

## Overview of the Handouts

This handout provides a summary of how I view technology and gender, and briefly presents the question that analysis of my interview data will address (p.1). Page 2 outlines some of the analytic problems associated with focusing on interventions in technology design aimed at improving women's living and working conditions. Page 3 contains a preliminary matrix that addresses how various aspects of technology design are related to the three aspects of gender that Harding (1986) identifies.

## Context: Situating Technology and Gender

Theory about technology and society suggests that technology is socially constructed (Mackenzie and Wacjman; etc.), and bears the imprint of its authors (Noble; Braverman).

Theory about women and technological change suggests that

- a) women and men experience technological change differently;
- b) that new technology often contributes to the reproduction of traditional gender roles, rather than their transformation.

If technology is socially constructed and bears the imprint of its authors, and in its current state reproduces rather than transforms traditional gender roles, rather than focusing solely on effects, we also need to focus on technology design if we are to work towards women's equality. Specifically,

- we must focus our attention on the processes surrounding the design of technology, in order to understand how it is that through the process of the social construction of technology, women are often disadvantaged relative to men.

In thinking through these issues, we need to make a distinction (common to feminists) between biological sex and social construction of gender, which allows a refinement of the central question of Women Users:

- how do the processes surrounding the design of (socially constructed) technology contribute to, or challenge, socially constructed gender roles?

In answering this question, it is useful to further clarify how gender is socially constructed.

- Gender is universally a relation and a process (Cockburn and Ormrod, 1993).

Harding (1986, p. 57) distinguishes between 3 aspects of gender:

**gender structure, or the sexual division of labour; (men and women are situated in sex typed ways).** Gender structured experiences-- that are not static-- propose and dispose but do not determine our actions (Cockburn and Ormrod). Gender is a fundamental category within which meaning and value are assigned to everything in the world (Harding, 1986, p. 57).

**gender identity, or individual gender.**

- a) Gender identity is projected
  - potential, actual or desired identity as others perceive or portray them
- b) and subjective
  - the gendered sense of self-- the identity created and experienced by an individual.

**gender symbolism, which refers to how meaning and value is assigned to everything in our world.** It involves representations and meanings.

Gender gains expression in technology relations, and technology acquires meaning in gender relations (Cockburn and Ormrod). Masculine and feminine exist in relation to one another. Gender systems suggest that gender is articulated in relation to other hierarchical structures, such as class and race.

There is a recursive relation between material and representational factors. "Representations shape material practices (to be told that engineering is a job for men increases the percentage of engineers who are male). But the material itself is a source of meaning (if I see that of ten engineers, nine are men, this *tells* me something about both engineering and men). (Cockburn and Ormrod, 1993, p.?).

My task in Women Users is to look at how activities undertaken by those designing technology to be used by women users

- a) are related to each of these aspects of gender, and
- b) how activities undertaken by technology designers either build on or challenge each of these aspects of gender.

## **Challenges associated with focusing on interventions in technology design aimed at improving women's living and working conditions**

### Biological essentialism and ergonomics:

- Ergonomists acknowledge biological differences between men and women in relation to technology design.
- Although it is possible to acknowledge biological difference in a way that does not perpetuate essentialist notions of women and men (that women and men are essentially different and thus one group is more typically suited to some types of work than others-- example: Norwegian sized boxes of copy paper vs. North American sized boxes--, this is seldom done.

### Standpoint theory and essentialism:

- Standpoint theory makes claims about the situated-ness of knowledge which suggest that our experiences shape the processes through which we construct knowledge and understand the world.
- Such views have been essential to feminist efforts to involve women in technology design, precisely because they have helped to legitimate women's contributions to the design process, as contributions that will benefit women.
- However, such views often result in either a simplistic liberal feminist approach to technology design (we need only provide women with access to technology design), and
- Fall prey to a sort of biological essentialism (in which it is assumed that only women have the standpoint to design for women users, often associated with being biologically different. (This view has been perpetuated in part of Keller's earlier work that suggested that women and men do science differently because they are essentially different, in that women are closer to nature than men).
- Although standpoint theory serves to legitimates women's views of technology and work, it also in a sense fail to account for the ways that the three aspects of gender identified by Harding interact to produce gendered accounts of women and men in general and in relation to technology design in particular.

### Accounting for sex and gender of users without marginalizing women users:

- If we talk about designing technology specifically for women users, it is easy to again be accused of taking an essentialist view of women and men, and thus reproducing the sexual division of labour.
- In addition, because historically the construction of gender differences has been an important part of marketing and selling technology<sup>1</sup> it is challenging to convey the idea that promoting the equality of women in technology design could result in anything more than the role of women as expanded consumers in relation to technology.

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<sup>1</sup> See titles like Sparke, P. (Ed.). (1995). As Long as it's Pink: The Sexual Politics of Taste (1st ed.). London: Pandora. and Forty, A. (Ed.). (1986). Objects of Desire: Design and Society since 1750. London: Thames and Hudson Ltd..

	Aspects of gender →			(taken from Harding, 1986)	Notes
	<b>gender structure, or the sexual division of labour; (men and women are situated in sex typed ways).</b>	<b>gender identity, or individual gender.</b>		<b>gender symbolism, which refers to how meaning and value is assigned to everything in our world.</b>	
Aspects of technology design ↓	Gender is a fundamental category within which meaning and value are assigned to everything in the world (Harding, 1986, p. 57).	Gender identity is projected potential, actual or desired identity as others perceive or portray them	Gender identity is subjective the gendered sense of self-- the identity created and experienced by an individual.	It involves representations and meanings.	
skill	women's jobs are seen as unskilled, men's as skilled	women who do "men's" jobs are seen as masculine; men who do 'women's' jobs as feminine.	women may derive a sense of empowerment by entering traditionally male domains. However, their increased presence diminishes the value ascribed to the activities they pursue.	Representations of women's work are often neglected in design precisely because by virtue of being done by women, they are viewed as of lesser value.	
user involvement in design	mediated by the gendered structure of technical expertise; men are engineers, women are users.	projected and subjective gender identities work against women enjoying authentic involvement in design.		Gender structures and those of technical expertise are virtually inseparable (Benston, 198?), which relegates user views less valuable than technical views.	
design activities  'seeing' work  representing work	gender structures have denied women access to the skills in many cases essential to design.	women who do "men's" jobs are seen as masculine; men who do 'women's' jobs as feminine.	women may derive a sense of empowerment by entering traditionally male domains. However, their increased presence diminishes the value ascribed to the activities they pursue.	the activities associated with representing work often reproduce gendered views of women's work and men's work. As Woods suggests, 'maps' (representations) are political.	e.g., spatial skills, often viewed as biologically based but known to be socially constructed.