Gender as a Social Structure Shaping Computer Usage

In this paper, the authors challenge the presupposition that "large segments of the using population have equivalent propensities to perceive, interpret, and understand the multi-dimensional spatial properties and relationships" commonly featured in visual user interfaces. Using Silverman's hunter-gathering theory, the authors posit that differences in spatial and cognitive abilities "between the genders" stem from "differentiated sex roles" which evolved over time. These differences are demonstrated through males' and females' disparate utilization of spatial visual cues and user interface features.

While I agree with the overall thrust of the argument –information technologies are not neutral, and individuals have disparate opportunities to access and make effective use of information technologies– I argue for an understanding of gender that goes beyond an essentialist account of innate differences between sexes (Kvasny, Greenhill & Trauth, 2005). The authors implicitly adopt essentialist tendencies and language such as "female handicap", "fundamental differences between the genders" and "innate differences". While the authors assert that these differences do not imply male superiority, which helps to refute the argument that women are naturally ill-suited for technical careers and ill-equipped users of technology, the essentialist formulation of gender remains problematic for women.

For instance, when women are assumed to be inherently different than men, we are led to technology-centric solutions such as "gender neutral designs" and "universal usability". The user interface is put forth as a mechanism for counterbalancing the innate differences which exist among different populations. Thus, women are to be accommodated with user interface designs which improve their performance relative to men. Areas in which women can outperform men are generally absent from consideration. For example, in this paper there are no experiments in which women are hypothesized to outperforming men. This would have been interesting given that there were experiments which hypothesized no gender differences and male performance advantages.

We can, however, give women a more central role in our research if we theorize gender as a social structure. Because systemic inequities in the capacities, positions and rights exist between men and women, and because these inequities are deeply entrenched in the formal and informal institutions, history and culture of many societies, we may regard gender as a social structure. As a social structure, gender relations are doxic in that they underpin the very organization and systems of daily life in ways that seem natural. In this sense, gender serves as an organizing principle much like race/ethnicity, age/generation, and social class/caste (Connell, 2002).

From this perspective, the notion of universal usability or gender neutral design would be untenable because gender relations are deeply woven into the fabric of society. Technology simply cannot exist as an autonomous entity outside of the gendered norms and institutions which shape society. Rather, gender biases are encoded in computerized systems by the human agents (primarily male) who conceptualize, design, and implement the technology. Users of technology are also shaped by these same social forces. Hence

we see the reproduction of gendered roles and norms in both the design and subsequent use of technology.

Given the importance of gender as a force in shaping both technology and society, further scholarly debate and research is warranted. For instance, would the inclusion of women in the design and testing of information technologies lead to more inclusive user interfaces? How might we measure gender inclusion in user interface design? And if our research centered on women rather than simply comparing and contrasting differences between sexes, we could begin to investigate feminist-oriented question which focus on the design and performance testing of female-centered user interfaces which privilege women's ways of knowing.

References:

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Kvasny, L., Greenhill, A. and Trauth, E. (2005) "Giving Voice to Feminist Projects in MIS Research" *International Journal of Technology and Human Interaction,* Vol. 1, No. 1, pp. 1-18.

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