evaluation? Reproductive technologies which enable experts to introduce untested contraceptive techniques and to have more and more direct control of the foetus and women's reproductive organs could threaten (and some would argue already have done) to create a politics of indifference with regard to women's health, self-identity and life choices.

Social control or greater choice?

In the second half of the article I would like to move from the effect on the individual to the social context in which reproductive technologies are being practiced. In particular I would like to shift from what has mainly been a Northern-centred analysis to look at some of the more disturbing social consequences already seen in the South where reproductive technologies are given even less careful attention than in the North.

To reexamine reproductive technologies in a social context, we move from a set of practices with consequences for individual women discussed above to a social process central to human rights issues, management of the population, economic interest of multinational companies, and state investment in public health and education. Seen from this perspective, reproductive technologies can be left even less comfortably to the scientific ethical vacuum.

Often the choice of techniques exported to the South is made not so much because it is more suitable or adaptable. On the contrary there can be more questionable motives. Technology, rejected by developed countries, is often dumped on the Third World markets (sometimes as aid).[7]

The nature of the use of the technologies needs to be questioned: who is deciding what for whom? In this case we have the Northern scientists making use of a wide field of research subjects under the less critical supervision of Southern governments, and multinational companies "expanding" their outreach in the less restrictive markets of the South.

Nor do these questionable initiatives come only from the North. There are examples of developing world governments adopting techniques which are applied as measures of social control as much as purported population management (such as the enforced sterilization in the 1970s in India). The use of contraceptive devices such as Norplant and other injectable contraceptives have been banned in the North but widely used in the South with the encouragement of governments following the advise of multilateral agencies.[8]

The coercion used and the way in which costly techniques are recommended raises a number of questions. First, the problem of local corruption and inadequately monitored techniques (not an infrequent problem in the development industry). But perhaps more serious, is the problem of reproductive technologies being heralded as part of the scientific wonders of western medicine. Over-zealous technological intervention, abuse of the public through continued use of banned drugs has been possible through the uncritical acceptance of medicine as part of "development" and "progress". A well set up hospital for neonatal care can be enthusiastically funded by governments as a symbol of development and technological knowhow, whereas, as recent studies show, less money channelled into ensuring that girls have better education would undoubtedly increase women's ability to monitor their fertility and their family's wellbeing and more securely guarantee improved infant survival.

Perhaps then, the question of individual choice and social wellbeing is not so unrelated when it comes to assessing the social impact of reproductive technology. In uncritically adopting the techniques of western science, the Third World is also uncritically taking on board the way in which western medicine operates. In other words, the underlying assumption is that reproductive techniques can be separated from the social and cultural context in which they were produced and simply transferred as useful knowledge to the South.

Amniocentesis is a telling example of how reproductive

technology is not a culturally neutral phenomena. The technique was introduced in the West for women over 35 to ascertain genetic defects (Down's syndrome) at an early stage of pregnancy in order for the defective foetus to be aborted. (In the North this technique is already a questioned procedure as some claim the line between this as a routine procedure and wider eugenics is a fine one and others have documented that the choice to abort is not always the parents' — many doctors ask parents to sign a document agreeing to abortion in the event of a defect before the results are known.[9]) An incidental result of the test is that it is also possible to know the sex of the foetus.

In developing countries which highly favour male children - in particular India and China - the test has become a routine practice - for those who can afford it - to test not for Down's syndrome but for femaleness. In one survey in India only one case out of one thousand aborted foetuses was male.[10] This practice, introduced as a medical technique to improve social wellbeing by producing healthier children has been misused in this case to promote "female foeticide", in effect to discriminate against girl children while they are still in the womb - a rather questionable case of adapting scientific technology to the cultural domain.

Another issue to examine when asking who decides what for whom is whether the western model of science increases the knowledge and skills of the local users of the technology. The model of expert instructing beneficiary (or doctor instructing patient) fits well with the prevailing practice of developing countries adopting developed countries' models of industrialisation and scientific progress regardless of traditional customs. Development thinkers are now beginning to challenge this practice which has lead to some disastrous results in the Third World.

In the same way as those interested in development are now beginning to see that sustainable development needs to preserve the local environment and culture and allow for the existence of future generations by relying on local expertise, knowledge and ability as well as external expert knowhow, the medical model of the western trained doctor applying techniques oblivious of local traditions needs to be challenged.

This challenge is not so much about the validity of the technologies as about their context. Following on from the critiques of reproductive technologies in the North, we need to pose in the context of developing countries questions about the social location and meaning of reproductivity. The point here is not to argue that we leave fertility, pregnancy and childbirth to "nature", whatever "nature" is, the reality is that reproductivity like all human behaviour is historically specific and our modern reproductive process is embedded in medical techniques and the scientific approach. In transporting this technique to the South, we also need to transport some of the critiques which ask that medicine be seen as a social phenomenon.

If we are talking about development as self-sustaining, empowering people to have greater food security, access to economic resources, health and longevity, we should also be talking about empowering people to have access to safe health practices, greater knowledge of their own bodies and greater ability to choose their roles in life. From our discussion in the first half of the article, it is clear that even in the North effective choices are not necessarily being offered by the introduction of reproductive technologies. Introducing inadequately tested medical procedures in the South is undoubtedly questionable from an ethical perspective. Based on the above analysis, we should extend this to questioning the underlying assumptions of medical practice. Transfer of knowledge instead of developing more choices for women with regard to their economic and social role has reinforced the role of mother as passive, with woman subject to the expert skill of doctor, or the aims of the government social planner. Though one does not wish to dispute the development gains deriving from some medical procedures, development agencies are now recognizing that public health and education for women which is sensitive to the local environment is far more effective than the few hi-tech innovations the same financial outlay could afford.

The point then, is not to suggest that traditional medical practices should not be replaced by western innovations, but rather that these innovations should be introduced sensitively with the goal to give women access to the knowledge of their own bodies, control of their fertility and safer birthing practices. The technological methods of population control clearly offer an important and necessary development for global economic and environmental sustainability. The change needed is to establish this new knowledge of women's bodies, fertility and childbirth within parameters which those most closely affected can actively shape and carry out.

In balanced development planning, funds used to control fertility, develop contraceptive techniques, foetal transfer and artificial wombs, need to be assessed in relation to funding available for adequate testing outside laboratories, basic knowledge of available family planning techniques and wider adequate nutrition and health. All areas which would enable just as effective and in the long run less costly means, in economic and human terms, of improved reproductive technology.

Biomedical revolution?

The development of reproductive technologies should not be seen so much as a revolution but as a combination of the prevailing 20th century scientific medical approach with increasing complex technologies. From this perspective this 'revolution' in techniques may not necessarily benefit those whom it purports to benefit: women. A true revolution then for young women of the future, would not be a super development of reproductive technologies as man triumphs over nature (one thinks of the sci-fi scenarios conjured up by the phrase test tube babies). Rather it would be a humbler and more wide sweeping revolution of changing the process of medical practice in order to allow the subjects and consumers of these technologies to determine its practice and use. Money devoted to the improve-

ment of medical technologies should be channelled into giving young women access to better education, better public health and awareness of their own bodies' fertility and functioning.

To conclude slightly tongue in cheek, one further, even more revolutionary step, would be to turn the focus away from female reproductivity to techniques for greater choice and control of *men's* reproductivity. Perhaps this is the future that young women and men will be determining.

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The Role of Women in Building the Future

Eleonora Barbieri Masini

Eleonora Barbieri Masini examines the ways in which women influence the future as educators of their family and conveyors of their own historical experience. Data and experiences are drawn from both North and South, and women's influence is seen as deriving both from inter-generational relationships and the historical process.

In examining the role of women in building the future, we can describe women as:

(a) contributors to the economic structures;

(b) carriers of a specific mode of participation in politics;

(c) builders of an alternative future;

(d) having an indirect influence on the future through the new generations.

The women's movement, which came into being at the end of the 19th century and developed more dynamically after the Second World War, has been a unique historical stimulant and promoter of awareness of women by women, a process, which, though at times not fully recognized, is nonetheless irreversible and worldwide. The awareness that women have of their role in society as mothers of future generations is evident in the industrialized countries; it is becoming increasingly important in the developing countries.[1]

Young people under the age of 15 today represent 22 percent of the 1,191 million inhabitants of the North and 37 percent of the 3,836 million inhabitants of the South. It is important to understand the influence on this vast population exercised by women as mothers and the effect of that influence on the future.

The young of the North

This article focuses on the age group between 18 and 25, the children of women now aged between 40 and 50, who were girls and young women in the years following the Second World War. These young people had their childhood in the 1970s and hence can be seen loosely as the younger brothers and sisters of those who participated in the years of great change and turbulence in the late 1960s.

In the 1970s, their elder brothers and sisters keenly felt the influence of the events of the late 1960s and were socially conscious. They fought to create a society that was different from the one in which they were living, and certainly different from the society in which their parents had lived, and actively participated in the fight to obtain more equality and justice in the world, freedom of expression, information and political participation. They liked to work and live in groups and discuss issues and problems. They were concerned with the marginalized, the handicapped, the ethnic minorities. They worked for the Third World and were, without doubt major promoters of the growing awareness of development issues in the Third World which we witnessed in the 1980s.

This generation is now aged between 35 and 45. Although some still cherish their ideals, they have for the most part been co-opted by the present highly-industrialized society. They have found jobs which are perhaps not to their liking, but they still maintain certain links with their past. Some are in positions of political and economic power, and continue to contribute elements from their own experience; yet, in general they have abandoned the ideals of the 1960s and are taking part in the development of post-industrial society.

Young people between the ages of 18 and 25 were very young at the time of the more recent explosion of social and political interest and involvement in 1977-78. They are, nonetheless, the children of the late 1960s. Their mothers are the women who lived through those times of revolt and exhilaration, but this younger generation has not been able to express the same commitments nor have they participated in any great numbers in political activities. They find themselves in a situation of great uncertainty which is linked to a different historical moment.

If, for example, we look at the employment statistics, 19.2 percent of the active population in Europe of the age group 18

to 25 is either unemployed or is looking for jobs. These data refer to ten nations of Europe and therefore mean that one in five is unemployed. If we include Spain and Portugal, we see that 22.2 percent of 18 to 25-year-olds are unemployed.

In Italy, 34 percent of the active population under 25 are looking for jobs, or have lost a job. This represents 1,471 000 young people. In the UK, it is 18.2 percent (1,120,000 young people), in the Federal Republic of Germany, 10.1 percent (503,000 young people), and in the USA, 13.6 percent (3,105,000 young people).

It should also be noted that many young people in Europe, including Italy, have what are known as precarious jobs, which means that they may earn wages but lack security in their jobs.

This situation certainly is not likely to give young people a sense of confidence in the future. Although those between 18 and 25 continue to prepare themselves for the future through education and alternative forms of training, yet they appear to have little confidence in society and what education can do to prepare them for the future.

Research[2,3] has shown that this generation does not expect much from the jobs that society will offer them and is not greatly interested in social or political commitments. Their interests more often lie in sports, music, and in social contacts with their peers.

A future fraught with uncertainty and the prospects of failure impels the young to cling to the present and seize what it has to offer. The utopian future their parents had envisaged and worked for — a future of equality, social justice, etc. — has not come into being and, in their opinion, is unlikely to do so.

The vision of their personal future and that of the society is often dichotomous: their life is one thing, the future of society quite another. On the one hand, they see themselves following in their parents' footsteps, pursuing the same profession and way of life, with little awareness that this no longer possible. On the other hand, they have no great hope in the future of society; what they do see is the danger of national and international conflicts, the uncertainty of employment, the precariousness of emotions and family life.

How to solve this dilemma is a major issue for the young, and we of the previous generation have done little to help them. This, perhaps, may be attributed to the contrast between the ideals cherished mainly by their mothers and the "real" society in which they live.

A closer look at European students reveals considerable awareness of the conflicts which exist at the international level and the growing economic and social gap between the North and the South. Some students from Northern Europe and from my own country, Italy, still appear to have some social concerns, but they are in the minority and demonstrate only a vague reflection of the commitment of their elder brothers and sisters of the 1970s, and certainly of their mothers who believed that change was possible. Is this the result of their mothers' disillusionment? Although young women are aware of the victories and conquests of the feminist movement, they realize that it has failed to change society as a whole, which is still unequal for women and often cruel towards human beings in general. The generation that I am describing certainly feels incapable of changing anything; the only interest remaining is itself.

The young of the South

A completely different picture emerges with regard to the same generation of young people from the developing countries. I am always struck by the strength and the determination which is present in young people between the ages of 18 to 25 in the developing countries, in marked contrast to the more selfish and hedonistic attitude of the young people in industrialized countries. What is clear is their determination to acquire what was denied to their fathers and mothers, their non-acceptance of the past and their firm belief that the future will at least not be the same as the past. My views are based on my experience with students from developing countries, many from Africa, at the university in which I am currently teaching in Rome.

The same strength and determination is also apparent among Chinese students, who are prepared to give up a great deal and make many sacrifices to prepare themselves for entering what they refer to as the "outside world". The more clearly voiced non-acceptance of the past of African youth and the constructive attitudes of the Chinese are both strong promises for the future. There is of course a much greater need for employment and education for the young in the developing countries but in compensation, there is a strong determination among young people to conquer their right to knowledge, to understanding, to be part of the future.

It is possible to detect here, as well, the influence of mothers in Africa and Asia, and in particular China, who had no education and who are therefore very ambitious for their children. Research has shown that they wish their children to be technically equipped for an economically advanced society. History seems to pass through the aspirations of mothers for their children and it is often they who influence the life choices of their children.[4]

The very young generation

If we turn our attention to the very young, i.e., those between the ages of 10 and 15, we see that in the industrialized nations this group spends more hours in front of the television than at school. This has produced what Harold Shane has called "the loss of childhood by information, with information equal to all".[5]

Whereas information from television — equally available to all — degrades critical attitudes, it can also stimulate a desire for knowledge. This generation, while very electronically minded, has difficulty in applying itself, in reading, for the image has substituted for the written word. What is the role and influence of women, of mothers? Are they, too, mesmerized by

images? Are they awed by the electronic capacity of their children? Or have they nevertheless been able to transmit to their children the concern for, and greater sensitivity to global issues?

In examining more closely the aspirations and the inner feelings of these children, one sees a keen awareness of the present and, even more so, of the dangers of the present and the future, especially in relation to environmental issues, world conflicts, etc. There is both fear and hope, an awareness of the need for solidarity between different cultures,[6] and the desire to find alternatives, as emerged clearly in a recent meeting held in Assisi, Italy, with images of children from different parts of the world — from about 30 countries — in a debate on the future.[7]

The cultural level can still prevail over the technological and economic levels, and the values, which are embedded in what may be called the collective memory and which derive from mothers, seem to emerge and create a link with the experience of the past as well as with the future. This awareness arises from those women who realize that there are problems which go beyond themselves, e.g., the destruction of the environment and conflicts between regions of the world.

Women and the young

Women play an important role in determining the attitudes and commitments of different age groups in different parts of the world. It is their experiences, suffering and insights that have an influence on the children. It is the direct or unconscious influence which we have to examine. The children of the mothers of the 1960s are uncertain and looking for security in the material area, wanting more and counting more on themselves than on sentiments. It could be argued that it is a generational issue and, as such, involves both parents. But in industrial society, it is still the mother who is most responsible for transferring values, fears and hopes. On the other hand, the children of the late 1970s are realizing, along with their parents, that more important than goods and services are environmental survival and solidarity with those in need.

Let us examine the dynamics more closely in an effort to understand. The mothers of the young of the industrialized countries have grown up in a society which, while characterized by a number of movements (the women's movement, the peace movement, the ecological movement, etc.), is also a society of consumers and highly technological communication. There is a distinct conflict here.

The mothers of the young in the developing countries are those who must value, above all other priorities, those of feeding and educating their children. This emerges clearly from research in which I have been recently engaged for the United Nations University.[8] The aspirations of the mothers of the young people of the 18-25 age group in the developing nations are strongly motivated, first and foremost, to obtaining an education, and it is this priority which produces the strength and the determination of the young people in developing countries and which influences them in their determination to express their needs and to fight for their rights.

Although it is undoubtedly important to look at the young in discussing the future, this must be done by groups that are differentiated, each having a different historical experience, a different impact from historical events, a different kind of influence from their mothers and fathers.

The impact of women is certainly great, for whether these women were girls in the post-war period, in the turbulent late 1960s, or in the feminist years of the 1970s, they are the carriers of their own values, experiences and historical changes. It is women specifically in the first three or five years in the life of the child, as has been widely documented, who influence the children through their way of being.

If all the different elements — historical, generational and even temperamental — are taken into account in looking at the future through the eyes of the young, it is very much the influence of women, in terms of generation, but also in terms of their historical context which is important. This is especially true for the mothers of the past 40 years, for it is they who have experienced in these years the greatest process of change for women in all of history. If the young are the main actors of the future, the influence of their mothers and their way of experiencing history will determine the attitudes of the young towards the future. The women of the 1980s, who have searched for themselves, can well project, through their children, an alternative vision of the future, based on a search for equality and solidarity. This might well represent the countervailing alternative to the competitive, aggressive society, which has been dominant for the past 200 years.

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Toll of Harmful Practices

Zenebework Berhane
National Children's Commission, Ethiopia

In the land of ethnic diversity,
with civilization adorned with variety,
traditional norms bestow life on one
and prey on others, sparing no one.
Where voiceless children are taken in stealth,
having no status or power to resist,
going through extraction of premolar teeth with nails and wires, or both,
my heart beats fast and I tremble,
shocked by the noise of a groaning child, I sympathize and curse.

Herbal potions and roots down the throat they force
as witches and frauds, who cure no disease
are the experts in these,
and are known for fatal cases,
Following the death of a baby they all cry.
To what avail is the ado, the sigh,
that mourning, that wailing, that lip biting,
when children die due to ignorance?

Practices like that of burning skins
or female circumcision and its akin,
they are too many to count or record.
May God protect us from actions of the ignorant!
A wedding day should be a joyful day,
with memories to be cherished and recalled,
Behold, it can also be day filled with pangs of death,
for an innocent, infibulated girl.

What trauma! Hoping for sympathy, she appeals for help.
But how can they hear or respond?
Their inner eyes are veiled with custom.
She wears the same scar for a lifetime as her own mama.
Women, mothers of heroes,
women, mothers of scientists, researchers and all,
why should women suffer and go through pain?
Why should they die in vain?

Taken from the Inter-African Committee on Traditional Practices Affecting the Health of Women and Children
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I.A.C. has national committees in Djibouti, Egypt, Ethiopia, Gambia, Ghana, Liberia, Mali, Nigeria, Sierra Leone, Sudan. The aim of I.A.C. is to create awareness at both national and international levels of the harmful practice of female circumcision and early marriage, nutritional taboos and their practices related to pregnancy and childbirth.

Law Relating to Pre-natal Diagnosis

*In recent years the practice of Amniocentesis aimed at female foeticide, has become a flourishing business. Thousands of such clinics have sprouted all over the country while the government has turned a blind eye. In fact, the majority of such centres are set up in government hospitals themselves. However, in April 1988, the Maharashtra Government enacted the Maharashtra Regulation of Use of Pre-natal Diagnostic Techniques Act. What are the provisions of the Act and how effective will it be in dealing with the problem? **Nilima Dutta** elaborates.*

The Maharashtra Legislature has taken a radical step by enacting the Maharashtra Regulation of Use of Pre-natal Diagnostic Techniques Act, 1988, which was notified in the Maharashtra Gazette on 28 April 1988 followed by the Rules notified on 7 June 1988.

Purpose of Statute

The Preamble to the Act which in a succinct way reveals the purpose of the statute states that the Act has been passed 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 abnormalities or sex-linked disorders and for prevention of the misuse of these techniques for the purpose of pre-natal sex determination leading to female foeticide and for matters connected therewith or incidental thereto.

From the title and the preamble of this new piece of legislation, it is clear that the Act does not ban pre-natal diagnostic techniques but only regulates the use of the latter to cases where genetic abnormalities are suspected. Secondly, the Act valiantly tries to prevent misuse of these techniques for pre-natal sex determination, particularly amniocentesis which on finding of a female foetus would lead to termination of the pregnancy by deliberate abortion. Amniocentesis involves the removal of a small amount of amniotic fluid from the sac by inserting a long needle through the abdomen of the pregnant woman, and culturing the cells for about three weeks for chromosomal analysis.

Amniocentesis is usually carried out after 16 weeks of pregnancy for accuracy. However, for sex determination, even the uncultured amniotic fluid is studied under the microscope as the X or Y chromosome tells whether the foetus is female or male. Chorion Villi Biopsy is another test for chromosomal abnormalities done during the eighth week. These important diagnostic tools used to determine sex-linked genetic abnormalities such as haemophilia or Down's Syndrome, where the child would be born mentally and/or physically retarded, have been clearly misused to carry out selective abortion of even healthy female foetuses. Surveys conducted by various groups at clinics where such sex determination tests are carried out showed that women and even their family members are not aware that pre-natal diagnostic tests can be used to detect genetic abnormalities.

The female foeticide which this Act strives to abolish is still possible under the MTP Act.

Pre-natal Tests Defined

Section 2 of the Act provides definitions. For the first time, genetic counselling centres, geneticists, pre-natal tests and procedures have been defined. Section 2(i) says that pre-natal diagnostic procedures means any procedure which involves testing the tissues of a pregnant female for carrying out tests on the foetus. Section 2(c) which defines a pre-natal diagnotic test is not an exhaustive definition. It mentions the current range of tests used to detect genetic or chromosomal or metabolic disorders or other congenital diseases. Therefore tests are not limited only to those mentioned but would include other pre-diagnostic tests as well.

Regulation of Centres

Only registered genetic centres, laboratories or clinics can carry out pre-natal diagnostic tests. The Appropriate Authority has discretionary powers regarding registration. These registered centres cannot use the services of persons including gynaecologists, who do not possess the medical qualifications prescribed in the Act itself. Further, the qualified medical person has to carry out diagnostic tests only in a place which is registered under this Act (Section 3) (See Box). Rule 20 makes it mandatory for the qualified medical person to locate the foetus with an ultra-sonography machine before doing any tests or procedures, in order not to damage the foetus.

Regulation of Pre-natal Tests

A registered Genetic Counselling Centre, clinic or laboratory cannot be used for pre-natal tests unless one or more of the following conditions are present:-

1. The pregnant woman is over 35 years.
2. She has a history of two or more abortions or foetal losses.
3. She has been exposed to teratogenic drugs, radiation infection or hazardous chemicals.
4. A family history of mental retardation or physical deformities such as spastic or deaf-mute child or any other genetic disease.

5. Any other condition approved by the appropriate authority.

Section 4(3) states that pre-natal diagnostic techniques shall be carried out only for the purpose of detection of any one or more of the following abnormalities i.e. chromosomal abnormalities, genetic metabolic diseases, haemoglobinopathies, sex-linked genetic diseases, congenital abnormalities or any other abnormalities or diseases declared by the appropriate authority. These procedures or tests cannot be carried out unless the person qualified to carry out such tests has obtained the consent of the woman patient after all the possible side effects and after effects of such procedures are explained to her

Sex Determination Tests Prohibited

Section 5(1) prohibits the use of pre-natal diagnostic techniques including ultra-sonography for the purpose of indicating the sex of a foetus with or without the possible object of female foeticide. Section 5(2) prohibits advertisements by centres, laboratories or clinics about procedures for pre-natal prediction of sex.

The Loopholes

The purpose of Section 4 and 5 seems laudatory but a closer analysis reveals lacunae. The pre-natal diagnostic tests are to be used only for detection of certain abnormalities, genetic diseases and similar problems which would affect the normal physical and/or mental development of the foetus. Women over 35 years of age, as has been medically proved, are in a greater risk group of having a healthy, normal baby. Any woman over 35 years, can under family pressures, always make a statement of having some genetic disorders in her family to get the tests carried out. A history of two abortions or foetal loss also entitles a woman to have a test done. It is quite common for a woman to have two or more abortions when she wants to terminate her unwanted pregnancies.

Here, the Medical Termination of Pregnancy Act, 1971 plays a guilty role as it legally sanctions abortions upto twenty weeks. Section 3 of the MTP Act permits abortions by registered medical practitioners if they believe that the continuation of the pregnancy would cause grave risk to the life of a pregnant woman or grave injury to her physical or mental health. According to the MTP Act, failure of a contraceptive device or method used by any married woman or her husband which results in an unwanted pregnancy constitutes a grave injury to the health of a pregnant woman.

Conflict With MTP Act

Clearly an anomalous situation exists here. On the one hand, the MTP Act allows abortions on the grounds of contraceptive failure and on the other, these very legally sanctioned abortions become a ground for paving the use of pre-natal diagnostic tests which are otherwise forbidden to a pregnant woman. Very often, people don't bother to use contraceptive devices for several reasons, psychological, sociological or sometimes medical resulting in a woman resorting to abortions as a means of contraception. Doctors working in government and private hospitals have cited instances of women, pregnant beyond 20 weeks, asking for abortions which are carried out by inducing labour, resulting in the birth of premature babies who are then callously left to die.

Section 4(2)(ii) could have been more explicit by stating that a woman with a history of two or more spontaneous abortions or natural miscarriages only, can be a candidate for pre-natal diagnostic procedures. Women who have had two or more abortions under the MTP Act must have certificates showing the reason why the abortions were carried out.

Excerpts from the Maharashtra Regulation of Use of Pre-natal Diagnostic Techniques Act.

3. Regulation of Centre, Laboratory, Clinic and Pre-natal Diagnostic Procedure and Techniques

(1) No Genetic centre, laboratory or clinic, or place, unless registered under this Act, shall carry out or associate or help in carrying out activities relating to the pre-natal diagnostic techniques with the help of procedures such as Amniocentesis, Chorionic Villi, Sampling or any other pre-natal diagnostic technique.

(2) No registered centre, laboratory or clinic shall employ or take services, whether honorary or on payment, from persons, including Gynaecologists, who do not posses the prescribed qualifications.

(3) No Medical Geneticist or Medical Practitioner or person shall carry out or help in carrying out or cause to carry out either himself or though his assistants, agents or associates, any pre-natal diagnostic technique at a place other than a Genetic Counselling Centre, a Genetic Clinic or a Genetic Laboratory registered under this Act.

5. Prohibition of pre-natal diagnostic techniques for certain purposes.

On and from the date of commencement of this Act-

(1) No Genetic Counselling Centre, laboratory, clinic gynaecologist, medical practitioner or any other person shall use or allow to be used the pre-natal diagnostic techniques including ultra-sonography for the purpose of indicating the sex of a foetus with or without the possible object of female foeticide.

(2) No centre, laboratory or clinic shall give advertisement in any manner regarding facilities of pre-natal prediction of sex available at the centre, laboratory, or clinic.

(3) No person or members of family of a pregnant female shall seek to get the pre-natal diagnostic procedure for a purpose other than those mentioned in Sub-section (3) of Section 4.

If it was on grounds of contraceptive failure, the kind of contraceptive used and reason for its failure must also be recorded. Of course, none of what has been stated above is aimed at condemning the woman who usually is a victim of her circumstances. After all, if husbands and other family members welcomed the birth of a child, irrespective of its sex, the need for legislation such as the current one would not arise.

Informed Consent

Section 4(4) is valuable. It makes it mandatory for the person carrying out pre-natal tests to obtain the "informed consent" of the woman. Informed consent is an important concept - it means a woman is a knowledgeable and voluntary participant to the invasive procedures carried out on her body. She should be aware of the possible after effects and side effects - the risk of spontaneous abortion of the foetus, chronic backaches and other ailments. Prior knowledge of such unpleasant side-effects may be a crucial factor for the woman to decide whether she wants to participate in such tests. An undertaking is also required from the woman to the effect that she will not terminate the pregnancy if the diagnosis shows the possibility of a normal child of either sex.

Section 5 which prohibits tests used for the purpose of indicating sex can be easily circumvented because the tests including ultra-sonography can be asked for on grounds of ignorance about the possible date of conception. Under the guise of determining foetal age, ultra-sonography may be used and thus an unscrupulous medical practitioner may roughly be able to predict the sex of the unborn child, making this legal provision redundant, although one of the Rules state that a person who is in charge of a centre, laboratory or clinic has to undertake not to disclose the sex of the foetus to the patient or her relatives.

Vigilance Committees

The Act doesn't leave room for the self regulation of centres using pre-natal diagnostic techniques and procedures. Under Section 13, the State Government has to appoint a Vigilance Committee consisting of persons from several fields and also includes medical personnel. The functions of the Vigilance Committee are stated in Section 14. These are quite wide ranging and adequate, for they authorize the Vigilance Committee to do the following necessary acts essential for implementing the provisions of the Act.

i) pay periodic and surprise visits to the centres, laboratories and clinics to check whether the provisions of the Act are being complied with.

ii) to investigate complaints from the public, press or Institutions about violations.

iii) to seize incriminating evidence or records for taking appropriate administrative or legal action.

iv) to recommend to the Appropriate Authority, the cancellation of registration or prosecution of a centre, laboratory or clinic.

v) to check and prevent unauthorised centres, clinics or laboratories.

vi) to take such action as the State government or appropriate authority may direct.

Punishment for Offences

A statute such as this has to necessarily be a penal one. The penalties for offences committed by medical practitioners who have forgotten the Hippocratic oath are quite heavy. Medical personnel who are qualified in the manner described in this Act, shall, for committing an offence under this Act be punished on conviction, with at least 1 year's rigorous imprisonment and fine of a thousand rupees or more. The conviction may extend to 3 years RI and fine upto five thousand rupees. The name of the medical person shall be reported to the State Medical Council who may take suitable action such as suspension of the name from the register for 2 years for the first offence and permanent removal for a subsequent offence.

Section 19(2) also punishes any person who brings a pregnant woman for pre-natal diagnostic tests for any purpose other than for detection of congenital or other abnormalities. This is a negative way of stating that any person who brings a woman for such tests, for the purpose of determining the sex of the child shall on conviction, be liable for rigorous imprisonment between 1 and 3 years and fine between Rs. 1000 to Rs. 3000.

There is a saving clause for the woman involved. It is presumed that she was compelled to undergo such tests by her husband or his family members, unless this presumption is rebutted by proof. However, on a conviction of the woman's family members, the woman is unfairly fined Rs. 50. The offences punishable under Sections 19(1) and 19(2) are cognisable, non-bailable and non-compoundable.

Like other statutes which were enacted as social welfare legislation this one too should not remain in the statute book. The Vigilance Committee has to be really vigilant, constantly monitoring genetic centres, laboratories and clinics, irrespective of how reputed the name of the gynaecologist or geneticist who owns and manages it is. Records must be scrupulously examined and duplicate copies of pre-natal diagnostic tests and procedures duly attested with the verification by the pregnant woman on whom carried out must be immediately filed with the Appropriate Authority.

The female foeticide which this Act strives to abolish is still possible under the MTP Act. A woman can be made to undergo pre-natal diagnostic tests if she can be brought into the acceptable categories defined in Section 4. On finding of a female foetus she can easily have her pregnancy terminated legally by the twentieth week of the pregnancy under the MTP Act. Stranger still is the existence of the MTP Act which merrily allows foeticide as a method of contraception since the Rules under the MTP Act are not stringent. Doctors do not record the exact age of the foetus at the time of abortion, the method of contraception used and reasons for its failure, whether the abortion is being asked for as the pregnant woman apprehends genetic abnormalities because of the family history, or because the couple have already found out the sex of the foetus and are aborting it because it is female.

Govt urged to check female foeticide

NEW DELHI, Sept 3 (PTI) — Mrs Veena Verma, Congress, on Monday drew the attention of the Government towards the increasing female foeticide and urged it to take welfare measures for the girl child in the "SAARC year of the girl child".

She spoke of the widening gap between the male-female ratio and said that in 1981 there were 934 females to 1000 males.

Her party colleague, Mr V. Narayansamy, said that the Textiles Ministry had a proposal to dispose of land belonging to National Textile Corporation Mills.

Mr Sunil Basu Ray, CPI-M, called for revitalising the Cycle Corporation of India in Asansol.

Mr Shankar Dayal Singh Janata Dal spoke of the killing of three Indian Air Force personnel in Kashmir.

Mr S.P. Malaviya, Janata Dal, called for immediate implementation of the Gujral committee report on Urdu. He was supported by Mr Khaleelur Rehman, Telegu Desam, who felt that the Cabinet should immediately accept the report as it was all complete setting up the expert committee to review the findings would only lead to delay, he added.

Mr Chandresh P. Thakur, Congress, said the Government should assure that the students would not lose an academic year due to the anti-reservation stir.

Mr Ajit P.K. Jogi, Congress, said that lakhs of tribals had not been disbursed profits earned on the sale of tendu leaves in Madhya Pradesh.

Dr Ratnakar Pandey, Congress, called for a probe of a Rs 12,000 crore excise scandal involving steel manufacturers.

THE BABY BILL

R. P. RAVINDRA

Doctors admit that most couples seeking sex-detection tests want to get rid of female foetuses

AN official bill seeking to ban the misuse of medical techniques like amniocentesis for sex prediction and subsequently for female foeticide was introduced on 8 April 1988 in the Maharashtra legislative council. The bill also intends to regulate the use of these techniques and analysis of samples obtained from them solely for prenatal diagnosis of genetic deformities, to genetic counselling centres and genetic laboratories specifically licensed for this purpose. If the bill is finally passed, Maharashtra would probably become the first state in the world to enact such a law.

However, the distinction is dubious, because nowhere in the world are these techniques being misused on such a large scale by the medical profession, for a purpose not listed in any medical texts. And no other state has such a roaring 'sex prediction' business as Maharashtra. Most districts and small towns in Maharashtra have 'sex prediction centres', run by doctors, usually gynaecologists, often without scientific training in the use of amniocentesis and most often without the provision of ultrasonic cover. According to a study commissioned by the Government of Maharashtra and carried out by Dr. Sanjeev Kulkarni, of the Foundation of Research in Community Health, Bombay, 85 per cent of the gynaecologists in Bombay are involved in the sex prediction business, leading to approximately 40,000-50,000 such tests being conducted every year, in Bombay alone. Doctors admit that most couples seeking the test intend to get rid of female foetuses.

The bill is a response to the two-year-old campaign launched by the Forum Against Sex Determination and Sex Pre-selection, Bombay. It is widely supported by the press and people from all walks of life. It is sad but true that the large scale violation of medical ethics has continued almost unchallenged by members of the medical profession. Some senior members have even defended this misuse of medical technology. Members of the Organization of Doctors Against Sex Determination and Sex Pre-selection are notable exceptions. So, in the absence of any self-regulating mechanism within the medical profession, a legal regulation is inevitable.

The utility of legislative means in curbing social evils like 'female foeticide' is often questioned. No doubt the final solution of the problem lies with the creation of an egalitarian society, in changing the values and attitudes of the people. Hence the role of education and awareness creation cannot be belittled. However, one cannot simply wait for social reform to take its course, because the sex ratio in India is adverse to females and it has been continuously declining in the last eight decades. (1901: 972, 1981: 935 females per 1,000 males). Further, proliferation of sex prediction technology might precipitate further demographic imbalances, leading to grave social problems. Progressive legislation can at least curb female foeticide. Moreover, doctors being extremely concerned about their professional reputations would, by and large, obey the law. Hence, progressive legislation, although not sufficient, is indispensable. Under the proposed Maharashtra Regulation of Use of Pre-natal Diagnostic Techniques Act, 1988, prenatal diagnostic procedures like amniocentesis will be permitted in Maharashtra only for the detection of genetic or metabolic disorders, chromosomal abnormalities or sex-linked disorders in specially registered genetic centres, laboratories, clinics and hospitals.

This bill puts the onus of proof for the offence of the selective abortion of female foetuses, not on the woman but on her husband and members of his family. Offenders face rigorous imprisonment from one to three years and a fine varying from Rs. 1,000 to Rs. 3,000. If in a particular case, a woman is proved guilty a fine of Rs. 50 on her as abettor to the offence has been provided.

This is because the woman undergoing a sex prediction test is a victim of the system and not the real perpetrator of the crime. Undergoing the test is not her independent choice but an act compelled by pressures and threats. So such a woman should not be punished by law.

According to the bill, medical geneticists, gynaecologists, registered medical practitioners or anyone owning centres, laboratories or clinics, or employees of one, who perform an abortion with the specific knowledge that it is the abortion of a female foetus, are also punishable with one to three years of rigorous imprisonment and Rs. 1,000 to 3,000 as a fine.

Institutions permitted to carry out such tests will be registered with the State Appropriate Authority. This body will consist of six official members, including two representatives of voluntary organizations and two ex-officio representatives. The authority which will have some powers of a civil court, will examine, grant, and renew applications for registration. Centres, laboratories and clinics are specifically prohibited from advertising any facility or test available for predicting the sex of the foetus.

To prevent abuse or misuse of techniques for sex prediction, an even more stringent penalty has been specified—the suspension or cancellation of the licence of the concerned medical practitioner.

However, to ensure that the bill is not misused, adequate representation from voluntary organizations may be needed to monitor the functioning of genetic laboratories, even at district levels.

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The law and the profits of sex tests

It is foolish to enact laws banning sex determination tests while ignoring the attitudes which persecute women, writes J B D'Souza

OUR ardent feminists are racing to another Pyrrhic victory. The monsoon session of parliament will outlaw prenatal tests to reveal the sex of an unborn child, because, if such tests show that the child will be a girl, they are nearly always followed by an abortion. Undeterred by the spectacular failure of the ban Maharashtra imposed in unseemly haste in 1988, Taradevi Siddhartha, the union health minister, has decided to thrust a similar prohibition on the entire country.

Our governments and our legislators have a touching faith in new laws. They enact a law and at once imagine they have licked the problem. So it was with the drink evil and prohibition; so it has been with the dowry ban; so will it be with Taradevi Siddhartha's fiat against sex determination testing. Having pushed the bill on to the statute book and made testing a crime, our rulers will sit back with the feminists in smug satisfaction. Sixteen months after Maharashtra enacted its law, *The Times of India* reported that the act remained on paper, gathering dust.

Have we asked ourselves who will benefit from a sex determination test ban? Not the parents of an unwelcome child. Surely not the unfortunate child herself. Before her lies a grim prospect, a life that promises little more than misery. You think of Aldonza's *cri de coeur* to Don Quixote: 'You know the worst crime of all? Being born. For that you get punished your whole life'. That is the future we offer millions of our women.

But yes, there will be beneficiaries of the new law, a whole lot of grateful beneficiaries. Here is a story a Bombay eveninger published six months after Maharashtra imposed its ban: 'Dr Hema Purandare, who runs a clinic in Bandra (West) [a Bombay suburb], when approached by this correspondent, who said her sister wished to go in for the test, said though sex determination tests were banned, 'an overall genetic analysis could be done. We will communicate the sex of the child orally to the family doctor (who had recommended Dr Purandare) and it is her discretion to tell or not', she said.

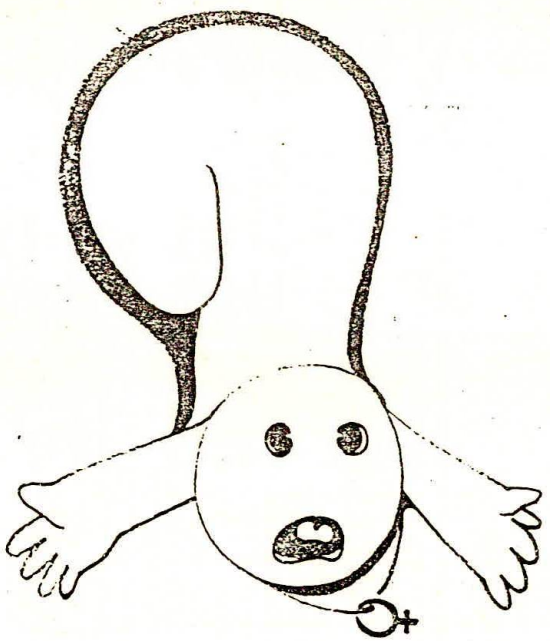
When told that the family did not have any history of genetic abnormality, she said, 'the patient will have to write whatever history of abnormality I will write'. When asked whether this would not lead to problems, she said, 'There are so many patients who come here, it can be anybody. How can they check?' She charges Rs 3500 for the genetic analysis'.

You may find this hard to believe, but Dr Purandare had been on a government committee that *unanimously* supported the ban before it was legislated. You see now what might have prompted her support. The act must have reinforced her devotion to the ban, for the government thereafter appointed her to an implementing committee. The appointment understandably roused the wrath of the Forum Against Sex Determination, as *The Times of India* reported in January 1989. Meanwhile, the prices for undercover sex determination testing had soared. So had the profits of the likes of Dr Purandare, of whom the press discovered large numbers in and around Bombay.

In the end, though, such flourishing practices may not deserve the blind censure that the press reports have implied (even if you might regret the boost the Maharashtra law gave them). What future lay before those foetuses had they not been aborted? What does our society offer its unwelcome girls? Look at what we do to them.

Near my home in Bombay a couple of girl babies were found in a garbage dump two years ago, abandoned by their parents, and dead. Babies are similarly abandoned all over the country, nearly all of them girls. 'In most parts of the country', a news magazine reported three years ago, 'a woman is still an appendage... Her birth is greeted with silence, even sorrow. A boy arrives to the sound of joyous conch shells. Discrimination begins at birth.

AVINASH GODBOLE



Girl babies are breast-fed less frequently, and for a shorter duration than boy babies... 71 per cent of females suffered from severe malnutrition, as against 28 per cent of the males... Boys are taken to hospitals for treatment of common diseases in twice the number as girls. Boys do not fall ill more frequently than girls, they are merely provided with more health care by parents, who value sons more than daughters'.

The bias against girls continues with equal vigour when those who survive their infant miseries reach school-going age. In primary schools, to every ten boys that enrol, there are only seven girls. Secondary education is still less even: girls number only a third of the enrolment. No wonder then that of the 424 million women in India no less than 300 million are illiterate. For men, the illiteracy figure is 185 out of 456 million, or 42 per cent.

SO who cares if Indian girls remain illiterate and uneducated? Theirs not to reason why, theirs but to do and die. And that is precisely their lot when they reach nubility. Then —often much earlier—starts the frantic effort to marry them off. Mostly, the success of that effort depends on their prospective husbands' intangible assets—a green card for stay in the US, a government job, a medical degree—and only minimally on the girl's qualities, where such dubious and irrelevant advantages as a pale skin may reduce the price demanded.

The 1984 legislation against dowry has made little difference, even at levels of society from which education should have banished this repulsive practice. A 1987 report by a set of lecturers at the IAS training school at Mussoorie revealed the shameful fact that the majority of male IAS recruits demanded dowries ranging from 15 to 50 lakhs of rupees. These are the men who are going to implement our laws, including the Dowry Act.

Dowry demands don't, of course, end on a bride's wedding day. They may continue for years after, reinforced by ill-treatment of the bride and physical violence. Again, it is not just uneducated husbands who beat their wives. An IAS joint secretary to the Maharashtra government had to be arrested in 1989 for torturing his wife. Quite a few wives must count themselves lucky if they are merely beaten. On the union home minister's own admission, dowry deaths rose to 4,006 in 1989, from 1,912 two years ago, an increase of 110 per cent.

Here are a few miles ones in this ghastly story of oppression:

August 1987. A Bihar farmer hacked his three minor daughters to death to escape their dowry requirements.

February 1988. Three sisters, between 18 and 25 years old, hung themselves in Kanpur because their middle class parents could not afford the dowry demanded for their marriage.

November 1988. Four daughters of a Kerala policeman ended their lives for a similar reason.

Christmas 1988. Three sisters in Jeypore, Orissa, killed themselves to relieve their parents of the dowry dilemma.

Less spectacular, less newsworthy sacrifices to the pernicious dowry system occur all the time, and it generally takes a lot of effort to persuade the police to act in such cases. Male-dominated as they are, the police tend to look the other way, at most to treat a bride murder as an accident or a suicide. One of these happened in a civil servants' colony near my home in April 1989. It took an aggressive intervention by the local feminists to rouse the police belatedly from their apathy.

With this trend toward barbarity rising inexorably, does it make sense to insist that parents must have children of a sex they do not want and often cannot afford? The Forum Against Sex Determination is sure that it does. It is confident that our society can tackle the dowry issue, a confidence few will share.

Happily for the unborn child, sex determination testing will soon move beyond the reach of the laws our feminist zealots want. Female foeticide, which offends their susceptibilities, may become unnecessary. Amniocentesis, which requires the insertion of a needle to withdraw from a pregnant uterus about a cubic inch of the amniotic fluid that envelopes the foetus, may regain its original function of warning a mother about deformities in the child she is carrying. Sex determination is becoming possible without puncture or tears.

In essence, the new technique involves a centrifugal separation of male-producing Y-chromosomes from female-producing X-chromosomes; the chosen combination is then implanted into the mother artificially. Dr Ronald Ericeson, a reproductive physiologist, has already set up a clinic appropriately equipped at Charni Road, Bombay. Sex determination *before conception* destroys one of the pro-life lobby's most powerful arguments.

But until such techniques become widely available, new laws will have worked untold mischief. They will have driven sex testing into the hands of quacks, whose covert operations will wreak havoc, whose profits will soar along with those of the Purandares of our country, the relatively few qualified physicians who defy the law with impunity.

We should deplore the attitudes that prevail in our society, the attitudes that shrink from female offspring and persecute women. It is stupid to ignore those attitudes.

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Special Report

By ZOYA ZOHRA

Family planning or murder?

A middle-aged woman, who prefers to remain anonymous, twists the pallav of her sari before replying. "I don't know... my husband brought me here to carry out some test to find out whether I'm carrying a boy or a girl. My in-laws want me to bear a boy so that he can carry on the name of the khandaan. I already have two daughters and I don't think we can afford another one. After all, girls are liabilities, aren't they?" Her husband, sitting beside her in the waiting room of the clinical lab in West Patel Nagar, tactfully shuts her up before she can say anything more.

Another time, another place. This time it's Bombay's Andheri colony, where another woman explains why she's there. "Arre bhai, it's so simple. After the doctor sahib finds out whether the child inside me is a ladki or a baba, we shall make up our minds. We are from a middle-class family and find it difficult to make both ends meet. After all, who doesn't want a boy? He brings in dowry and supports his parents in their old age. On the other hand, a ladki is paraya dhan and from the time she is born the poor mother and father start saving for her marriage."

Discrimination against women, thus, begins in the womb itself. It is now possible to predict with almost cent-per-cent accuracy the sex of an unborn child. The process is called amniocentesis by which the sex of the foetus can be established, and if so desired, abortion carried out. These tests were initially done to detect genetic disorders but are, today, being blatantly misused by unscrupulous doctors to make a quick buck and who are cashing in on the fact that male offspring are favoured in our society.

It is estimated that between 1978 and 1982, nearly 80,000 female foetuses were aborted following sex determination tests which showed them to be of an "inferior and unwanted sex."

Such tests began ten years ago by a gynaecologist couple in Amritsar. The "miracle tests", as they began to be known, became extremely popular and spread all over the country by word-of-mouth and sexist advertisements. One such ad was captioned: "Spend Rs. 500 now to save Rs. 5 lakhs later", thereby implying the enormous dowry given to a daughter on her marriage could be saved. Naturally, keeping in view the socio-sexist bias in our country, people began flocking to the clinic. Gradually, several such clinics opened in major cities and sex determination of foetuses and their subsequent abortion became a racket.

What exactly is an amniocentesis test?

In the 16th or 18th week of pregnancy, a needle is inserted into the womb and the amniotic fluid, about 15 cc, is withdrawn from the sac. Subsequent lab tests conclusively (success rate 97%) determine the sex of the unborn child. At this advanced stage of pregnancy, abortion becomes risky since the foetus is too big to be taken out by the suction method. Consequently, the risk of infection is also greater and there have been several cases of sepsis forming in the reproductive tract causing permanent damage to the reproductive organs.

Recently, Maharashtra banned all pre-natal diagnostic techniques used solely to determine the sex of the foetus. Under the new law, procedures such as amniocentesis will be permitted only to detect certain foetal abnormalities, and all clinics or hospitals which conduct such tests must be registered with the state government. However, the ban has only pushed such tests underground and given a free hand to quacks. Says Vibhuti Patel, activist of the Forum Against Pre-Natal Sex Determination and pre-selection Techniques: "In a predominantly patriarchial society, ours is a difficult job. Every mother and father wants a son although they might not state this openly. Even in post- Cultural Revolution China, nearly 45,000 female foetuses and newly-born girl babies were killed every year. There, abortion is not only legal but officially condoned as an effective instrument of birth control and the policy of one-child-per family is rigorously enforced. It's an uphill task in India since the society has preconceived ideas about women being interior to men."

On the other hand, there is a strong lobby of doctors who see the sex-determination tests and subsequent abortions as an effective method of family planning. Says Dr. Datta Pai, director of Pearl Centre Clinic of Bombay, which conducted such tests till recently: "If one cannot afford to bring up another child in a decent way, then it is better not to have the child at all. There are 200 million orphans in our country whose parents are either too poor or lackaidasical to provide them with the basic amenties. Unwanted babies must be aborted. The concept of 'two and no more' needs to be popularised. I am a strong protagonist of sex determination tests".

However, what is alarming is that this kind of selective abortion is being publicised as an effective method of family planning even by some government agencies. The average Indian woman on undergoing the cycle of conception-abortion-conception, till she is not "blessed" with a son, becomes a physical and mental wreck. The misconception that girls are the "weaker sex" has been exploded in Kerala which is the only state where the sex ratio is in favour of women - 1,032: 1,000 men. It also has the highest literacy rate among women at 73.4%, the country's lowest birth rate at 24.9 per 1,000, and the lowest infant mortality rate at 37 per 1,000 births.

But coming back to the controversial amniocentesis tests, another method used is the CV biopsy which is more expensive, costing between Rs. 1,200 to Rs. 1,500, involves tests for sonography, chromosomal and biochemical disorders, but has a higher success rate of 98%. Unlike the amniocentesis tests which are conducted only in an advanced stage of preganancy, the VCB is done when the foetus is only between eight to eleven weeks old. Ultrasonography was also being misused. The Erikson Method, which entails the separation of the chromosome and artificial insemination, was also being practised by half-a-dozen doctors in Bombay before a ban was imposed.

It is interesting to note that the sex ratio in India has been going down against women over the years. In the 1981 census it was 933 women: 1,000 men. With selective abortion becoming common and instances of female infanticide, particularly in rural areas, the ratio could come down to as low as 900 women: 1,000 men by the turn of the century. As a result of the practise of female infanticide, the Bhati community in Jaisalmer has, what is probably the lowest sex ratio, anywhere in the world at 550 women: 1,000 men. It has been reported that dearly 50 newborn girls were killed in the family of an MLA of Bharatpur for the past several generations. Female infanticide is also common in Gujjar families in Rajasthan and in the Kallar community of Madurai district in Tamil Nadu.

Until attitudes change, the situation will become even worse, despite the undeniable fact that whatever a boy can do, a girl can also do — sometimes better. Ancient prejudices against women persist inspite of the much touted slogan: "lakda ho ya ladki, ghar mein do hi achchey" (boy or girl, two is the best). — AK Features

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- Girl child
- Amniocentesis

Haryana's unborn convicts

Rohtak district in Haryana has an abysmally low sex ratio. PREMA VISWANATHAN discovers why: the appalling rate of female foeticide.

THE *ghunghat* cannot hide her eyes, widening with fear. Nor her trembling fingers, beating a tattoo on her belly, swelling for the seventh time round. Mother of six, all girls, she is now headed for the magic machine which, she hopes, will not betray her as the gods did. But what if it tells her her womb holds yet another daughter? Will she have the heart to snuff out her life? Her eyes fill at the very thought.

"Don't worry, everything will be all right," says her husband, a brawny Jat, following close at her heels. "The test is harmless, Doctorsaab said so. We can always decide later what to do with the child."

Somewhat reassured, she walks on, towards the ambulance which holds the wonder gadget that will tell her whether the child in her womb is a boy or a girl. "It's just like an X-ray," the receptionist in the clinic had assured her when she had come in for registration. There would be no needle puncturing her abdomen, she'd been told.

And the doctor is as good as his word. The test is over in minutes, and the ultrasound delivers its verdict: it's a girl. The couple is in a quandary. The woman turns to her husband, a silent appeal in her eyes. He runs nervous fingers over his turban, undecided what to do. "Suppose we decide to keep the child, what will our parents say?" is his dilemma. The receptionist turns to him in exasperation: "If you were so unsure, why did you undergo the test at all, paying Rs 600?"

"I will convince her to get rid of the child," he responds, almost apologetically.

Mission accomplished, they leave for their village, a good half hour's drive from Rohtak, making place for other couples who have travelled just as far to this quintessential small town with its overflowing drains and broken down buildings, in search of a panacea for their predicament: the craving for male progeny. Like Hissar, which sparked off the spate of sex-selection centres in Haryana, Rohtak has now become a fulcrum for female foeticide. Which, in all probability, accounts for the alarming decline in sex ratio in the district. If the overall sex-ratio in the country has dipped from 934 to 929, in Rohtak district the situation is far worse, the decline being as substantial as 13 points (879 to 866).

Demographer Ashis Bose feels this is cause for considerable concern, since the factors responsible seem to be neither outmigration of females nor the migration of males into the district. That leaves only female foeticide as a major cause. "It is not entirely unpredictable, since the Jats are not known to accord a high status to their women, and the sex-ratio was lowest among this community even as early as 1931. Moreover, sex-pre selection is not illegal in the state of Haryana as it is in, say, Maharashtra," says Dr Bose.

Dr K.B.Kanwal, chief medical officer of Rohtak, and Dr B.D.Kalra, the district family welfare officer, concur that the absence of legal constraints leave them helpless. "The doctors need no licence from my office, so how can I take them to task?" asks Dr Kanwal. Dr Kalra points out that it is ironical that there has been a sharp drop in the population growth rate in Rohtak despite the discernible failure of the family planning and welfare programme in this district. "It is 17 per cent as compared to the state average of 28 per cent. There can be only one explanation for this, the rise in female foeticide."

One heartening feature, however, is the high degree of awareness among doctors, women's rights activists and government officials about the need to curb this practice. Dr Kanwal himself spared no efforts (in vain, however) to persuade the Devi Lal government to pass a law banning pre-natal sex-selection. As many as 100 doctors, including activists of the Vigyan Manch and the Janwadi Mahila Samiti, also petitioned the then chief minister to pass the bill. "We were unsuccessful, but we at least managed to increase social awareness through our campaigns," says Jagmati Sangwan, secretary of the Samiti.

But changing the attitudes of people is a slow process, she acknowledges. "For instance, even in the teaching fraternity, there is an in-built resistance to issues concerning women. When I approached the Maharshi Dayanand University, Rohtak, with an M.Phil proposal on female foeticide, it was struck down without even a preliminary examination." Given such a regressive social situation, it is no wonder that practices such as pre-natal sex- determination are being accepted even by the victims, women, themselves. "In fact," discloses Dr Jaswant, a member of the Manch, "one of my female colleagues herself went in for an ultrasound and aborted the foetus on finding it to be a girl. If this is so among the educated sections, how can you expect anything better from the uneducated, rural populace?"

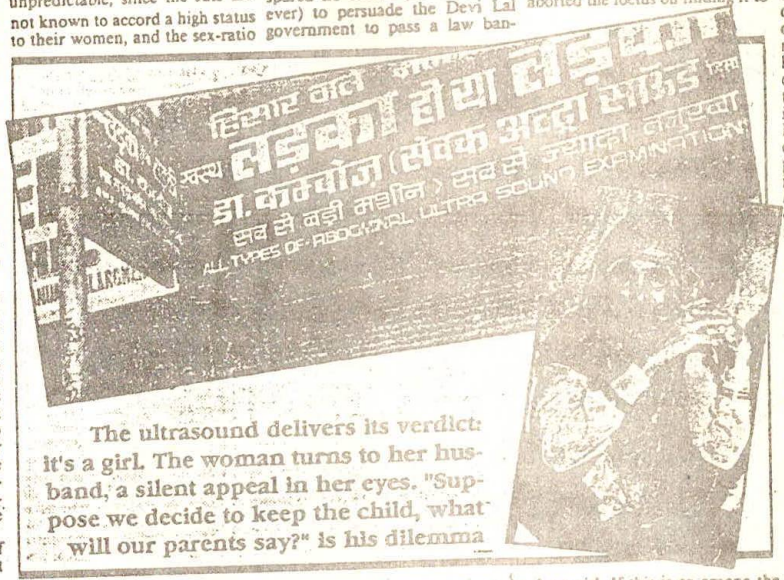
Thus it is that one day in a week, Dr Kambhoj, "the pioneer of this technique in the state," according to Dr Kanwal, trundles in with his mobile ultrasound service to cater to the needs of 20-25 patients on an average (local residents put the figure at 30-40), most of them rural-based.

This is somewhat at variance with the claim made by some activists of the Haryana Vigyan Manch, a progressive science movement in the state, that the practice of sex pre-selection is an urban fad patronised by the educated middle class. The reality squares up more with Dr Kanwal's theory that it is only the landed peasantry who have a substantial stake in opting for a male child, since inheritance rights for women remains an unrealised dream in Haryana. He also surmises that the practice has roots in the caste structure: "We found in our family planning campaigns in the state, that the Jat-dominated districts like Rohtak were more resistant to progressive ideas than Ahir and Yadav-dominated ones."

While it would be unfair to single out Dr Kambhoj for criticism, in that he is not the only doctor indulging in this regressive practice in Rohtak, it has to be conceded that other clinics (there are about five of them) in the town are less explicit in their modus operandi. The Narulas' X-ray and ultrasound clinic, for instance, had earlier put up a board outside announcing *"Ladka ho ya ladki, janch karo"* (find out whether it is a girl or a boy), but following demonstrations by the Vigyan Manch and the Janwadi Mahila Samiti, it was withdrawn and now occupies pride of place in the waiting room, the prefix *'swasth'* (healthy) having been added for legitimacy.

So effective is Dr Kambhoj's publicity network (he employs both printed pamphlets as well as word of mouth, and unlike other doctors, claims 100 per cent accuracy in diagnosis) that he has now extended his area of operations well beyond Haryana, to include Meerut and even Delhi. A pamphlet handed out to visitors to the clinic unabashedly proclaims him to be the ace ultrasound expert, *"jinhe shayad Bharat me is test ki sahi report likhne ka sab se jyada thajurba hein"* (who possibly has more experience in this field than anyone else in the country).

Unfortunately, Haryana's women have allowed themselves to be decimated to an alarming degree despite their immeasurable capacity for hard work and contribution to the economic prosperity of the state. But, as Dr Ranbir Singh Dahiya of the Vigyan Manch asserts, "There is no need to wallow in despair. Instead we should intensify our campaign to spread awareness of this practice among the people and get the powers-that-be to treat it not merely as a medical problem but a social evil."



The ultrasound delivers its verdict: it's a girl. The woman turns to her husband, a silent appeal in her eyes. "Suppose we decide to keep the child, what will our parents say?" is his dilemma

Punjab to outlaw sex determination tests

by P.P.S. Gill
Tribune News Service

CHANDIGARH, June 13 – Ban on sex determination tests and repeal of the Lepers Act, 1898, were two important decisions taken by the Governor-in-Council here recently.

Of late, women activists, political parties and even individuals had repeatedly represented to the Punjab Government to ban the misuse of sex determination tests allegedly carried out by private doctors. As a consequence of these tests, the natural corollary was medical termination of pregnancy or female infanticide to be precise.

Now the government proposes to enact legislation to make sex determination tests an offence. Though, Punjab would eventually adopt the central legislation, to begin with, keeping in view the urgency and importance of the issue, it would follow the Maharashtra Parental Diagnostic Techniques Act, 1988.

According to the Health Secretary, Mr A.K. Kundra, what really made the government sit up was the low sex ratio reported in the 1991 census, which showed there were just 888 females per 1,000 males in Punjab. Admittedly, there was preference for a male child in society yet the government was keen to educate the people and mobilise opinion for the equality of sexes. For this, besides the legislation which is on the anvil, there was need for intensive education, he added.

The ante-natal sex determination tests in government hospitals were done in exceptional cases for "research" and "diagnostic" purposes to determine sexually-linked genetic disorders. One of the reasons behind the ban on tests was to end abortion of female foetus to ensure equality of sexes.

In May 1988, the central council of health at its meeting in Delhi had reached a consensus that sex determination for "scientific purposes" should be done only at government hospitals or at approved centres run by voluntary organisations. This was solely for "genetic link diseases" or for research purposes without, however, disclosing the sex of the foetus. However, Punjab showed concern at the scientific tool being misused.

Mr Kundra said the entire scheme of things was aimed as a befitting gesture for promoting equality of sexes by preventing female infanticide through such tests.

Talking about the Lepers Act, Mr Kundra said this was applicable to Amritsar district alone since June 1953. But over a period of time, as medical research advanced, it was found that leprosy was curable and there was no need for segregation of patients, who could get treatment at home. First came Dapsone tablets in the 50s and Rimpicine capsules in the 80s.

Thus, the multi-drug treatment had the desired effect. All along leprosy carried a social stigma. Since the centre repealed the Act in question in 1984, it asked the states to follow suit. Punjab was doing so now.

Under the Lepers Act, 1898, lepers in Amritsar were prohibited from preparing for sale or selling articles of food, drink, drugs or clothes, bathe or draw water from public wells and tanks and private carriers plying for hire other than railways.

Medical science has now made it possible to prevent physical deformities arising out of this disease and even correcting the same through surgery.

Enquiries with the health director, Dr Bachittar Singh, and the zonal leprosy officer, Dr Jujhar Singh, revealed that at present the state had about 3,500 leprosy patients. These were mostly confined to 30-odd colonies in different district undergoing "regular treatment" with the department providing free medicines.

The incidence was more in Patiala, Ludhiana, Jalandhar and Amritsar. Both, Dr Bachittar Singh and Dr Jujhar Singh, warned that any person who finds "patches of discolourisation" on the skin insensitive to pain should report to check whether there are symptoms of leprosy. These however, remain dormant for long periods. People could now undergo immunity tests to find whether there is leprosy bacteria. Loss of sensation on hands and feet should also ring a bell!

Most of the patients in Punjab hospitals are from outside the state. Bihar, UP and MP are considered to be highly endemic to the disease. Punjab now has district TB and leprosy officers in all districts.

It, nevertheless, remains to be seen how soon the two decisions are implemented and how effectively.

BOY OR GIRL
A DANGEROUS TREND
PRE-NATAL KILLER
Female babies killed
Alarming rise in female foeticide
Female foeticide family planning?

Stepping into Maggie's shoes

BY ZOYA ZOHRA

One can always see pregnant women in the clinics of gynaecologists waiting for the results of the sex of their unborn babies. If it is a female, they have it aborted; if it is a male, they keep it. *ZOYA ZOHRA* probes into the flourishing sex determination racket and the misuse of the controversial test.

Sex Determination Test

A middle-aged woman, who prefers to remain anonymous, twists the pallav of her sari before replying. "I don't know... my husband brought me here to carry out some test to find out whether I'm carrying a boy or a girl. My in-laws want me to bear a boy so that he can carry on the name of the khandaan. I already have two daughters and I don't think we can afford another one. After all, girls are liabilities, are'nt they?" Her husband, sitting beside her in the waiting room of the Loomba Clinical Lab in Delhi's West Patel Nagar, tactfully shuts her up before she can say anything more.

Another time, another place. This time it's the Goel Hospital in Bombay's Andheri colony, where another woman explains why she's there. "Arre bhai, it's so simple. After the doctor sahib finds out whether the child inside me is a ladki or a baba, we shall make up our minds. We are from a middle-class family and find it difficult to make both ends meet. After all, who doesn't want a boy? He brings a dowry and supports his parents in their old age. On the other hand, a ladki is paraya dhan and from the time she is born, the poor mother and father start saving for her marriage."

Discrimination against women, thus, begins in the womb itself. It is now possible to predict with almost cent-percent accuracy the sex of an unborn child. The process is called amniocentesis by which the sex of the foetus can be established, and if so desired, abortion carried out. These tests were initially done to detect genetic disorders but are, today, being blatantly misused by unscrupulous doctors to make a quick buck and who are cashing in on the fact that male offsprings are favoured in our society. It is estimated that between 1978 and 1982, nearly 80,000 female foetuses were aborted following sex determination tests which showed them to be an "inferior and unwanted sex."

Such tests began ten years ago by a gynaecologist couple in Amritsar. The "miracle tests", as they began to be known, became extremely popular and spread all over the country by word-of-mouth and sexist advertisements. One such ad was captioned: "Spend Rs. 500 now to save Rs. 5 lakhs later", thereby implying the enormous dowry given to a daughter on her marriage could be saved. Naturally, keeping in view the socio-sexist bias in our country, people began flocking to the clinic. Gradually, several such clinics opened in major cities and sex determination of foetuses and their subsequent abortion became a racket.

What exactly is an amniocentesis test?

In the 16th or 18th week of pregnancy, a needle is inserted into the womb and the amniotic fluid, about 15 cc, is withdrawn from the sac. Subsequent lab tests conclusively (success rate 97%) determine the sex of the unborn child. At this advanced stage of pregnancy, abortion becomes risky since the foetus is too big to be taken out by the suction method. Consequently, the risk of infection is also greater and there have been several cases of sepsis forming in the reproductive tract causing permanent damage to the reproductive organs.

Recently, Maharashtra banned all pre-natal diagnostic techniques used solely to determine the sex of the foetus. Under the new law procedures such as amniocentesis will be permitted only to detect certain foetal abnormalities, and all clinics or hospitals which conduct such tests must be registered with the state government. However, the ban has only pushed such tests underground and given a free hand to quacks. Says Vibhuti Patel, activist of the Forum Against Pre-natal Sex Determination and Pre-Selection Techniques: "In a predominantly patriarchal society, ours is a difficult job. Every mother and father wants a son although they might not state this openly. Even in post-Cultural Revolution China, nearly 45,000 female foetuses and newly-born girl babies were killed every year. There, abortion is not only legal but officially condoned as an effective instrument of birth control and the policy of one-child per family is rigorously enforced. It's an uphill task in India since the society has pre-conceived ideas about women being inferior to men."

On the other hand, there is a strong lobby of doctors who see the sex-determination tests and subsequent abortions as an effective method of family planning. Says Dr. Datta Pai, director of Pearl Centre Clinic of Bombay, which conducted such tests till recently: "If one cannot afford to bring up another child in a decent way, then it is better not to have the child at all. There are 200 million orphans in our country whose parents are either too poor or lackadaisical to provide them with the basic amenities. Unwanted babies must be aborted. The concept of 'two and no more' needs to be popularised. I am a strong protagonist of sex determination tests."

However, what is alarming is that this kind of selective abortion is being publicised as an effective method of family planning even by some government agencies. The average Indian woman on undergoing the cycle of conception - abortion- conception, till she is not "blessed" with a son, becomes a physical and mental wreck. The misconception that girls are the "weaker sex" has been exploded in Kerala which is the only state where the sex ratio is in favour of women--- 1,032 : 1,000 men. It also has the highest literacy rate among women at 73.4% the country's lowest birth rate at 24.9 per 1,000 and the lowest infant mortality rate at 37 per 1,000 births.

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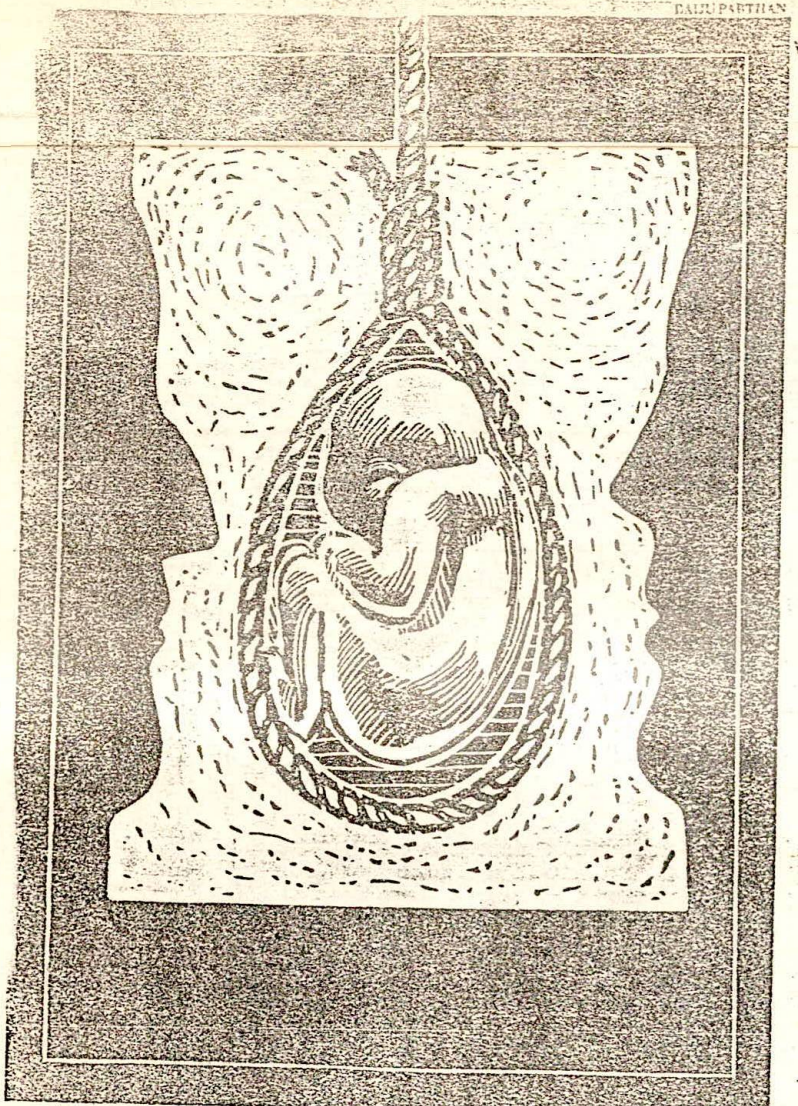
It is interesting to note that the sex ratio in India has been going down against women over the years. In 1901, it was 933 women: 1,000 men, but in the last 1981 census it was 933 women: 1,000 men. With selective abortion becoming common and instances of female infanticide, particularly in rural areas, the ratio could come down to as low as 900 women: 1,000 men by the turn of the century. As a result of the practice of female infanticide, the Bhati community in Jaisalmer has, what is probably the lowest sex ratio, anywhere in the world at 550 women: 1000 men. It has been reported that nearly 50 newborn girls were killed in the family of an MLA of Bharatpur for the past several generations. Female infanticide is also common in Gujjar families in Rajasthan and in the Kallar community of Madurai district in Tamil Nadu.

Until attitudes change, the situation will become even worse, despite the undeniable fact that whatever a boy can do, a girl can also do--- sometimes better. Ancient prejudices against women persist inspite of the much touted slogan: "ladka ho ya ladki, ghar mein do hi achchey" (boy or girl, two is the best).

–A.K. FEATURES

(1) What is Amniocentesis
(2) Some professionals attitude towards Sex Determination Tests.



RAJU PARTHAN

Who's to judge?

The case for aborting abnormal foetuses is that it spares a child a life of poor quality. Kanaaz Vazifdar questions the right of the mother and physician to decide the fate of the unborn child

NOWADAYS, an increasing number of pregnant women undergo some prenatal test or other, on the assumption that the pregnancy may be terminated if the foetus is found to be affected by any serious disorder. Procuring an abortion for eugenic reasons is not very difficult in India, especially with a liberal Medical Termination of Pregnancy (MTP) Act in force. The act sanctions abortions in cases where pregnancy could be injurious to the mother's health (health being viewed in physical, mental and social terms). This means that the birth of a handicapped child could be considered injurious to the health of the mother, opening the doors for an abortion.

In this age of prenatal diagnosis, the omnipotent right of the woman and the physician to decide on the quality of the unborn child must be questioned. The Royal College of Physicians, in its 1989 report on Genetic Screening, recommends that the scope of prenatal diagnosis, with a view to selective abortion, be widened further. "Most infants with congenital malformations are born to healthy women. There is no evidence that such sporadic disorders can be prevented and prevention is not possible before pregnancy is established. The only means of detecting disorders is by population screening during pregnancy." In India, where prenatal determination of foetal sex has been banned through legislation, shouldn't prenatal diagnosis of congenital defects also be questioned? Or are we moving towards an acceptance of Hitler's views: "It is a half-measure to let defective people contaminate the healthy ones."

There is no denying that prenatal diagnosis is a vital aid in monitoring pregnancy with a view to safe deliveries. The main purpose of prenatal diagnosis is to promote the health and well-being of the unborn child and the mother. For instance, hydrocephalus, excess fluid in the brain cavities, can be diagnosed by ultrasound. Needle aspiration of excess fluid before delivery helps to facilitate the birth of the child, thus preventing a Caesarean or preterm delivery.

Prenatal diagnosis makes sense when it is treatment oriented. But when it is undertaken with a view to avoiding genetic malformations by means of selective abortion, it does nothing to promote the well-being of the patient most concerned, namely, the unborn child.

It is frequently pointed out that the daily care of a handicapped child involves enormous sacrifice on the part of its parents. It is mentally and physically exhausting, and financially taxing. Leading obstetricians feel that abortion of abnormal foetuses is advantageous in that it spares the child a life of poor quality. This compassion, however, is solely directed towards the parents and does not extend to the unborn child. This discrepancy can be attributed to the fact that the foetus is not yet viewed as a person, so killing it may not be viewed as killing a person. But within the realm of morality, there can be no favouritism. However small and disabled a person is, he has the same right to life as the rest of us.

Attention is often drawn to the financial benefits of preventing disabled children from being born. The *British Medical Journal* in 1976 estimated the net income benefits of a screening programme for pregnant women in terms of institutional care, less economic production by parents of affected children and the less-than-average output of such individuals.

A contradictory view in *The Economics of Prenatal Screening*, however, points out that the underlying rationale of selective abortion could well undermine the position of the disabled and promote an increased aversion towards them. Further, the insinuation that the disabled person is of lesser value, devalues humanity itself. It regards a person in material terms, his value depending on the amount he gives in return. One would then also be justified in killing the old and infirm.

Another argument is that the embryo, in the early stages after fertilisation, is not yet a rational human being and therefore has no human rights. Dr A McLaren in her book *Human Embryo Research: Yes or No* states that until the primitive streak appears, the embryo is not a functional whole.

As for rationality, according to J Locke, in his work *Essays Concerning Human Understanding*, the embryo is not yet a person as, in order to be rational, it is necessary to possess exercisable abilities associated with self-consciousness, which the early embryo lacks.

An apt counter-argument put forth by T Iglesias in the *Journal of Medical Ethics* states that, "The bodily person I am now, began as one cell. If this original cell was capable of developing into me, what capacities did it have then? The development of personal abilities does not come independently of our organic development. They are not added (by miracle). If we are to make sense of our existence now, we must admit that the capacities we have now, developed from what we were from the beginning."

Moreover, on Lockean lines, if the early embryo does not possess a rational nature, then neither does the comatose individual or the newborn baby.

From the earliest time, the church has adopted an uncompromising stand on this issue. The authoritative document, *Donum Vitae* (1987) reaffirms: "The destruction of so-called 'life without value' cannot in any way be justified. From the time that the ovum is fertilised, a life is begun which is neither that of the father nor of the mother, but a life of a human being with its own growth... Prenatal diagnosis is permissible if the method safeguards the life of the embryo and the mother. But a diagnosis which shows the existence of a malformation must not be equivalent to a death sentence."

The Hippocratic code explicitly states that the physician has a professional responsibility to promote the patient's interest and to do no harm. However, the *Handbook of Medical Ethics* also states that "the (the doctor) has a moral duty to continue to declare his own ethical position and is entitled to persuade others that it is the most appropriate one."

This is especially applicable when things go so drastically wrong with the process of generation, that the foetus lacks, from the beginning, the fundamental biological prerequisites, for human development. For example, in anencephaly, where the brain has not formed properly and as a result the baby is incapable of living outside the womb for more than a brief period.

Similarly, where there is a choice between the mother's life and the child's, the obstetrician's decision to abort the child is acceptable. But there are cases, especially relevant to India, where women who unknowingly undergo routine X-rays during pregnancy are advised that the risk is less than 1 per cent but that there is a definite chance of congenital anomalies. If the woman so desires, the pregnancy is terminated even before prenatal tests are carried out. These are cases which require critical examination.

The British medical bulletin states in the context of prenatal diagnosis, that because a mother might give priority to what she considers her best interests, the obstetrician has a special obligation to protect the interests of the unborn child.

A leading obstetrician, who prefers anonymity, agrees that the best way to do this is to inform the mother of the full implications of such diagnosis and to discuss the status and interests of the unborn child. The mother's decision then, is her own responsibility.

By offering her advice he might give the foetus a better chance in the face of prevailing attitudes. In addition, he might spare the mother the agony of regretting an abortion, for it must not be taken for granted that every woman would rather have an abortion than give birth to a disabled child.

Abnormal foetuses that are aborted are often said to have been spared lives of poor quality. But what is frequently overlooked, is that even such lives may have their pleasures. A life which a healthy person may view as pointless and frustrating, could be viewed very differently by the person whose life it is.

This issue is just the tip of the iceberg. It points to the many loopholes in the existing MTP Act. In our attempts to curb the population growth, abortion has taken precedence over contraception at the cost of the moral status of the foetus. Whatever one's ethical stand, abortions cannot be put on a par with tooth extractions.

GURGAON
6 JAN 1991
(New Delhi Edition)

determination or extermination?

...os evident in New Delhi, Parliament and the very ...dra Shekhar Government ...ems inconceivable that ... be concerned about the ... country. Yet perhaps as ...ormalcy can sometimes ...chaos, the Central ...unced its intention to ...current session of ...the use of sex ...ogies.

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...provided the sex ...abortion under the same ...runs such a centre which ...determination tests, holds ...performing a ...Nobody has a right to ...poor and miserable ...blames women, and the ...hat has contributed to the ...e birth to a son. "When I ...e good old days, not a ... the test unless she had ...states.

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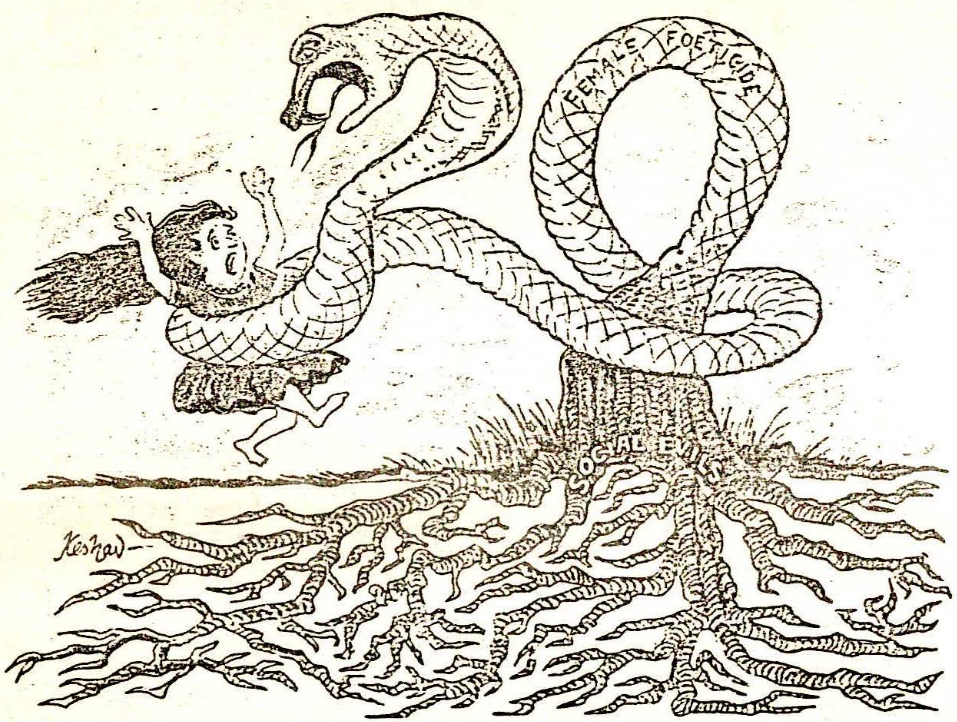

Before finalising its legislation to control sex determination tests, which in this country is being misused for killing female foetuses, the Central Government should learn from the shortcomings in the Maharashtra law and its implementation, argues KALPANA SHARMA

by the Maharashtra Government which had begun considering the feasibility of a law to check female foeticide, found that 42 out of 50 doctors questioned, that is 84 per cent, performed sex determination tests. The study, by Dr. Sanjeev Kulkarni, calculated that these doctors averaged 270 sex determination tests a month. With more than 1,000 gynaecologists practising in the city of Bombay, the extent of the problem could well be imagined. The majority of the doctors also believed that they were performing a humane service for women who did not want daughters. In other words, they felt no guilt, nor did they consider this an illegal act, although the technology was being clearly used for a purpose other than the one for which it had been invented.

The impact of the continued misuse of sex-determination was also evident from the statistics gathered by three sociologists of two villages in Bijnore District, Uttar Pradesh. They [illegible] ...ales to a 1,000 males [illegible]

state average of 886 which is substantially lower than the national average of 935. Sex determination clinics had been operating in the district for several years prior to the survey.

It was a combination of outrage and such facts that led to the campaign demanding for a ban on sex determination technologies.

The discussions on the law which were initiated by the health ministry of Maharashtra are relevant today with the Centre considering a national law. The questions raised then have yet to be fully answered.

First would it be right to ban a technology just because it is being misused? After all, amniocentesis or chorionic villi biopsy, another such test, is a vital one which can alert parents about genetic abnormality in the foetus, thereby giving them the option of resorting to an abortion if they did not wish to be burdened with an abnormal child.

Secondly, could a law check a practice that [illegible] of a woman [illegible]

reluctant even to give birth to a girl? Would merely preventing people from discovering the sex of the child stop the practice? Would it not push it underground and raise the price?

The very nature of the test made its control extremely difficult. Amniocentesis does not require sophisticated equipment. A qualified gynaecologist can remove the amniotic fluid which can then be tested in any pathology laboratory by a geneticist. How could one catch a doctor in the act of conducting a sex determination test?

The activists, who were associated with the formulation of the Maharashtra law, insisted that the only way to check the growing misuse of the technology was to prohibit private practitioners from conducting it. They held that if the test was restricted to government medical institutions, its misuse could be checked even if not completely eliminated.

This [illegible]

could be challenged under Article 19 of the Constitution.

The question of punishment was also debated. Should the woman be held liable at all or should one take it for granted that she had resorted to sex determination because of direct pressure from her family or because of the indirect pressure of society? Here again the activists and the bureaucrats differed with the former holding that the woman should not be punished and the latter insisting that some light punishment should be given to the woman. The Maharashtra law imposes a fine of Rs 50 on the woman. Supporting this provision, Mr D. T. Joseph, now Urban Development Secretary to the Government of Maharashtra and one of the architects of the law when he held the post of

the SAA or the vigilance committees being constituted. It took the State Government more than seven months to start moving on the law. When it finally took some steps, it did not demonstrate sufficient alertness or urgency. For instance, soon after the constitution of the state vigilance committee, activists discovered that the Government had appointed a gynaecologist who had been performing sex determination tests. Following their protests, she was asked to step down.

Since then, the implementation of the law has been practically non-existent. The state vigilance committee received two complaints in 1989, about two private hospitals which were advertising sex-determination facilities. The complainants sent photographic proof of this. The committee did not move with any alacrity. Instead, it handed over the task of investigation to an official of the Bombay Municipal Corporation, and by the time the team went to these hospitals, the boards had been removed.

Even the SAA has not been effective. Despite

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Health Secretary, says, "The presumption should be built into the law that whenever a woman resorts to sex determination, she has been pushed into doing it by others."

On the question of banning sex-determination tests from private clinics, Mr. Joseph feels such a provision would be 'too drastic'. He suggests that they should be allowed to use the technology, after being granted a special licence under the law, but that within five years the Government should review the situation to consider how the licensed institutions are functioning and whether a review in the policy is needed.

The Maharashtra Regulation of Use of Prenatal Diagnostic Techniques Act, 1988, which came into effect on May 10 of that year, was the product of many months of intense discussions between government bureaucrats, activists, doctors, like Dr Pai who opposed the law, and lawyers. Although at the outset the law was welcomed as Maharashtra became one of the first states to take such a step, subsequently it has been criticised both for the obvious loopholes that exist in it and its lackadaisical implementation by the Government.

The act regulates the use of sex determination technologies but does not ban them. It also does not touch on the aspect of sex preselection technologies, which the Forum felt should have been part of the law.

The act provides for a State Appropriate Authority (SAA) which is enjoined to register institutions conducting these tests and state and regional vigilance committees which are supposed to keep an eye on these institutions and follow up complaints.

It also lays down that sexdetermination technologies can only be used on women over 35 years with either a history of two or more abortions, or who has been exposed to teratogenic drugs, radiation, injections or hazardous chemicals or with a family history of mental retardation or physical deformities. Under no circumstances is the doctor permitted to reveal the sex of the foetus.

The Act also prohibits advertisements about prenatal sex determination tests.

S[illegible]

knowing that there are literally thousands of private nursing homes and clinics in the state with facilities to conduct sexdetermination tests, the SAA received only 11 applications for registration from the Bombay circle, which consists of Bombay, Thane, Raigad, Ratnagiri and Sindudurg districts. Of these nine have been registered. To date some 16 clinics in Maharashtra have been granted permission to use the technology for detecting genetic abnormalities.

Dr. S. R. Salunkhe, joint director of health services, admits that there is no way in which the clinics that have not applied to the SAA for registeration can be forced to do so. Nor does the Government have the machinery to check whether unregistered nursing homes are conducting these tests or not. In fact, Government officials privately admit that checking the misuse of amniocentesis is a relatively low priority area when there are far more pressing problems in the area of health care.

Given this attitude, it is not surprising that even a law considered inadequate, has remained on paper. In fact, even the Health Department's plea that Bombay required a separate vigilance committee because of the large number of private institutions conducting sexdetermination tests in the city, was only acknowledged last month. The process of setting up such a committee has only just begun. The other regional vigilance committees are non-existent.

Mr. Joseph, however, holds that despite the inefficient implementation of the law, it has had an effect. Clinics cannot openly advertise their services, even if they are carrying them out covertly. The more law-abiding of the medical fraternity has stopped doing the tests. Even if their numbers are few, this should not be discounted. Dr. Pai, for instance, says 'fear of God and his enemies' has persuaded him to stop doing the tests.

Dr. Pritam Phatnani, a medico-legal expert, however, says that the law has not curbed the practice at all. Instead of conducting the tests in the nursing homes, doctors are now sending the samples of the amniotic fluid just across the [illegible]

Sex determination or extermination?

Continued from previous page

border to Gujarat, where laboratories proliferate. The test result merely states 'favourable', which means a male foetus, or 'unfavourable' meaning the converse. The law has also raised the price of the test. While this could have constrained a few, it was unlikely to deter the more determined. And as medical practice is increasingly regarded as a business, only the more principled doctors would deny themselves the opportunity of making a few more rupees.

In any case, doctors point out, that it is easy to subvert the law. For instance, how can anyone prove that a test has been conducted for the purpose of sex determination if the doctor is willing to certify that the patient was exposed to substances that could have harmed the foetus, thereby justifying the test. In any case, information about the sex of the foetus can be verbally conveyed without anything being stated in print.

Dr. Phatnani feels that one of the ways in which the practice could be checked is by noting the sex of the aborted foetus. And if there is an abnormally large number of female foetuses being aborted, the authorities can be alerted. He also suggests that the MTP Act should be reviewed and the provision which allows for an abortion on the grounds of 'failure of contraceptive' should either be removed or modified to prevent its misuse for the purpose of female foeticide.

Both Dr. Phatnani and Mr. Joseph are convinced that a central law would help as it would prevent the present practice of people going across the border to states where there is no ban on sex determination technologies.

But health officials given the task of implementation claim helplessness in the absence of a machinery to check clinics and powers to question and inspect such institutions. At present the vigilance committees can inspect a registered clinic if a complaint against it is filed. But they can do nothing about unregistered clinics which are suspected of conducting the tests. In fact, they have no power to demand information from these clinics in order to ascertain whether they are conducting sex determination tests covertly.

In the final analysis, given the experience in Maharashtra, it is clear that legislation in itself is inadequate in an area which requires social reform. The same attitude that has led to bride-burning, or justification of 'sati', governs the cold-blooded decision of parents to abort a female foetus. Until Indian society grants women equal status to men, and values them as human beings, such practices as female foeticide or infanticide will continue.

At the same time, it is evident that a government and a society that is made aware of an illegal and immoral practice like female foeticide cannot condone it. And merely because it is difficult to check this evil practice without a fundamental change in social attitudes, does not obviate the need for a law. Indeed, the very fact of a law can be used to generate awareness on the issue.

The advantages of a Central law are evident. It would prevent the undercutting of State laws, such as the one in Maharashtra, by neighbouring States that allow the practice. It would also constitute a statement that the Central Government regards the problem as serious enough to require a law.

However, before finalising the Central law, the Union Government should learn from the shortcomings of the Maharashtra law. For instance, the state law specifically mentions the sex determination techniques now in use. But it is more than likely that new techniques will be devised in the future, which are also safer than the present ones. The Central law should ensure that such future technologies are also covered by the law.

The powers of the appropriate authority and the vigilance committees also have to be reassessed and probably enhanced to ensure that they can fulfil the function for which they have been appointed. For instance, just as the Federal Drug Administration has inspectors, the State vigilance committees should be provided with permanent staff who could carry out surprise checks on clinics suspected of conducting these illegal tests.

At the same time, regardless of the extent to which the law is tightened, it is evident that only a continued campaign by the groups concerned to create awareness and to pressure the States to implement the law, will make a difference in the long run. The only people who will monitor clinics suspected of performing sex-determination tests, and report them to vigilance committees, and also ensure that their complaints are followed up, are the individuals and groups who are aware of the problem and concerned that it should not continue. The existence of a law will assist them in the task of creating awareness and restricting the abuse of the technology. They cannot, however, sit back and rest.

This is the reality with regard to all social laws in this country. They can be translated into reality only if enough people demand it.

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Limiting the licence to kill

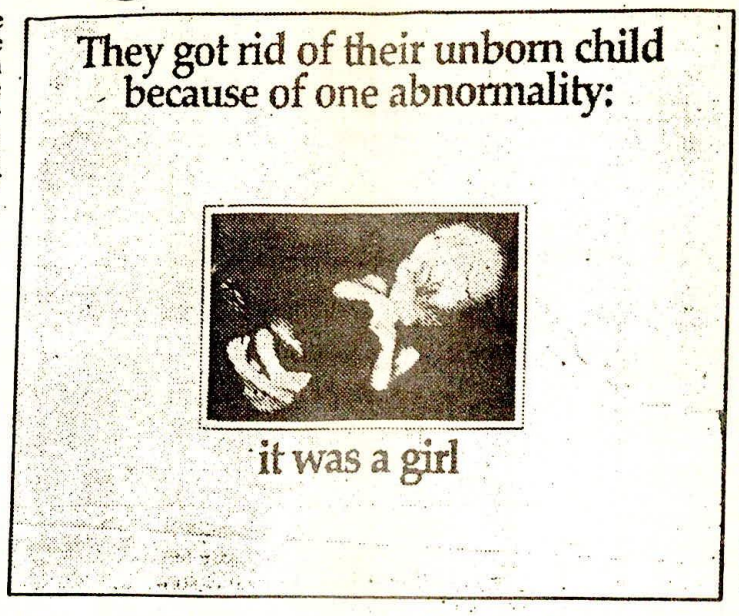
"PAY Rs. 70 now, save Rs 70,000 later": The poster, pasted on a peeling wall in a remote village in northern UP, says it all. Juxtapose this with a staggering set of statistics: 78,000 female foetuses aborted in the space of five years (1978-1983) after determining their gender.

And it's not just your average unlettered village woman who wends her way to the clinic to check out if her womb holds an heir-apparent. According to a recent Delhi university M.Phil thesis titled "The Silent Deaths: A Study on Female Foeticide in Delhi", many of the women opting for sex- selection are graduates and post-graduates.

The draft bill for the prevention of misuse of pre-natal diagnostic techniques, circulated in Parliament last week, then, has not come a day too soon. And it may never have come to pass but for the initative taken by women's groups in Bombay. Organisations such as the Forum Against Oppression of Women and The Women's Centre, along with activists of the People's Science Movement, set up the Forum Against Sex-determination and Preselection in March 1986. It was the Forum which ventually pressured the state vernment to bring the law into e in early 1988.

With all its flaws, the harashtra Act had a positive lout. Using it as a precedent, men's organisations and man rights activists have been rrying on a sustained campign for imposing a countywide ban on these tests which et female foeticide. The Rajiv gime drafted a law but it never w the light of day. After him, .P.Singh extended an assurance Parliament that his governent would pass the legislation. his also proved abortive. And ow, the Chandra Shekhar govrnment has finally presented a raft bill to Parliament.

But while women's organisaions have welcomed the governent's move, they are perturbed y the fact that the draft has virtually replicated the Maharashtra legislation, incorporating all its loopholes. One of the most objectionable provisions is that a woman who goes in for a sex-determination test shall be punished with imprisonment and a fine. This presupposes that the woman has of her own free will, whereas research reveals that this is not the case at all, even among the educated.



Yet another women-oriented law is on the anvil which treats the victim as offender. PREMA VISWANATHAN on the draft amniocentesis bill

This is a point that has been highlighted by Subhashini Ali, CPM MP, who has submitted a memorandum to the minister for health, Shakeelur Rehman, seeking a review of the draft. The letter, counter-signed by Ravindra R.P., member of the government-instituted expert committee and of the Forum Against Sex-determination and Pre-selection in Bombay, has apparently met with a favourable response. The minister has promised to invite representatives of women's organisations to discuss the fine- tuning of the draft sometime before the budget session, discloses Ali.

Brinda Karat of the All India Democratic Women's Organisation, however, does not place too much importance on these assurances. "I prefer to go by results. Our experience with past governments, especially the Congress government, has been that despite their 'professed' concern for women's rights, their approach is not serious. It's more in the nature of tokenism. When laws are passed, for instance, the provisions are not examined minutely and in the context of the social environment in which they are to be implemented." In the absence of such a committed approach, lacunae tend to creep in, making the whole exercise counter-productive. "Which is what has happened in the case of this draft law. The lessons of the Maharashtra experience have not been taken into account at all. Why else would there be this obnoxious clause, which views the woman seeking sex-selection as a potential offender. Why can't they recognise that it is social and familial pressures which force a woman to opt for female foeticide?"

Pramila Dandavate of the Mahila Dakshata Samiti concurs with Karat's criticism. "This is exactly like the sati legislation. The woman is seen as the culprit instead of the victim."

She admits, however, that there is divergence of opinion on this clause among women's rights activists. "Kapila Hingorani of the Indian Federation of Women Lawyers, for instance, supports this provision. But we in the Mahila Dakshata Samiti feel that the issue cannot be viewed in purely legal terms. The social context is equally important if the law is to benefit women."

Yet another loophole which has been critiqued by Ali is the exclusion of the very concept of vigilance committees which is most crucial to the successful implementation of this Act. "Both the Maharashtra Act as well as the draft bill prepared by the expert committee have advocated the formation of such committees, comprising government officials, medical experts and members of voluntary organisations. Instead, this draft bill vests all authority in a single government official."

An equally significant lacuna is the granting of licences to private hospitals and clinics. According to Ali, only select government hospitals should be authorised to conduct these tests in cases of suspected genetic abnormalities. Karat agrees. "Once the private sector is allowed to get in, vested interests will hold sway. And the whole law will be reduced to a travesty."

A point of view which finds favour with Swami Agnivesh, who, along with other activists of the Arya Samaj, had conducted several demonstrations in the capital calling for a ban on amniocentesis. But he points out that the issue of female foeticide cannot be viewed as a purely women's issue. "I would say it is a human rights issue. After all it is a practice which makes a mockery of Indian culture and civilisation, lowering the standards of social life. It is nothing but another form of sati. This is the point we must put across to the people, using all means of propaganda, especially the electronic media."

Indian tradition can come to the aid of such a campaign, he contends. "The Vedas and Upanishads contain several references to the elevated status of women, their importance in the life- sustaining process. We should highlight this to counter the regressive aspects of latter-day religion which pull down the position of women." Unless a cultural campaign is launched cutting across gender and class barriers, the law by itself will have no effect, he cautions.

Karat concurs. "I think it is time we stopped treating this issue as women-specific. That is too simplistican approach. After all, we've had a lot of support from men in our campaigns for women's rights. Moreover, it robs the movement of a human perspective."

Which, in these times of discord, is the only perspective that promises sanity.

Despite ban, doctors help choose sex of child

By A.L. Chougule

BOMBAY, May 19

ANY abortion based on sex of the foetus is a cognisable offence under the Indian Penal Code.

In Maharashtra there is an additional act called the Maharashtra Regulation of Pre-natal Diagnostic Techniques Act, 1988, passed by the state assembly in April 1988 to curb this practice. However, despite the act, sex determination (SD) tests and abortion of female foetuses is rampant.

While defiant gynaecologists offer SD tests openly in sheer violation of the law, many doctors are more cautious about their unethical and criminal practice, informs Dr. Inamdar who is in the forefront of the campaign against selective female foeticide. Says he, "There are no written records. All that the doctors do is extract the amniotic fluid and send it to the lab to ascertain the sex of the foetus. Patients are conveyed the results orally, and then abortions are carried out under the Medical Termination of Pregnancy Act, 1971."

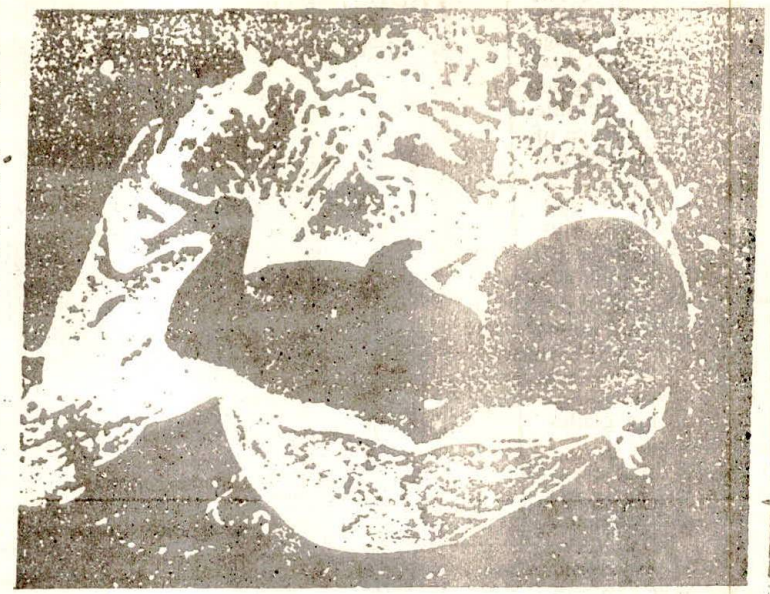
According to another leading gynaecologist, there are 1,000 gynaecologists in Bombay and it can be safely assumed that more than 50 per cent are carrying out the tests privately. According to a survey of 50 doctors conducted by Dr. Sanjeev Kulkarni of the Foundation for Research in Community Health, a year after the act was passed, over 64 per cent of the city doctors said that they used amniocentesis solely to determine the sex of the child.

Another fallout of the act, says Dr. Vibhuti Patel, member of the Forum Against Sex Determination and Sex Pre-selection and reader in SNDT University, is the sudden increase in cost. Before the ban, an amniocentesis test cost about Rs. 500 to 1,200, depending upon the gynaecologist and the equipment used. Today it does not cost less than Rs. 2,000. Some of the leading gynaecologists charge as much as Rs. 8,000.

Amniocentesis has become a booming business in small towns like Dahanu, Jalgaon, Amravati and Dhule. In fact, according to Vibhuti, after Bombay, Dahanu is a major centre today for SD tests.

Sex determination tests are equally or more popular in the states of Gujarat, Madhya Pradesh, Uttar Pradesh, Punjab, Haryana, Delhi, Tamil Nadu and Orissa. And after the ban came into force in Maharashtra three years ago, SD test has caught on in Goa too.

Last year alone, according to statistics revealed in Parliament, one lakh female foetuses were aborted after as- [illegible] memorandum



Techs. Obviously it shatters the myth that education brings about attitudinal changes.

The reason for the act being totally ineffective is the lack of political will to implement it. Such is the apathy of the state government that even after the act came into force, according to the forum's activists, it took more than eight months for the government to appoint the State Appropriate Authority (SAA) — the supreme administrative body to regulate the use of pre-natal techniques — and the State Vigilance Committee (SVC). And local vigilance committees were non-existent for the first two years.

Gaping flaws in the act have rendered it ineffective. The act does not prescribe any minimum number of meetings for the SVC in a year whereas the SAA is supposed to meet only twice.

In fact, the existence of these committees is cloaked in anonymity because till date the government has not announced the names of the committee members in the papers. Neither is the lay public aware of the procedures and regulations the committees have adopted to book the culprits.

The forum members feel though it provides for the SAA to issue licences to clinics for carrying out amniocentesis and other scientific tests for the purpose of detecting genetic abnormalities, the process of booking the offending doctors is a task in itself. For no person can file a complaint with the police or approach the court against unscrupulous doctors. The complaint has to be lodged with SAA which will take 'suitable action.

Ever since while on the one hand the popularity of the test caught on like wildfire, on the other hand it triggerd off a national debate which has now taken an ideological turn with even doctors wanting it banned. Those who speak in its favour argue that amniocentesis is a useful family planning device. However, the fact they have overlooked, say campaigners opposed to the test, is that by taking recourse to amniocentesis the woman does not undergo sterilisation but merely aborts female foetuses till such time that she does not conceive a male child.

Though through amniocentesis over 70 genetic diseases can be detected, its misuse has made it quite popular. And its misuse could be one of the reasons that has affected the male-female sex ratio. The 1991 census reveals that the sex ratio has declined to 929 females per 1,000 males from 935 females per 1,000 males in 1981. The campaigners and protestors had demanded that private clinics should not be allowed to offer the tests as the occurence of genetic disorders is one in one lakh foetuses and there are enough government hospitals to cope with the problem. Instead the government thought it best to regulate the misuse of the pre-natal diagnostic techniques by issuing licences to private clinics and bureaucratic control, thus increasing the scope for corruption.

What is more surprising is that a toothless act like this is a model for the Central draft bill which was introduced in the winter session of the recently dissolved Lok Sabha. The Central bill does not provide for vigilance committees and all the authority is vested with a single government official. And what is worse is that the Central bill, like the Maharashtra act, punishes women who seek such tests when it is a known fact that most women who undergo such tests do so under pressure from their husband or families.

The Ericsson technique:

29.6.86

A new way to eliminate women?

Dr Ronald Ericsson, a reproductive physiologist from the US, was recently in India to propagate a new sex selection technique he has invented. MANISHA GUPTE and RAVI DUGGAL, who spoke to him, discuss the ethical questions this controversial technique raises and the adverse impact it will have on the already unfavourable sex ratio in India.

ADDRESSING a press conference in mid April this year, Dr Ronald Ericsson, a visiting reproductive physiologist from the US, explained the controversial technique he has invented in California whereby the father's sperms could be segregated on the basis of sex characteristics and then, through fertilisation of the mother's ovum, a child of the desired sex could be produced. Dr Ericsson has floated the Gametrics Limited Company and has 46 clinics all over the world to propagate and universalise his patented technique.

The technique is based on the premise that the Y (male sex) bearing sperms swim faster than those with the X (female) characteristic when placed in a glass column filled with a dense liquid protein. After this "swim race", the Y containing sperms can be collected at the bottom of the column. The mother-to-be then could be artificially inseminated with this Y-rich semen and would have a 75 per cent chance of producing a male child. To produce a female child, the sperms are filtered through a starchy gel, in which the X sperms travel faster. The female sex selection is, however, not yet fully developed.

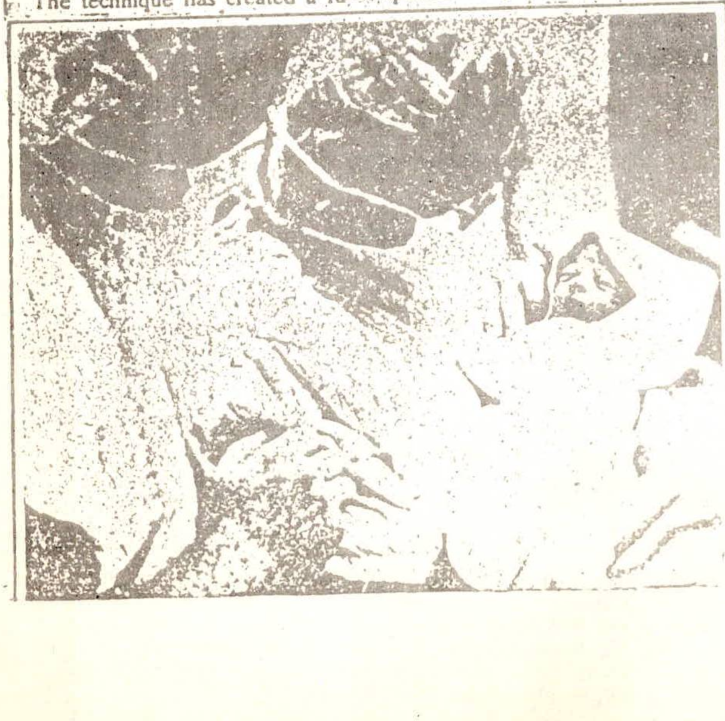
The technique has created a furore. [...] fact that gender preselection is a very personal question to meet a very personal demand". By personalising the need, he divorces the personal from the political, a position which is antithetical to the feminist stance asserting that the personal is political.

Ericsson's argument that his technique is not sex biased is refuted by the the fact that 11 of his clinics are in Asian countries where the male child syndrome is very prevalent: Malaysia, Taiwan, Korea, Pakistan, Egypt, Jordan, Singapore and now India. It is difficult to place a halo around the propagators of sex selection when it is evident that all they want is to fill their coffers at the cost of an anti-woman feeling that exists worldwide. Ericsson's research in reproduction has resulted in seven lucrative patents and he still holds the monopoly through the chain of 46 Ericsson clinics all over the world. Each Ericsson clinic, according to the terms of contract, can conduct the gender selection only after importing the necessary reagents from Gametrics, US. Local gynaecologists, too, may proceed to undertake artificial insemination in their own clinics only after acquiring the separated and concentrated sperms from the nearest Ericsson [...] pensive ultrasonography to pinpoint her ovulation time. Artificial insemination, again, would be charged separately. Such a procedure would cost, at a modest estimate, Rs 2,000. The entire procedure may have to be repeated three or four times to ensure pregnancy.

Once the woman gets pregnant, there is still the lurking 25 per cent chance that she may have conceived a child of the "wrong" sex, ie female if she had hoped for a male or vice versa. Therefore, she would still have to undergo a chorionic villi biopsy or amniocentesis and in the event of such a mistake, would have to undergo an abortion, or repeated abortions, at the cost of her health and at exhorbitant financial cost as well. Therefore, even the argument that sex selection is entirely non-invasive and non-violent is untrue, and neither is it as modestly priced as it is made out to be.

The consequences of such a technique would be horrifying. Firstly, and most evidently, it would adversely affect the already unfavourable sex ratio in India. According to the Census of India, 1981, there are 934 females per 1,000 males. Given the "male child craving" so obvious in India, couples would not be content with having one male child just to "balance their families" but would, definitely not have even a single female child if they could help it.

The argument that the status of women would rise if their numbers decreased has been scientifically disproven. There are numerous surveys to prove that, in fact, an adverse sex ratio increases rape, purdah, polyandry as well as other violence on and oppression of women. 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 exterminate them. In Punjab, a girl is endearingly and indulgently called "*Muee*" (literally meaning "dead"), indicating the secret death wish that even natal family members place on their female progeny; so, the unmasked hostility towards a female, born as an "accident", after the procedure of sex selection, can be well imagined.



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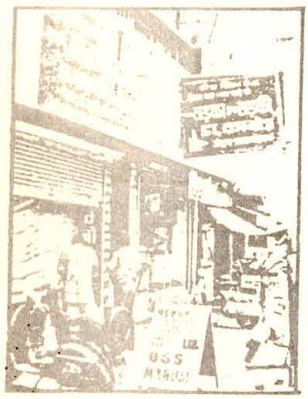
• by Raka Sinha

Rohtak Rampage

Alarming Female Foeticide

"Just yesterday, a bitch was seen carrying a four-month-old foetus in its mouth."



Most (in)famous of them all — Dr Kambhoj's Sex Determination Centre

Family pressure drives Savitri, a mother of two daughters, to determine the sex of her unborn child

Congested, crumbling and callous, Haryana's Rohtak town and its surrounding district have the dubious distinction of possessing the lowest sex-ratio in the country: an alarming 866 females to 1000 males. What is even more alarming is that while the all-India sex-ratio has dropped from 934 to 929 females, a drop of 6 points, the Rohtak figure has slid as many as 13 points, from 879 to 866. There has been a corresponding drop in the population growth rate in the district — it now stands at 17% against the State average of 28%, in spite of a not-too-successful family planning programme in the area. 'Rampant female foeticide' is the verdict of most medical and social observers.

When I, eight months pregnant myself, went to Rohtak to investigate, my first encounter with the horrors there took place in the city police station, where the inspector complacently told me, "Just yesterday a case was reported to us where a bitch was seen carrying a four-month-old foetus in its mouth. It was spotted by a tea-shop owner, but it would be difficult for us to trace where it came from." He could not tell me whether the foetus was male or female.

My next stop is at the clinic of Dr Mahindra Kambhoji, one of the most (in)famous doctors in Rohtak. He owns four sex-determination centres at Meerut, Delhi, Hissar and Rohtak, and local residents put his clientèle figures at around 1,000 a month. His charges range from Rs 200 to Rs 400 to Rs 1000 per test (depending on the kind of scanning done). Dr Kambhoj, however, very politely insisted, "Few women come to me to determine the sex of the foetus." The pregnant women sitting outside in his clinic tell a different story. Savitri, who has already had two daughters, confesses, "I have come to find out the sex of my child. If it is female, I might abort her." Santosh admits, "I have three daughters and want to find out the sex of this unborn child. If it is female, I will have to discuss the matter with my family members and decide whether to go in for an abortion." Neelam, a housewife, whose husband works in a college, reveals that she has one daughter, wants to find out if the next baby will be a female... the implications of her statement hang heavily on her.

Opposite Dr Kambhoj's clinic is a small shop with a hoarding which says 'We supply medicines for ensuring the birth of a son'. The name-plate reads, 'R D Hospital'. Inside, Savitri Devi, the lady at the counter says her mother Rama Devi makes the medicine which is a *desi* one. She gives personal proof of its efficacy: "I myself ate the medicine for a month and then gave birth to a son." Her mother, (who is currently ill and at home) has been trained as a nurse-*dai*, Savitri Devi says, and she also does abortions, "but only those which are two-month-old, and by the D & C method." I see a small, dingy and dirty area at the back of the shop where a ramshackle wooden platfrom has been set up. No sight of any kind of medical equipment — how Rama Devi does the D & C operations remains to be imagined.

Over to an elderly couple, the Sabharwals, who have obtained their medical diplomas from Lahore, before partition. Yes, they do abortions "using the D & C method" and also use a cream or an injection at times. They refuse to tell me the name of the cream or injection .

At Dr Chitkara's Nursing Home, Dr (Mrs) Chitkara reveals, "There are almost 80 outlets in Rohtak where abortions can be done. Some are done by trained *dais* or even nurses, and of course lady doctors like myself." Though the *dais* use Fetex cream (which is cheap but extremely hazardous), Dr Chitkara says she uses an imported injection which costs Rs 380 to Rs 475. It has a few side effects... suddenly her husband calls her aside and whispers something... she comes back and tells me sternly that she is not prepared to answer any more of my questions.

Dr Vinay Gour is ready to do so, however. A pleasant-looking woman she admits, "Many women from the surrounding villages come to me for abortions; they are quite aware that the sex of a foetus can be determined early on. We do about ten such abortions in a month. The cost ranges from Rs 500 to Rs 1,000." Dr Gour justifies her practice: "In Haryana, if a woman gives birth only to female babies, the husband will either get married again or he, along with her in-laws, will totally neglect her and the girls. That is why I am in favour of these abortions."

How many times before have we heard this kind of reasoning? The same old excuses, the same white-washing of guilt. True, societal changes don't take place overnight, but till then, the government, women's organisations, politicians, women's publications, you, me, all of us, have to work towards creating greater awareness as the first step towards curbing this shameful practice of murder of the female of the species.

Mushroom growth of sex clinics in Capital

NEW DELHI, December 26 (UNI).

THE street urchin thrusts a sex booklet into a young man's hand. The young man, window-shopping in Chandni Chowk, quickly turns the leaves.

"Just try us out once, sir, and your marital life will turn torrid again," the illustrated booklet assures him.

Scores of such booklets are distributed free every day by sex clinics in Delhi which have grown over the years.

Thirty years ago there were only three sex clinics in the walled city where the wealthy made clandestine, nocturnal visits to regain virility.

Today many sex shops—no exact count is available—have sprung up which are frequented by both the rich and the not-so-rich. Quite a few are doing roaring business, judging by their clientele.

What strikes a casual visitor is the glossy facade of the sex clinics: wood-papelled walls, leather sofas, marble-topped tables, and plush carpets in the reception room. Amorous illustrations from the Kama Sutra adorn the walls.

The majority of clients are males below 30 who visit these clinics on the eve of marriage. Most of them come nervous and distraught but go back confident and happy after treatment, claims the proprietor of a well-known clinic.

His treatment is a mixture of rare herbs, bhasmas, rasayanas, and aphrodisiacs which used to be administered to rajas and nawabs who kept harems and concubines. Sex orgies dissipated the blue-blooded princes rather early and they needed rejuvenation.

TREATMENT CHARGES

About ten per cent of his "patients" are foreigners. The charges for the miracle cure are varied—Rs. 225 for general treatment, Rs. 525 for special treatment, Rs. 1,025 for super special treatment, Rs. 1,825 for royal treatment, Rs. 2,525 for super royal treatment and Rs. 5,525 for nawabi treatment.

Another pharmacy in Chandni Chowk whose proprietor had a fairly good practice in Wazirabad, a sizable town in Gujranwala district, in the pre-partition days, is patronised by the young and the old. Its charges vary according to the nature of the ailment. For a full course a patient pays Rs. 350.

A well-advertised shafakhana, reportedly patronised by the elite, has made good over the years. Started on a modest scale 32 years back, today it has a daily turnover of over 30 patients. The clinic uses Unani (Greek system of medicine) concoctions along with other medicines to rekindle the sex flame. The proprietor has many foreign clients on his regular list of visitors and goes abroad at least twice a year. His treatment costs anything between Rs. 5,000 and Rs. 20,000.

However, the most modern is a health clinic in Connaught Place. It has a sauna (steam bath) and provocative aids and appliances to restore virility. Its proprietor describes himself as a "physician and sexologist and a writer of modern sex education."

ISOMETRIC TREATMENT

He cites the cases of "many happy married couples" who come to thank him. His charges are Rs. 975 for general treatment and Rs. 9,975 for isometric treatment. His super special treatment is an undisclosed sum.

The latest to join the tribe of sex-specialists is a physician who set up a clinic in Karol Bagh two years back. He claims that a large number of foreign clients seek his advice through correspondence. His charges are "moderate".

What have the "clients" to say about these sex doctors? Most of them provide "temporary relief" with the aid of powerful aphrodisiacs, says a 32-year-old engineer. Married at the age of 27 the engineer suffered a groin accident a year later that impaired his sex life. He visited several sex clinics and spent a fortune, but obtained "poor results".

Other disgruntled clients say that these clinics are frauds and are run mainly on "high-powered publicity stunts."

Another dissatisfied client feels that despite poor results, the sex clinics come out unscathed for two reasons. Firstly, in the event of tentative results, the clients speak glowingly of the clinics to their friends who spread the word fast. Secondly, even if a client gets no relief, he is too ashamed to speak about his infirmity to others.

Illusion or reality, the sex clinics keep mushrooming in Delhi as elsewhere and the urchins go on thrusting colourful booklets on anyone they accost on the road.

"Even the argument that sex selection is entirely non-invasive and non-violent is untrue and neither is it as modestly priced as it is made out to be."

rore in the US. Though a particular male may either have an X or a Y concentrated semen, the probability of his fathering a male child is slightly above 50 per cent (there are 106 males to every 100 females born), a fact that is demographically proven and even accepted by Dr Ericsson. How useful is this technique then? It raises questions of ethics and issues other than the mere 25 per cent extra chance of producing a child of the desired sex.

Rosy pictures are conjured up about the sex selection technique. It is advocated as a "social service", since now for the first time "couples can improve the quality of their progeny", "quality" implying the male gender, naturally. In the pamphlets issued by Dr Ericsson, one can see the intelligent defences built up against expected resistance. Though his technique is better adapted to choose the male sex, he says that the "sex selection for females is more complicated", but that "methods of selecting females are also being developed by Gametrics and others". He argues that 52 per cent of the couples who have contacted him wanted female children (he does not disclose the sex ratio of the children in families which wanted a girl baby). Yet, while 248 couples in his clinics have selected boys, only 15 couples have actually undergone the test to have a female child, bringing down the percentage of the latter to less than six.

Another smart defence used by Ericsson is the "personalisation aspect". Arguing about the appropriateness of sex preselection on social, ethical or religious grounds, he says that "this merely highlights the laboratory.

The Ericsson technique has raised many controversies in the west. Artificial insemination has been opposed on religious grounds. In India, a similar resistance may not be put up because actually Indian mythology is filled with episodes of "foreign seed in wife's womb". The wife being a commodity of the husband, her uterus was the "garden" that her husband owned and therefore the fruit of any "seed" that set root in the garden legally belonged to the husband. There are innumerable stories of sterile kings inviting revered hermits to "donate their seed" to the queen to be able to bear a "legitimate" heir to his throne. The idea of the "husband's own seed" being artificially inseminated may not seem like a repugnant idea at all.

Dr Mehta, who will run an Ericsson clinic in Bombay, argues that the cost benefit is greater when a couple uses sex selection as compared to amniocentesis. He says that amniocentesis only detects gender. The dangers of undergoing an abortion, that too in the second trimester of pregnancy are greater, so is the cost. However, the argument is not very convincing. Sperm separation alone would cost around Rs 1,000; consultancy and establishing the reproductive capability of the couple would cost much more. (Five per cent of couples would come with infertility problems such as low sperm count and blocked Fallopian tubes; and in these cases the defect would have to be removed by sperm concentration or laparoscopic surgery, respectively).

After the separation of sperm, the woman would have to undergo ex-

Even if the sex selection technique is not always used to entirely annihilate women, it is most likely that it will be used to select the male gender for the first borns. A social psychologist of Cleveland State University, Dr Roberta Steinbacher argues that the "younger sister phenomenon" would institutionalise a second class status for women, as first borns are known to be aggressive achievers who tend to be more successful educationally and economically than siblings born later.

Another clever game that the "sex selectors" play is to pass the buck around. When asked about the social consequences of sex selection they deny all responsibility and say that while it is the doctor's duty to please individual clients, it is the duty of the social workers to educate the general public against discriminating techniques. When asked as to why they do not refuse to perform such controversial techniques, they argue that since couples would anyway resort to all kinds of unscientific and harmful methods to produce male offspring and get "cheated", the benevolent medical profession could not be blamed for performing such tests. These arguments were advanced by both, Dr Kapoor of a hospital in Bombay where amnoiocentesis is performed and by Dr Mehta who will soon start the sex selection facility.

Insurmountable hurdles await all those who wish to oppose such sexist techniques. Firstly, the adversaries are "respectable" members of the medical profession. They have sophisticated advertising media, ranging from slick pamphlets to professionally prepared slide shows. Not only do they have the power and resources in their hands, but unfortunately, the general public's self-interest is also on their side. The tripartite coalition of the medical technocrats, the government and social preference for male children has to be dealt with simultaneously, and that does not make the fight any easier.

ESMAN (Delhi)
EXPRESS (Delhi)
PIONEER
GRAPH

Will bill to ban sex test control medical mercenaries

IB 13/7/92

HUMAN RIGHTS

by Usha Rai

THE massacre of the female foetus after determining the sex of the child by use of the most sophisticated pre-natal diagnostic techniques sounds like a horror story. It is a crime in which the medical profession has colluded with parents who do not want a girl child.

In this session of Parliament the bill for prevention of misuse of pre-natal diagnostic techniques is likely to be discussed and passed.

A joint select committee of Parliament has held a series of meetings to incorporate the suggestions of interested parties. But will the bill really solve the problem? Or will it be just another ornament in the cause of women's upliftment?

Even as the joint select committee was grappling with the amazing mass of evidence for a cogent, meaningful bill, at Udaipur a doctor held a crash course for two days to train doctors in pre-natal testing.

He was charging a whopping Rs 35,000 for the course. The young doctors undergoing the training were assured they would get back their investment in no time at all and then they would be on the high road to minting money.

Fifteen years ago when the alarm was first sounded about the pre-natal testing, the amniotic fluid was being extracted from the pregnant woman's womb and the chromosome pattern tested to determine the sex of the child. But now 95 per cent of the sex determination tests (SDTs) are by ultra sound equipment which has innumerable other medical uses and has mushroomed to small towns and even villages.

Banning the ultra sound is neither feasible or advisable. But its use definitely needs control.

According to evidence given to the select committee, between 1978 and 1982 78,000 female foetuses were aborted after sex determination and between 1986-87 30,000 to 50,000 were aborted.

Between 1982 to 1987 the number of clinics for sex determination increased from less than 10 to 248 in Bombay city alone.

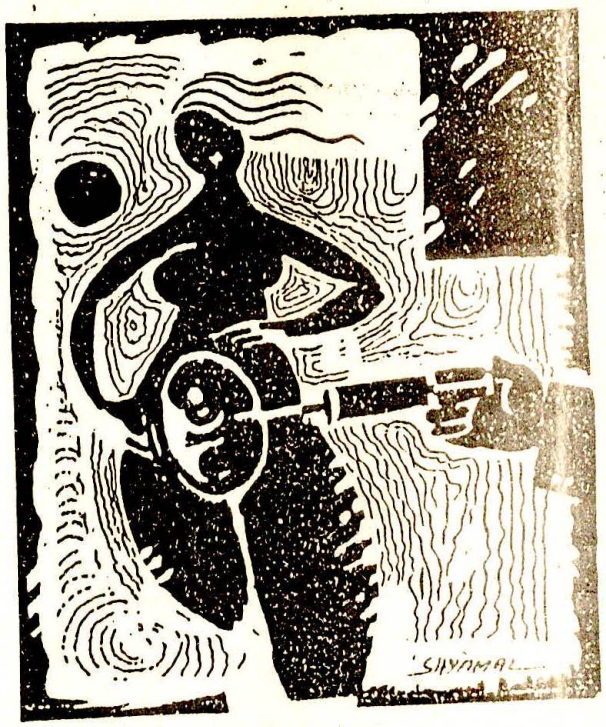
A 1986 government sponsored study in Bombay revealed that 84 per cent of the sample of doctors were performing amniocentisis for sex determination alone.

Each of the doctors was doing an average of 270 tests a month.

In 1987 the Garbh Parkshan Virodhi Manch reported that 2400 SDTs were conducted in Baroda city and only three of 30 doctors interviewed were against sex determination.

In seven Delhi clinics 13,000 SDTs were done between 1987-88.

While ultrasonography is the commonest way of sex determination, several sophisticated techniques for sex pre-selection are increasingly being developed and popularised commercially like the Ericsson method.



Between 1986-87 about 50,000 female foetuses were aborted after sex test. A doctor at Udaipur held a two-day crash course in pre-natal testing. He was charging a whopping Rs 35,000 for the course.

Sex determination facilities have spread to rural interiors like Bijnor (UP); Dhulia, Satara and Sangli in Maharashtra and areas of Gujarat where basic facilities like potable water do not exist. From the rural areas the amniotic fluid is sent for testing to the cities in ice packs.

Doctors and others who support the SDTs point out that in a country where abortion has been legalised there should be no squeamishness about SDTs and the subsequent abortions.

Those seeking a ban point out that the impact of the SDTs can now be felt at the demographic level and the falling ratio of women to men.

The bill is welcomed as the first attempt to control medical technology and private medical practice. But there are fears that the government may use it to achieve its not so immediate goal of bringing down the Net Reproductive Rate to one (that is a woman produces just one female child.)

The bill seeks to give licence to anyone who wants to register as a genetic counsellor or those running genetic clinics and laboratories.

A person who has a degree or diploma in medical genetics and two years experience has been termed a 'medical genetist'.

It has been suggested that the bill be amended to specify which pre-natal diagnostic tests/techniques the legislation proposes to control.

The purpose for which the tests are conducted should be spelled out and there should be a central supervisory board for monitoring them.

Pre-natal testing should be limited to hospitals attached to medical colleges recognised by the Medical Council of India and to apex research organisations that have facilities on par or higher than teaching hospitals, it has been suggested.

An interesting suggestion made to the select committee was that the Ultra Sound equipment be brought under the Dangerous Equipments Act – like guns. Only registered firms should be allowed to sell ultra sound equipment. Transfer and subsequent sale should not be permitted.

The onus of responsibility for the crime should fall on the medical professionals and the husband and other relatives for aiding and abetting the crime.

But the women on whom the tests are conducted are victims of the existing gender bias and should not be prosecuted.

CONFIDENTIAL

CB II NO. 378

L O K S A B H A

THE PRE-NATAL DIAGNOSTIC TECHNIQUES (REGULATION AND PREVENTION OF MISUSE) BILL, 1991

REPORT

OF THE JOINT COMMITTEE

(Presented on 22nd December, 1992)

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LOK SABHA SECRETARIAT

NEW DELHI

December, 1992 / Agrahayana, 1914 (Saka)

Date: 11.1.93

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Appendix I :

Motion in Lok Sabha for reference of the Bill to the Joint Committee.

Appendix II :

Motion in Rajya Sabha.

Appendix III :

List of Associations/Organisations, individuals, etc. from whom Memoranda were received by the Joint Committee.

Appendix IV :

List of witnesses who tendered oral evidence before the Joint Committee.

Appendix V :

Minutes of the Joint Committee.

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*To be appended at the time of printing.

JOINT COMMITTEE ON THE PRE-NATAL DIAGNOSTIC TECHNIQUES (REGULATION AND PREVENTION OF MISUSE) BILL, 1991.

COMPOSITION OF THE COMMITTEE

Smt. D.K. Tharadevi Siddhartha - Chairperson

MEMBERS
LOK SABHA

02. Smt. Dil Kumari Bhandari
03. Smt. Malini Bhattacharya
04. Smt. Saroj Dubey
05. Smt. Girija Devi
06. Dr. Mahavirsinh Harisinhji Gohil
07. Dr. Viswanatham Kanithi
08. Smt. Sumitra Mahajan
09. Smt. Geeta Mukherjee
*10. Dr. (Smt.) Padma
11. Dr. Kartikeswar Patra
12. Dr. Vasant Niwrutti Pawar
13. Dr. (Smt.) K.S. Soundaram
14. Km. Uma Bharati
15. Km. Vimla Verma

RAJYA SABHA

16. Smt. Chandrika Abhinandan Jain
17. Smt. Sarla Maheshwari
18. Shri Sarda Mohanty
19. Shri V. Narayanasamy
20. Smt. Satya Bahin
21. Smt. Sushma Swaraj
**22.

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* Appointed w.e.f.20.12.1991 vice Shri K.R.Narayanan resigned.

** Shri Bhaskar Annaji Masodkar ceased to be a member of the Committee w.e.f.4.7.1992 on the expiry of his term in Rajya Sabha and the vacancy was not filled up.

SECRETARIAT

1.	Shri G.L. Batra	- Additional Secretary
2.	Shri S.C. Gupta	- Joint Secretary
3.	Shri R.K. Chatterjee	- Deputy Secretary
4.	Shri T.D. Dhingra	- Under Secretary

REPRESENTATIVES OF THE MINISTRY OF LAW, JUSTICE AND COMPANY AFFAIRS (LEGISLATIVE DEPARTMENT)

1.	Shri B.P. Jayakar	- Joint Secretary and Legislative Counsel.
2.	Shri N.K. Agrawal	- Joint Secretary and Legislative Counsel
3.	Shri M.S. Sharma	- Additional Legislative Counsel.
4.	Shri T.K. Vishwanathan	- Additional Legislative Counsel.

REPRESENTATIVES OF THE MINISTRY OF HEALTH AND FAMILY WELFARE (DEPARTMENT OF FAMILY WELFARE).

1.	Shrimati Usha Vohra	- Secretary
2.	Shri A.K. Mukherjee	- Acting D.G.H.S.
3.	Shri S.B. Mishra	- Joint Secretary
4.	Shri S.S. Kapur	- Director

REPORT OF THE JOINT COMMITTEE ON PRE-NATAL DIAGNOSTIC TECHNIQUES (REGULATION AND PREVENTION OF MISUSE) BILL, 1991..

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1. The Chairperson of the Joint Committee to which the Bill* viz. the Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Bill, 1991 was referred, having been authorised to submit the Report on their behalf, present this Report.

2. The Bill was introduced in the Lok Sabha on 12 Sept. 1991. The motion for reference of the Bill to a Joint Committee of both Houses of Parliament was moved in Lok Sabha by Shri M.L. Fotedar, Minister of Health and Family Welfare on 16 September, 1991 and was adopted (Appendix I).

3. The Rajya Sabha concurred in the said motion on 17 September, 1991 (Appendix II).

4. The message from Rajya Sabha was published in Lok Sabha Bulletin Part II on 19 September, 1991.

5. The Committee held 18 sittings in all.

6. The first sitting was held on 22 October, 1991. At this sitting, the Committee considered their future programme of work and decided to issue a press communique inviting memoranda containing suggestions/comments on the Bill by 22 November, 1991 from the State Governments, Union Territory Administrations, Bar Councils, Medical Associations and other individuals interested in the subject matter of the Bill for their consideration. They also desired that

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*Published in the Gazette of India Extra-ordinary Part II Section II, dated 12 September, 1991.

Clause 14

31. This clause provides for disqualification for appointment as members of the Central Supervisory Board. The Committee feel that those persons who have been associated with the use or promotion of pre-natal diagnostic techniques for determination of sex should be disqualified from being members of the Supervisory Board. Accordingly, the Committee have decided to provide a new sub-clause (f) which provides that a person should be disqualified from being appointed as a member if he has, in the opinion of the Central Government, been associated with the use or promotion of pre-natal diagnostic techniques for the determination of sex.

Clause 16

32. One of the functions of the Central Supervisory Board is stated to be to create public awareness against the practice of female foeticide. The purpose of the Bill is to discourage the practice of pre-natal sex-determination itself to prevent its misuse. Therefore, the Committee have modified the relevant provision to provide for creating public awareness not just against the practice of female foeticide but basically against the pre-natal sex-determination, whether or not it leads to female foeticide. Therefore, the words "pre-natal sex determination and" have been added at the appropriate place.

Clause 17

33. This clause provides for the appointment of Appropriate Authorities for discharging the functions of granting registration enforcing standards prescribed for such Centres, Laboratories and Clinics, suspension or cancellation of a Genetic Counselling Centre, Genetic laboratory or Genetic Clinic and to enforce standards prescribed for such Centres,

Laboratories and Clinics. It also provides for the appointment of Advisory Committee to advise the Appropriate Authorities in the discharge of their functions.

Sub-clause (1) and (2)

34. In sub-clause (1) and sub-clause (2), the existing Bill provides that the Central Government or the State Government shall appoint one or more "officers" as Appropriate Authorities for each of the Union Territories/States etc. The Committee feel that the existing provision needs to be amplified inasmuch as there could be one or more Appropriate Authorities for the whole or part of the State or Union Territory for the purposes of this Act keeping in view the intensity of the problem of pre-natal sex determination leading to female foeticide. Therefore, the Committee have amended these sub-clauses accordingly.

Sub-clause (3)

35. In this sub-clause the present provision states that the Appropriate Authorities contemplated in sub-clauses(1) and (2) shall be of or above the rank of Joint Director of Health and Family Welfare of the State Government or a Union Territory, as the case may be. In this connection, the Committee appreciate that at the district level officers of the rank of Joint Director or above may not be available. Therefore, the Committee have amended the clause to provide inter-alia for officers "of or above the rank of Joint Director of Health and Family Welfare or such other rank of the State Government or of the Union Territory, as the Central Government or the State Government, as the case may be, may deem fit to appoint".

Sub-clause (4)

36. While discussing this sub-clause, the Committee have felt that while discharging the functions of Appropriate Authority, it should be obligatory for the Authority to seek and consider the advice of the Advisory Committee, constituted under sub-clause (5) of clause 17 on matters relating to grant of registration, complaints or suspension or cancellation of the registration etc. Accordingly, the Committee have added a new sub-clause to this sub-clause to provide for it.

Sub-clause 5

37. The existing provisions in the Bill do not give adequate representation to certain interests to make the Advisory Committee effective. The Committee are of the opinion that the Advisory Committee should include a paediatrician, a legal expert as also an officer concerned with the information and publicity of the concerned Department. The Committee feel that since the Appropriate Authority is to be guided by this Advisory Committee, the opinions emerging from the Advisory Committee should be well considered from all angles, for which these interests should be properly represented. The Committee have also decided to include a provision that one of the Members of the Advisory Committee should be appointed as the Chairman of the Committee by Central Government or the State Government as the case may be, to guide the deliberations and to discharge the various functions of the Committee. The Committee also feel that only those persons should be represented on this Committee who are in no way associated with the use or promotion of the pre-natal diagnostic techniques for determination of sex. This sub-clause has been amended accordingly. The Committee have also come to the conclusion that the Advisory Committee should meet at reasonably fixed intervals which could be provided in the rules so that the Advisory Committee can render useful advise to the Appropriate

Authority at the appropriate times. The sub-clause has been amended accordingly.

Clause 18

38. This clause provides for registration of all Genetic Counselling Centres, Genetic Laboratories and Genetic Clinics engaged in conducting pre-natal diagnostic techniques. The Committee feel that in order to cover any loophole, it is necessary to provide for registration of the Genetic Centre, Laboratory or Clinic functioning "either separately or jointly". The Committee have amended sub-clauses (1), (3) and (4) of this clause accordingly.

Clause 19

39. Sub-clause (1) has been amended to include the words "Either separately or jointly" as explained in regard to clause 18 above.

Clause 22

40. This clause bans advertisements by a Genetic Counselling Centre, Laboratory or a Clinic relating to pre-natal diagnostic techniques and also provides for the punishment for its contravention. The Committee have amended the sub-clause(1) to provide that even any agent on behalf of a Centre, Laboratory or a Clinic shall be bound by these provisions.

41. The Committee are of the opinion that even those who print such an advertisement should also be punishable. Accordingly, the Committee have provided a new sub-clause(2) to this clause.

Clause 23

42. This clause provides for offences and penalities. The Committee feel that instead of all persons employed in a Counselling Centre, Laboratory or Clinic, only those persons

who render professional or technical services should come within the purview of the penal clause of this Bill. The clause has been amended accordingly.

Clause 24

43. This clause provides that the court shall presume, unless the contrary is proved, that the pregnant woman has been compelled by her husband or the relative to undergo pre-natal diagnostic technique and such person shall be liable for abetment of the offence under sub-section (3) of section 23.

44. The Committee deliberated on the question at length whether the pregnant woman who undergoes such pre-natal diagnostic techniques should be exempted from such punishment considering the social status and compulsions in which the Indian woman is placed today. However, the Committee felt that providing for punishment for the pregnant woman herself will go a long way in achieving cherished objectives of the Bill. Therefore, the Committee decided not to make any change in the present clause and to retain it as it is.

Clause 28

45. This clause provides that the court shall take cognizance of an offence under the Act only on a complaint made by the Appropriate Authority or any officer authorised by the Central Government or State Government or the Appropriate Authority or by a person who has given notice of not less than sixty days to the Appropriate Authority of the alleged offence and his intention to make a complaint to the court.

46. In clause (b) of sub-clause (1), the Committee have decided to amplify the existing provision to provide that any person "including a person representing any social organization" could give a notice of his intention to make a complaint to the court.

47. The Committee have also felt that the existing provision of sixty days' notice is too long for approaching the court. The Committee, have, therefore, decided to reduce it to thirty days. The Committee have amended the clause accordingly.

48. The Joint Committee recommended that the Bill, as amended, be passed.

SMT. D.K. THARADEVI SIDDHARTHA
CHAIRPERSON
Joint Committee on Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse)Bill,1991.

NEW DELHI;
16 December, 1992.

11.1.93:Pr/

Bill No. 155 of 1991.

THE PRE-NATAL DIAGNOSTIC TECHNIQUES (REGULATION AND PREVENTION OF MISUSE) BILL, 1991

(As reported by the Joint Committee)

[*Words underlined or side-lined indicate the amendments suggested by the Committee, asterisks indicate omissions.*]

A

BILL

to provide for the regulation of the use of pre-natal diagnostic techniques for the purpose of detecting genetic or metabolic disorders or chromosomal abnormalities or certain congenital malformations or sex-linked disorders and for the prevention of the misuse of such techniques for the purpose of pre-natal sex determination leading to female foeticide; and for matters connected therewith or incidental thereto.

BE it enacted by Parliament in the Forty-third Year of the Republic of India as follows:—

CHAPTER I

PRELIMINARY

Short title, extent and commencement.

1. (1) This Act may be called the Pre-natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1992.

(2) It shall extend to the whole of India except the State of Jammu and Kashmir.

(3) It shall come into force on such date as the Central Government may, by notification in the Official Gazette, appoint.

Definitions.

2. In this Act, unless the context otherwise requires,—

(*a*) "Appropriate Authority" means the Appropriate Authority appointed under section 17;

(*b*) "Board" means the Central Supervisory Board constituted under section 7;

(*c*) "Genetic Counselling Centre" means an institute, hospital, nursing home or any place, by whatever name called, which provides for genetic counselling to patients ***;

(*d*) "Genetic Clinic" means a clinic, institute, hospital, nursing home or any place, by whatever name called, which is used for conducting pre-natal diagnostic procedures;

(*e*) "Genetic Laboratory" means a laboratory and includes a place where facilities are provided for conducting analysis or tests of samples received from Genetic Clinic for pre-natal diagnostic test;

(*f*) "gynaecologist" means a person who possesses a post-graduate qualification in gynaecology and obstetrics;

(*g*) "medical geneticist" means a person who possesses a degree or diploma or certificate in medical genetics in the field of pre-natal diagnostic techniques or has experience of not less than two years in such field after obtaining—

(*i*) any one of the medical qualifications recognised under the Indian Medical Council Act, 1956; or 102 of 1956.

(*ii*) a post-graduate degree in biological sciences;

(*h*) "paediatrician" means a person who possesses a post-graduate qualification in paediatrics;

(*i*) "pre-natal diagnostic procedures" means all gynaecological or obstetrical or medical procedures such as ultrasonography foetoscopy, taking or removing samples of amniotic fluid, chorionic villi, blood or any tissue of a pregnant woman for being sent to a Genetic Laboratory or Genetic Clinic for conducting pre-natal diagnostic test;

(*j*) "pre-natal diagnostic techniques" includes all pre-natal diagnostic procedures and pre-natal diagnostic tests;

(*k*) "pre-natal diagnostic test" means ultrasonography or any test or analysis of amniotic fluid, chorionic villi, blood or any tissue of a pregnant woman conducted to detect genetic or metabolic disorders or chromosomal abnormalities or congenital anomalies or haemoglobinopathies or sex-linked diseases;

(*l*) "prescribed" means prescribed by rules made under this Act;

(*m*) "registered medical practitioner" means a medical practitioner who possesses any recognised medical qualification as defined in clause (*h*) of section 2 of the Indian Medical Council Act, 1956, and whose name has been entered in a State Medical Register; 102 of 1956.

(*n*) "regulations" means regulations framed by the Board under this Act.

CHAPTER II

REGULATION OF GENETIC COUNSELLING CENTRES, GENETIC LABORATORIES AND GENETIC CLINICS

Regulation of Genetic Counselling Centres, Genetic Laboratories and Genetic Clinics.

3. On and from the commencement of this Act,—

(*1*) no Genetic Counselling Centre Genetic Laboratory or Genetic Clinic unless registered under this Act, shall conduct or associate with, or help in, conducting activities relating to pre-natal diagnostic techniques;

(*2*) no Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic shall employ or cause to be employed any person who does not possess the prescribed qualifications;

(*3*) no medical geneticist, gynaecologist paediatrician registered medical practitioner or any other person shall conduct or cause to be conducted or aid in conducting by himself or through any other person, any pre-natal diagnostic techniques at a place other than a place registered under this Act.

CHAPTER III

REGULATION OF PRE-NATAL DIAGNOSTIC TECHNIQUES

Regulation of pre-natal diagnostic techniques.

4. On and from the commencement of this Act,—

(*1*) no place including a registered Genetic Counselling Centre or Genetic Laboratory or Genetic Clinic shall be used or caused to be used by any person for conducting pre-natal diagnostic techniques except for the purposes specified in clause (*2*) and after satisfying any of the conditions specified in clause (*3*);

(*2*) no pre-natal diagnostic techniques shall be conducted except for the purposes of detection of any of the following abnormalities, namely:—

(*i*) chromosomal abnormalities;

(*ii*) genetic metabolic diseases;

(*iii*) haemoglobinopathies;

(*iv*) sex-linked genetic diseases;

(*v*) congenital anomalies;

(*vi*) any other abnormalities or diseases as may be specified by the Central Supervisory Board;

(*3*) no pre-natal diagnostic techniques shall be used or conducted unless the person qualified to do so is satisfied that any of the following conditions are fulfilled, namely:—

(*i*) age of the pregnant woman is above thirty-five years;

(ii) the pregnant woman has undergone of two or more spontaneous abortions or foetal loss;

(i) the pregnant woman had been exposed to potentially teratogenic agents such as drugs, radiation, infection or * * * chemicals;

(iv) the pregnant woman has a family history of mental retardation or physical deformities such as spasticity or any other genetic disease;

(v) any other condition as may be specified by the Central Supervisory Board;

(4) no person, being a relative or the husband of the pregnant woman shall seek or encourage the conduct of any pre-natal diagnostic techniques on her except for the purpose specified in clause (2).

Written consent of pregnant woman and prohibition of communicating the sex of foetus.

5. (1) No person referred to in clause (2) of section 3 shall conduct the pre-natal diagnostic procedures unless—

(a) he has explained all known side and after effects of such procedures to the pregnant woman concerned;

(b) he has obtained in the prescribed form her written consent to undergo such procedures in the language which she understands; and

(c) a copy of her written consent obtained under clause (b) is given to the pregnant woman.

(2) No person conducting pre-natal diagnostic procedures shall communicate to the pregnant woman concerned or her relatives the sex of the foetus by words, signs or in any other manner.

Determination of sex prohibited.

6. On and from the commencement of this Act,—

(a) no Genetic Counselling Centre or Genetic Laboratory or Genetic Clinic shall conduct or cause to be conducted in its Centre, Laboratory or Clinic, pre-natal diagnostic techniques including ultrasonography, for the purpose of determining the sex of a foetus;

(b) no person shall conduct or cause to be conducted any pre-natal diagnostic techniques including ultrasonography for the purpose of determining the sex of a foetus.

CHAPTER IV

Central Supervisory Board

Constitution of Central Supervisory Board.

7. (1) The Central Government shall constitute a Board to be known as the Central Supervisory Board to exercise the powers and perform the functions conferred on the Board under this Act.

(2) The Board shall consist of—

(a) the Minister in charge of the Ministry or Department of Family Welfare, who shall be the Chairman, *ex officio*;

(*b*) the Secretary to the Government of India in charge of the department of Family Welfare, who shall be the Vice-Chairman, *ex officio*;

(*c*) two members to be appointed by the Central Government to represent the Ministries of Central Government in charge of woman and Child Development and of Law and Justice, *ex officio*;

(*d*) the Director General of Health Services of the Central Government, *ex officio*;

(*e*) ten members to be appointed by the Central Government, two each from amongst—

(*i*) eminent medical geneticists;

(*ii*) eminent gynaecologists and obstetricians;

(*iii*) eminent paediatricians;

(*iv*) eminent social scientists; and

(*v*) representatives of women welfare organisations;

(*f*) three women members of Parliament, of whom two shall be elected by the House of the People and one by the Council of States;

(*g*) four members to be appointed by the Central Government by rotation to represent the States and the Union territories, two in the alphabetical order and two in the reverse alphabetical order:

Provided that no appointment under this clause shall be made except on the recommendation of the State Government or, as the case may be, the Union territory;

(*h*) an officer, not below the rank of a Joint Secretary or equivalent of the Central Government, in charge of Family Welfare, who shall be the member-secretary, *ex officio*.-

Term of office of members.

8. (*1*) The term of office of a member, other than an *ex officio* member, shall be,—

(*a*) in case of appointment under clause (*e*) or clause (*f*) of sub-section (2) of section 7, three years; and

(*b*) in case of appointment under clause (*g*) of the said sub-section, one year.

(*2*) If a casual vacancy occurs in the office of any other members, whether by reason of his death, resignation or inability to discharge his functions owing to illness or other incapacity, such vacancy shall be filled by the Central Government by making a fresh appointment and the member so appointed shall hold office for the remainder of the term of office of the person in whose place he is so appointed.

(*3*) The Vice-Chairman shall perform such functions as may be assigned to him by the Chairman from time to time.

(*4*) The procedure to be followed by the members in the discharge of their functions shall be such as may be prescribed.

Meetings of the Board.

9. (*1*) **The Board shall meet at such time and place, and observe such rules of procedure in regard to the transaction of business at its meetings (including the quorum at such meetings) as may be provided by regulations:**

Provided that the Board shall meet at least once in six months.

(*2*) **The Chairman and in his absence the Vice-Chairman shall preside at the meetings of the Board.**

(*3*) **If for any reason the Chairman or the Vice-Chairman is unable to attend any meeting of the Board, any other member chosen by the members present at the meeting shall preside at the meeting.**

(*4*) **All questions which come up before any meeting of the Board shall be decided by a majority of the votes of the members present and voting, and in the event of an equality of votes, the Chairman, or in his absence, the person presiding, shall have and exercise a second or casting vote.**

(*5*) **Members other than *ex officio* members shall receive such allowances, if any, from the Board as may be prescribed.**

Vacancies, etc., not to invalidate proceedings of the Board.

10. No act or proceeding of the Board shall be invalid merely by reason of—

(*a*) any vacancy in, or any defect in the constitution of, the Board; or

(*b*) any defect in the appointment of a person acting as a member of the Board; or

(*c*) any irregularity in the procedure of the Board not affecting the merits of the case.

Temporary association of persons with the Board for particular purposes.

11. (*1*) The Board may associate with itself, in such manner and for such purposes, as may be determined by regulations, any person whose assistance or advice it may desire in carrying out any of the provisions of this Act.

(*2*) A person associated with it by the Board under sub-section (*1*) for any purpose shall have a right to take part in the discussions relevant to that purpose, but shall not have a right to vote at a meeting of the Board and shall not be a member for any other purpose.

Appointment of officers and other employees of the Board.

12. (*1*) For the purpose of enabling it efficiently to discharge its functions under this Act, the Board may, subject to such regulations as may be made in this behalf, appoint (whether on deputation or otherwise) such number of officers and other employees as it may consider necessary:

Provided that the appointment of such category of officers, as may be specified in such regulations, shall be subject to the approval of the Central Government.

(*2*) Every officer or other employee appointed by the Board shall be subject to such conditions of service and shall be entitled to such remuneration as may be specified in the regulations.

13. All orders and decisions of the Board shall be authenticated by the signature of the Chairman or any other member authorised by the Board in this behalf, and all other instruments issued by the Board shall be authenticated by the signature of the member-secretary or any other officer of the Board authorised in like manner in this behalf. Authentication of orders and other instruments of the Board.

14. A person shall be disqualified for being appointed as a member if, he— Disqualifications for appointment as member.

(a) has been convicted and sentenced to imprisonment for an offence which, in the opinion of the Central Government, involves moral turpitude; or

(b) is an undischarged insolvent; or

(c) is of unsound mind and stands so declared by a competent court; or

(d) has been removed or dismissed from the service of the Government or a Corporation owned or controlled by the Government; or

(e) has, in the opinion of the Central Government, such financial or other interest in the Board as is likely to affect prejudicially the discharge by him of his functions as a member; or

(f) has, in the opinion of the Central Government, been associated with the use or promotion of pre-natal diagnostic technique for determination of sex.

15. Subject to the other terms and conditions of service as may be prescribed, any person ceasing to be a member shall be eligible for reappointment as such member. Eligibility of member for reappointment.

16. The Board shall have the following functions, namely:— Functions of the Board.

(i) to advise the Government on policy matters relating to use of pre-natal diagnostics techniques;

(ii) to review implementation of the Act and the rules made thereunder and recommend changes in the said Act and rules to the Central Government;

(iii) to create public awareness against the practice of pre-natal determination of sex and female foeticide;

(iv) to lay down code of conduct to be observed by persons working at Genetic Counselling Centres, Genetic Laboratories and Genetic Clinics;

(v) any other functions as may be specified under the Act.

CHAPTER V

APPROPRIATE AUTHORITY AND ADVISORY COMMITTEE

17. (1) The Central Government shall appoint, by notification in the Official Gazette, one or more Appropriate Authorities for each of the Union territories for the purposes of this Act. Appropriate Authority and Advisory Committee

(2) The State Government shall appoint, by notification in the Official Gazette, one or more Appropriate Authorities for the whole or part of the State for the purposes of this Act having regard to the intensity of the problem of pre-natal sex determination leading to female foeticide.

(3) The officers appointed as Appropriate Authorities under sub-section (1) or sub-section (2) shall be,—

(a) when appointed for the whole of the State or the Union territory, of or above the rank of the Joint Director of Health and Family Welfare; and

(b) when appointed for any part of the State or the Union territory, of such other rank as the State Government or the Central Government, as the case may be, may deem fit.

(4) The Appropriate Authority shall have the following functions, namely:—

(a) to grant suspend or cancel registration of a Genetic Counselling Centre, Genetic Laboratory, or Genetic Clinic;

(b) to enforce standards prescribed for the Genetic Counselling Centre, Genetic Laboratory and Genetic Clinic;

(c) to investigate complaints of breach of the provisions of this Act or the rules made thereunder and take immediate action; and

(d) to seek and consider the advice of the Advisory Committee, constituted under sub-section (5), on application for registration and on complaints for suspension or cancellation of registration.

(5) The Central Government or the State Government, as the case may be, shall constitute an Advisory Committee for each Appropriate Authority to aid and advise the Appropriate Authority in the discharge of its functions, and shall appoint one of the members of the Advisory Committee to be its Chairman.

(6) The Adivsory Committee shall consist of—

(a) three medical experts from amongst gynaecologists, obstetricians, paediatricians and medical geneteists;

(b) one legal expert;

(c) one officer to represent the department dealing with information and publicity of the State Government or the Union territory, as the case may be;

(d) three eminent social workers of whom not less than one shall be from amongst representatives of women's organisations.

(7) No person who, in the opinion of the Central Government or the State Government, as the case may be, has been associated with the use or promotion of pre-natal diagnostic technique for determination of sex shall be appointed as a member of the Advisory Committee.

(8) The Advisory Committee may meet as and when it thinks fit or on the request of the Appropriate Authority for consideration of any application for registration or any complaint for suspension or cancellation of registration and to give advice thereon:

Provided that the period intervening between any two meetings shall not exceed the prescribed period.

(9) The terms and conditions subject to which a person may be appointed to the Advisory Committee and the procedure to be followed by such Committee in the discharge of its functions shall be such as may be prescribed.

CHAPTER VI

REGISTRATION OF GENETIC COUNSELLING CENTRES, GENETIC LABORATORIES AND GENETIC CLINICS

Registration of Genetic Counselling Centres, Genetic Laboratories or Genetic Clinics.

18. (1) No person shall open any Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic after the commencement of this Act unless such Centre, Laboratory or Clinic is duly registered separately or jointly under this Act.

(2) Every application for registration under sub-section (1), shall be made to the Appropriate Authority in such form and in such manner and shall be accompanied by such fees as may be prescribed.

(3) Every Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic engaged, either partly or exclusively, in counselling or conducting pre-natal diagnostic techniques for any of the purposes mentioned in section 4, immediately before the commencement of this Act, shall apply for registration within sixty days from the date of such commencement.

(4) Subject to the provisions of section 6, every Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic engaged in counselling or conducting pre-natal diagnostic techniques shall cease to conduct any such counselling or technique on the expiry of six months from the date of commencement of this Act unless such Centre, Laboratory or Clinic has applied for registration and is so registered separately or jointly or till such application is disposed of, whichever is earlier.

(5) No Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic shall be registered under this Act unless the Appropriate Authority is satisfied that such Centre, Laboratory or Clinic is in a position to provide such facilities, maintain such equipment and standards as may be prescribed.

Certificate of registration.

19. (1) The Appropriate Authority shall, after holding an inquiry and after satisfying itself that the applicant has complied with all the requirements of this Act and the rules made thereunder and having regard to the advice of the Advisory Committee in this behalf, grant a certificate of registration in the prescribed form jointly or separately to the Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic, as the case may be.

(2) If, after the inquiry and after giving an opportunity of being heard to the applicant and having regard to the advice of the Advisory Committee, the Appropriate Authority is satisfied that the applicant has not complied with the requirements of this Act or the rules, it shall, for reasons to be recorded in writing, reject the application for registration.

(3) Every certificate of registration shall be renewed in such manner and after such period and on payment of such fees as may be prescribed

(4) The certificate of registration shall be displayed by the registered Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic in a conspicuous place at its place of business.

Cancellation or suspension of registration.

20. (1) The Appropriate Authority may *suo moto*, or on complaint, issue a notice to the Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic to show cause why its registration should not be suspended or cancelled for the reasons mentioned in the notice.

(2) If, after giving a reasonable opportunity of being heard to the Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic and having regard to the advice of the Advisory Committee, the Appropriate Authority is satisfied that there has been a breach of the provisions of this Act or the rules, it may, without prejudice to any criminal action that it may take against such Centre, Laboratory or Clinic, suspend its registration for such period as it may think fit or cancel its registration, as the case may be.

(3) Notwithstanding anything contained in sub-sections (1) and (2), if the Appropriate Authority is of the opinion that it is necessary or expedient so to do in the public interest, it may, for reasons to be recorded in writing, suspend the registration of any Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic without issuing any such notice referred to in sub-section (1).

Appeal.

21. The Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic may, within thirty days from the date of receipt of the order of suspension or cancellation of registration passed by the Appropriate Authority under section 20, prefer an appeal against such order to—

(i) the Central Government, where the appeal is against the order of the Central Appropriate Authority; and

(ii) the State Government, where the appeal is against the order of the State Appropriate Authority,

in the prescribed manner.

CHAPTER VII

OFFENCES AND PENALTIES

Prohibition of advertisement relating to pre-natal determination of sex and punishment for contravention.

22. (1) No person, organisation, Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic shall issue or cause to be issued any advertisement in any manner regarding facilities of pre-natal determination of sex available at such Centre, Laboratory, Clinic or any other place.

(2) No person or organisation shall publish or distribute or cause to be published or distributed any advertisement in any manner regarding facilities of pre-natal determination of sex available at any Genetic Counselling Centre, Genetic Laboratory, Genetic Clinic or any other place.

(3) Any person who contravenes the provisions of sub-section (1) or sub-section (2) shall be punishable with imprisonment for a term which may extend to three years and with fine which may extend to ten thousand rupees.

Explanation.—For the purposes of this section, "advertisement" includes any notice, circular, label, wrapper or other document and also includes any visible representation made by means of any light, sound, smoke or gas.

Offences and penalties.

23. (1) Any medical geneticist, gynaecologist, registered medical practitioner or any person who owns a Genetic Counselling Centre, a Genetic Laboratory or a Genetic Clinic or is employed in such a Centre, Laboratory or Clinic and renders his professional or technical services to or at such a Centre, Laboratory or Clinic, whether on an honorary basis or otherwise, and who contravenes any of the provisions of this Act or rules made thereunder shall be punishable with imprisonment for a term which may extend to three years and with fine which may extend to ten thousand rupees and on any subsequent conviction, wih imprisonment which may extend to five years and with fine which may extend to fifty thousand rupees.

(2) The name of the registered medical practitioner who has been convicted by the court under sub-section (1), shall be reported by the Appropriate Authority to the respective State Medical Council for taking necessary action including the removal of his name from the register of the Council for a period of two years for the first offence and permanently for the subsequent offence.

(3) Any person who seeks the aid of a Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic or of a medical geneticist, gynaecologist or registered medical practitioner for conducting pre-natal diagnostic techniques on any pregnant woman (including such woman unless she was compelled to undergo such diagnostic techniques) for purposes other than those specified in clause (2) of section 4, shall be punishable with imprisonment for a term which may extend to three years and with fine which may extend to ten thousand rupees and on any subsequent conviction with imprisonment which may extend to five years and with fine which may extend to fifty thousand rupees.

Presumption in the case of conduct of pre-natal diagnostic techniques.

1 of 1872.

24. Notwithstanding anything in the Indian Evidence Act, 1872, the court shall presume unless the contrary is proved that the pregnant woman has been compelled by her husband or the relative to undergo pre-natal diagnostic technique and such person shall be liable for abetment of offence under sub-section (3) of section 23 and shall be punishable for the offence specified under that section.

Penalty for contravention of the provisions of the Act or rules for which no specific punishment is provided.

25. Whoever contravenes any of the provisions of this Act or any rules made thereunder, for which no penalty has been elsewhere provided in this Act, shall be punishable with imprisonment for a term which may extend to three months or with fine, which may extend to one thousand rupees or with both and in the case of continuing contravention with an additional fine which may extend to five hundred rupees for every day during which such contravention continues after conviction for the first such contravention.

Offences by companies.

26. (*1*) Where any offence, punishable under this Act has been committed by a company, every person who, at the time the offence was committed was in charge of, and was responsible to, the company for the conduct of the business of the company, as well as the company, shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly:

Provided that nothing contained in this sub-section shall render any such person liable to any punishment, if he proves that the offence was committed without his knowledge or that he had exercised all due diligence to prevent the commission of such offence.

(*2*) Notwithstanding anything contained in sub-section (*1*), where any offence punishable under this Act has been committed by a company and it is proved that the offence has been committed with the consent or connivance of, or is attributable to any neglect on the part of, any director, manager, secretary or other officer of the company, such director, manager, secretary or other officer shall also be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

Explanation.—For the purposes of this section,—

(*a*) "company" means any body corporate and includes a firm or other association of individuals, and

(*b*) "director", in relation to a firm, means a partner in the firm.

Offence to be cognizable, non-bailable and non-compoundable.

27. Every offence under this Act shall be cognizable, non-bailalbe and non-compoundable.

Cognizance of offences.

28. (*1*) No court shall take cognizance of an offence under this Act except on a complaint made by—

(*a*) the Appropriate Authority concerned, or any officer authorised in this behalf by the Central Government or State Government, as the case may be, or the Appropriate Authority; or

(*b*) a person who has given notice of not less than thirty days, in the manner prescribed, to the Appropriate Authority, of the alleged offence and of his intention to make a complaint to the court.

Explanation.—For the purpose of this clause, "person" includes a social organisation.

(*2*) No court other than that of a Metropolitan Magistrate or a Judicial Magistrate of the first class shall try any offence punishable under this Act.

(*3*) Where a complaint has been made under clause (*b*) of sub-section (*1*), the court may, on demand by such person, direct the Appropriate Authority to make available copies of the relevant records in its possession to such person.

CHAPTER VIII

MISCELLANEOUS

Maintenance of records.

29. (*1*) All records, charts, forms, reports, consent letters and all other documents required to be maintained under this Act and the rules shall be preserved for a period of two years or for such period as may be prescribed:

Provided that, if any criminal or other proceedings are instituted against any Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic, the records and all other documents of such Centre, Laboratory or Clinic shall be preserved till the final disposal of such proceedings.

(*2*) All such records shall, at all reasonable times, be made available for inspection to the Appropriate Authority or to any other person authorised by the Appropriate Authority in this behalf.

Power to search and seize records, etc.

30. (*1*) If the Appropriate Authority has reason to believe that an offence under this Act has been or is being committed at any Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic, such Authority or any officer authorised thereof in this behalf may, subject to such rules as may be prescribed, enter and search at all reasonable times with such assistance, if any, as such authority or officer considers necessary, such Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic and examine any record, register, document, book, pamphlet, advertisement or any other material object found therein and seize the same if such Authority or officer has reason to believe that it may furnish evidence of the commission of an offence punishable under this Act.

2 of 1974.

(*2*) The provisions of the Code of Criminal Procedure, 1973 relating to searches and seizures shall, so far as may be, apply to every search or seizure made under this Act.

Protection of action taken in good faith.

31. No suit, prosecution or other legal proceeding shall lie against the Central or the State Government or the Appropriate Authority or any officer authorised by the Central or State Government or by the Authority for anything which is in good faith done or intended to be done in pursuance of the provisions of this Act.

Power to make rules.

32. (*1*) The Central Government may make rules for carrying out the provisions of this Act.

(*2*) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for—

(*i*) the minimum qualifications for persons employed at a registered Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic under clause (*1*) of section 3;

(*ii*) the form in which consent of a pregnant woman has to be obtained under section 5;

(*iii*) the procedure to be followed by the members of the Central Supervisory Board in the discharge of their functions under sub-section (*4*) of section 8;

(*iv*) allowances for members other than *ex officio* members admissible under sub-section (5) of section 9;

(*v*) the period intervening between any two meetings of the Advisory Committee under the proviso to sub-section (*8*) of section 17;

(*vi*) the terms and conditions subject to which a person may be appointed to the Advisory Committee and the procedure to be followed by such Committee under sub-section (*9*) of section 17;

(*vii*) the form and manner in which an application shall be made for registration and the fee payable thereof under sub-section (*2*) of section 18;

(*viii*) the facilities to be provided, equipment and other standards to be maintained by the Genetic Counselling Centre, Genetic Laboratory or Genetic Clinic under sub-section (5) of section 18;

(*ix*) the form in which a certificate of registration shall be issued under sub-section (*1*) of section 19;

(*x*) the manner in which and the period after which a certificate of registration shall be renewed and the fee payable for such renewal under sub-section (*3*) of section 19;

(*xi*) the manner in which an appeal may be preferred under section 21;

(*xii*) the period up to which records, charts, etc., shall be preserved under sub-section (*1*) of section 29;

(*xiii*) the manner in which the seizure of documents, records, objects, etc., shall be made and the manner in which seizure list shall be prepared and delivered to the person from whose custody such documents, records or objects were seized under sub-section (*1*) of section 30;

(*xiv*) any other matter that is required to be, or may be, prescribed.

Power to make regulations.

33. The Board may, with the previous sanction of the Central Government, by notification in the Official Gazette make regulations not inconsistent with the provisions of this Act and the rules made thereunder to provide for—

(*a*) the time and place of the meetings of the Board and the procedure to be followed for the transaction of business at such meetings and the number of members which shall form the quorum under sub-section (*1*) of section 9;

(*b*) the manner in which a person may be temporarily associated with the Board under sub-section (*1*) of section 11;

(*c*) the method of appointment, the conditions of service and the scales of pay and allowances of the officer and other employees of the Board appointed under section 12;

(*d*) generally for the efficient conduct of the affairs of the Board.

Rules and regulations to be laid before Parliament.

34. Every rule and every regulation made under this Act shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or regulation or both Houses agree that the rule or regulation should not be made, the rule or regulation shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule or regulation.

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