# Assessing Social Imprint of Technology in Gender and Development

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*Abstract: Technology covers a wide area from nadir to zenith. It does not always benefit humans equally. How much benefit one can get from technology depends on how much control one has over technology. Wajcman points out that 'Technologies result form a series of specific decisions made by particular groups of people in particular places at particular times for their own purposes.' As such, technologies bear the imprint of the people and social context in which they developed' (1991:22). Taking this view as the premise of the article, I would first give an overview of technologies that includes domestic and education technologies and then concentrate on reproductive technology- its impact on women's life.*

## Introduction

Technology touches our work, bodies, living patterns, and communication process. It is both commodity and infrastructure for all these and other aspects of human life (Star, 2000:1910). Technology, a product of science, developed out of the human need and desire to live comfortably and compatibly with our social and physical environment (Martins, 1969:269). It includes tools and machinery and the knowledge connected to their development and use. 'Technology is widely associated with maleness' (Willoughby, 2000:536) and it is 'a gender symbol of specific importance because of its connection to the sexual division of labor…a symbol of maleness and a source of male identity' (Lie, 1991). Design of technology also reinforce male dominance, for example, in Bangladesh, a rickshaw is made in such a way so that the puller can be a man. We cannot think of a rickshaw that may be pulled by a female rickshaw-puller. A bicycle is made in Bangladesh (iron rod in the middle) with the idea in mind that only male persons would use it. The idea that women would use it is not taken into consideration. Wajcman argues that 'technology is more than a set of physical objects or artefacts. It also fundamentally embodies a culture or a set of social relations made up of certain sorts of knowledge, beliefs, desires and practices' (1991:149).

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## Domestic Technology

It is a common view that domestic technology liberates women from ordinary tasks. But studies mirror the different picture. Surveys on six developed countries (USA, UK, Canada, Norway, Denmark and the Netherlands), from the 1960s to the 1980s, observed that although in some cases, technology made work more efficient, additional technology such as ironing created new tasks. Studies of child rearing in these countries found that that demands on women rose with the influx of technology (Wajcman, 1992).

Cowan (1983) shows that each device such as dishwasher does speed the cleaning of dishes, standards and number of tasks also rose during this period that cause the actual decrease in women's leisure time. Thus, as Defrancisco (2000:411-2) argues, 'domestic technology has not liberated women from housework' rather accompanied by predominant social ideology, it reinforces the idea that the proper place of women is the home. Wajcman argues that 'the significance of domestic technology lies in its location at the interface of public and private worlds. The fact that men in the public sphere of industry, invention and commerce design and produce technology for use by women in the private domestic sphere, reflects and embodies a complex web of patriarchal and capitalists relations' (1991:106).

## Education: Technology

Girls and women's participation in technical education also mirrors gender stereotypes. Irrespective of educational systems, economic development, prosperity, employment patterns, and political systems, educational patterns are similar, with girls and women constituting a small percentage of technology students and practising professionals. 'Traditional arguments tended to centre on the nature of technology as dirty and heavy work or on women being genetically unsuited to science and technology. Such views were then enforced and reinforced by bars against women in certain jobs, in trade unions and engineering institutions, and in science and computing clubs in school' (Willoughby, 2000:536). Committee on Women in SET, 1994 documented that 'Girls do perform well in math and science until puberty, after which the gender separation becomes notable, although those girls continuing

with these subjects achieve results that are as good as boys'. "Gender differences in educational experience are not simply the result of what is taught in courses of formal instruction. In a more profound way the culture of the school is involved in constructing gender and sexuality through the 'hidden curriculum'-teaching in an implicit way meanings and behaviours associated with femaleness and maleness, with femininity and masculinity" (Wajcman, 1991:152).

## Reproductive Technology

Now there would be an attempt to discuss about reproductive technology, which is directly related to women's reproductive behaviour. Wajcman (1991:54) sees that 'nowhere is the relationship between gender and technology more vigorously contested than in the sphere of human biological reproduction. Women are the bearers, and in most societies the primary nurtures, of children. This means that reproductive technologies are of particular significance to them'.

Klein (1987:65) defines " 'reproductive technologies' as the full range of biomedical/technical interferences during the process of procreation whether aimed at producing a child or preventing/terminating pregnancy". Reproductive technologies can be divided broadly into two categories- fertility control technologies and infertility treatment devices. Fertility control technologies includes pill, Norplant, IUD, Depo Provera, condoms (both male and female), abortion, drugs etc. Infertility treatment devices include IVF (in vitro fertilization)- GIFT (gamete intrafallopian transfer); ZIFT (zygote intrafallopian transfer); super ovulation with fertility drugs; TUDOR (trans vaginal ultrasound-directed acolyte recovery; and fetal reduction or seductive pregnancy. Other reproductive technologies are concerned with sex predetermination; embryo transfer; surrogacy; surrogate gestation; embryo and egg freezing; fetal tissue transplant; post-mortem caesarian and genetic screening.

Raymond (1993:viii) argues that 'all these technologies, drugs, and procedures violate the integrity of woman's body in ways that are dangerous' destructive, debilitating, and demeaning, they are a form of medical violence against women. Some of these, such as reproductive contracts (surrogacy) create traffic in women's bodies.

## Technologies for Fertility Control

Most of the contraceptive devices made and developed for women. It seems that women are responsible for population growth without being impregnated by men. Unwillingness of using condom during intercourse further reinforces male control over reproduction. Infertility is considered to be epidemic in the developed countries while sterilization is prevalent in developing countries. Women of the Third World are considered as population polluters. As a result massive termination of female fetuses is observed in many parts of India (Raymond 1993:xxiv). So, one can look back the past history of Arab countries when female child were killed immediate after birth.

Norplant is another device to protect pregnancy. It is an 'economic benefit to women who cannot afford another child or who do not want to confront the alternatives to another pregnancy' (Wall 1999:61). Who are the women who cannot afford another child? These women are living in developing countries like Bangladesh. Thus, the media manipulate their success by hiding (or not observing) the harmful side effects experienced by Bangladeshi and Brazilian women (Akheter et al., 1993; Raymond 1993:xxiv). Norplant also undermine the abortion for unwanted pregnancy by blaming young women in the US, especially women of colour, for their pregnancy when Norplant is available (Wall 1999:60). It seems that Norplant implant brings more sexual pleasure for men and in this way women's bodies are used as vehicles for sexual pleasure.

Abortion is another way to control unwanted pregnancy. Right to abortion and right to reproductive technology is treated same. However, right to abortion is directly related to the cause of pregnancy. An unwanted pregnancy needs a safe, legal abortion. 'There is vast difference, between however, women's right to choose safe, legal abortion and women's right to choose unsafe, experimental, and demeaning technologies and contracts. One allows genuine control over the course of a life; the other promotes abdication of control over the self' (Raymond, 1993:xi). Albury (1999:x) argues that 'demand for choice about using technology to terminate an unwanted pregnancy sounds odd when converted into a demand for choice about the use of technologies of assisted reproduction to achieve pregnancies for women past menopause'.

## Technologies for Infertility Treatment

IVF (in vitro fertilization) is the latest and most advanced and technology of reproduction for infertile women. New reproductive technologies, for example, IVF undoubtedly benefited few infertile women who wanted to get a child. However, the strong debate around these technologies is whether they reinforce male control over women's bodies. Reproductive technologies as Meyer (1997:37) argues, 'increase the options available to some infertile women. The control over who can and cannot become mothers with the aid of reproductive technology lies with the medical profession, a patriarchal system'. This technology also reinforces men's control over motherhood. Pro-choice women often perceive the technologies as a way to strap women into compulsory motherhood. Now there is no excuse for childlessness; women without male partners, women with fertility problems, women past childbearing age- all can become mothers.'(p.38). Thus new technologies represent a threat to women's psychological and physical health as well as a means to undermine their control of their bodies.

## Women at Risk

Although, some of these technologies, with some extent, benefit certain group of women, they also bear the cost and burdens when the male-developed reproductive benefits fail. In gamete donation it is always woman who is at risk. The semen donor is in no danger, while semen recipient often risks the transmission of sexually transmitted or other infectious diseases from semen not tested adequately or not frozen and/or quarantined. Women are also at risk in egg donation. Most donors experience some side effects from the procedure, sometimes-serious ones. The recipient risks complications from hormone manipulation and implantation, which can lead to temporary or permanent damage (Meyer, 1997:35).

Pill also has led to higher rates of cancer and thrombosis, and continues to be a drug, which is taken on the basis of little, and poor research into its side effects. Depo Provera, the most 'efficient' contraception, has placed many women at risk. The Dalkon Shield, a contraceptive inter-uterine device (IUD), has in fact caused death of women through infection and septic abortion

and represents again the use of women's bodies by a medicine little concerned for the well-being of its victims'. (Rowland, 1987:80). Women also have been used as guinea pigs testing oral connectives and alleged anti-abortifacient, DES. They have experienced strokes and blood clots and cancer. Women have also been the victims through sterilization and even death after using the male-developed IUD (intrauterine device), the Dalkon Shield' (Steinbacher and Holmes, 1987:58). 'Reproductive technologies have been developed not because women need them, but because capital and science need women for the continuation of their model of growth and progress' (Mies, 1993:175).

## Sex Selection

Sex selection is another way of control over number of female population. Abortion gives women control over their bodies and lives while sex selection gives men control over sex of the next generation (Rowland, 1987:84). Son preference is a reality in both developed and developing countries. The number of sons she has produced determines the status and treatment of a woman. Holmes and Hoskins (1987:25) argue that as sex choice technologies are patriarchal, 'it can be another way of oppressing women. Under the guise of choice we may indeed exacerbate our own oppressions'.

Study shows that amniocentesis is now widely used in China and India to determine the sex of the fetus. Due to strong pressure for one-child families in China, and as both countries preferred boy child, female fetus are frequently aborted (Davin, 1985) which results the use of reproductive technology for femicide.

Amniocentesis is also used for detecting genetic or developmental disabilities of the fetus during pregnancy so as to prevent the birth of disabled infants. Aborting such a fetus seems contradictory to women's right to abortion. Hubbard appeals for meeting women's education, healthy home and work environment, good nutrition and parental care to produce healthy babies rather amortize the investments in technology through marketing the techniques as widely as possible (1988:233).

Whether the new reproductive technologies are used to enhance or decrease the autonomy of women will depend on who makes decisions about how they are used. Most feminist scholars argues

that women have no control over the development and use of new reproductive technologies (Whitback, 1988; Sarah, 1988; Corea 1988).

Here, I argue not on whether women are benefited or not, rather the ideology behind the development of these technologies. Is not it the century long ideology that see women as mother, nurturer, carer? Is not it the ideology that sees women inferior than men? It is the socio-biological deterministic thinking, as Bleier argues that 'Woman is to be legally defined and socially confined as mother, reproducer, and nurturer; dependent and subordinate' (1984:11). It, as Shannon argues 'also reinforce the perspective that the primary or exclusive role of women is to have children. An assumption may be that a female is not fully a woman until she has been able to bear a child. There is an implicit affirmation that the worth of a woman is centred on her ability to reproduce. This attitude reinforces stereotypes of women and helps keep them in their subordinate social position. It reinforces attitudes that claim women's worth is derived from biology, not ability' (1988:164). Thus, in my view, reproductive technologies do not bring reproductive freedom for women rather reinforce male domination over women's bodies.

## Conclusions

From the above discussions and arguments made by different feminists scholars, it is understood that all technologies reflect their socio-cultural and historical context in which those technologies were made and developed. Technologies, through their discourses on sexuality always play an important role in the social construction and control of women's sexuality and idealized temperament. Technologies always consider women as passive, dependent, martyred, and masochistic, who have reinforced the existing social stereotype of woman as a subordinate member of the patriarchal household and social order. 'Through their prescriptions and definitions of normality and maturity, science and medicine have lent tacit support to structures and ideologies that condone direct and indirect violence in the social control of women, and have, in fact, themselves been the instruments of violence against the bodies and minds of women' (Bleier, 1984: 190). All technologies bear the burden of social values, which are 'linked to the people who create them and to the social concerns of those people' (Osler, 1980:123)

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