Title

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1. Introduction

In this talk, I scope my analysis of gender related issues specifically to the domain of Human-Computer Interaction (herein referred to as HCI) – a field that concerns itself with the design and use of technology. The topic of gender is not new to HCI and has been addressed through multiple discourses such as domestic technology, product design, virtual online environments, and software engineering to name a few. The quality, concerns, motives, and impacts of these works can be best characterized as varied. These existing works stress the importance of considering gender issues in the process of design, and provide thought-provoking insights and implications for design. Yet, these works tend to remain marginal in the field of HCI. Research interests regarding gender are viewed as niched. The relevance of the works remains contained to a small body of works, and the insights that are garnered through these works are often treated as one-off.

My work is an attempt to understand what hinders the progression of this discourse from achieving its potential. I do this by critically observing the existing works in an attempt to address the question 'How and what do we talk about when we talk about gender?' Through Foucauldian discourse analysis, I highlight some of the blind spots, misconceptions, assumptions, and their implications in the already existing body of works. The intent behind such an activity is not to provide a checklist of how to do gender related work but to raise a critical sensibility on the topic. In this work, I argue that understanding the discursive processes through which gendered conceptions are realized is the required next step and propose two specific directions for future research in this area.

2. Methodology

A total of 50 works including archival papers, journal articles, workshop position papers, project websites, and magazine articles were chosen for review. Using the ACM digital library (a central online knowledge repository for works in the field), I searched for works that had the keywords 'gender,' 'sex,' 'women,' 'men,' 'transgender,' and 'feminism' listed. From the initial set of search results, I then reference crawled to find other works cited in the initial search results. The aim was to construct a corpus that was thematically representational of the existing discourse of gender in the field. After constructing the corpus, the works were analyzed using Foucault's technique of discourse analysis. Foucault summarizes his own approach to the study of sexual discourses in the social sciences as follows:

> *"The central issue… is not to determine whether one says yes or no to sex, whether one formulates prohibitions or permissions, whether one asserts its importance or denies its effects, or whether one refines the words one uses to designate it; but to account for the fact that it is spoken about, to discover who does the speaking, the positions and viewpoints from which they speak… What is at issue, briefly, is the over-all 'discursive fact,' the way in which sex is 'put into discourse'" [5].*

The way in which gender is put into discourse – to gain a critical understanding of that discursive practice is the aim of this work.

3. Findings

In this section, I will list the top three insights garnered through the discourse analysis along with the implications.

3.1 What is the question?

A common research framing for many of the works was 'how do men differ from women in doing X.' For example, [2] sets out to explore "how differences in gender should influence the design of problem-solving software." We would like call attention to the usage of the word "should" in the aforementioned quote. The central focus is on the difference (or the lack of) between the binary gender categories. Irrespective of whether differences are found or not, the question of what constitutes masculinity (and by implication men) or femininity remains unquestioned. The problem with this form of research framing is that it forecloses any possibility of intentional change to the existing notions of the gender categories. If the design decisions of such products are founded by research findings that are focused on the differences between the essentialist categories of gender, there exists no room for intentional change to subvert existing gender conditions. Instead, our designs end up affirming and furthering these differences instead of challenging and subverting them. Observing existing patterns and using these findings to inform design choices which in turn reinforces those patterns forms a vicious self-feeding cycle and leads to "inadvertently reproducing cultural norms because they seem so "natural"" [4].

3.2 Gender binarism

Like any good critical exercise, I turned towards analyzing 'what is left out' rather than just focusing on 'what is there'. The literature on gender inside HCI is strikingly silent about non-binary genders. Other than a handful of works, which talk about transgendered subjects, there is a pronounced silence about the existence of non-binary genders. Non-binary gendered subjects such as transgendered, gender queer, gender non-conformant, gender-neutral individuals are systematically left out of the equation on all levels. Research questions regarding gender, the

design, recruitment and execution of user studies, the actual language used to describe the project (e.g., s/he), the resulting design concepts that get created are all framed with respect to the binary genders. Even works like [3] that attempt to address complex issues such as 'gender swapping', primarily do so with respect to binary genders. Another example is [1], which frames the phenomenon of 'gender bending' as a "misrepresentation of gender identities." It makes one wonder whether the reason for doing so is a simple lack of awareness or a willful blind eye to reinforce hegemonic heteronormativity. Whatever the reason, a unanimous silence about a specific subject warrants attention and investigation especially in a field like HCI that takes pride in improving the quality of life for everyone.

3.3 Just add gender

Works that address gender issues are either treated as a niched interest or as an interesting one-off insight. This attitude, we believe, stems from treating gender as a discrete variable that can be added or removed from a research framing just like a Lego block. Even though this would make all our lives easier, it is far from the truth. When we conjure up an image of a subject with a specific gender, what we see is not just gender but a synthetic and complex interaction of gender, class, race, sexual orientation, nationality, etc. To put it simple, gender is never just gender. As [6] points out, reducing this complex synthetic account of gender to a single universal discrete Lego block "emphasizes a single characteristic of gender while ignoring the interaction effects of race, class, national origin, and sexual preference on the self-identity." It is also crucial to note who gets chosen to be the representative of this universal reductionist identity and what gets left behind.

4. Moving Forward

The three issues raised in the previous section have one specific characteristic in common – they do not address the discursive structures through which gender is enacted. And this, I believe is where future work needs to focus upon. By shifting the object of inquiry from 'the difference between two genders' to the process through which such gendered identities are constituted, we can gain a better understanding of gender and its dynamic with designed technologies. One way to do this, I propose, is to pay attention to non-binary gendered identities within the discourse. Building upon Foucault's work, [7] argues that in order for us "to clearly see discursive power at work, we need bodies at society's margins. Margins are margins because that's where the discourse begins to fray, where whatever paradigm we're in starts to lose its explanatory power." The dominant discursive practices make sense only when we talk in terms of binary genders and hence appear 'natural.' However, when we pay attention to non-binary gendered subjectivities, various power and hierarchies in the existing structures get exposed. In other words, analyzing non-binary genders defamiliarizes the discursive practices through which gendered identities are constituted through these technologies. Such an analysis, helps us gain a critical understanding of the discursive practices that constitute gendered identities and determine the hierarchies.

This would also help empower a highly marginalized group that has been consistently and systematically left out of the equation on all levels. As we reach out for social justice, empowerment and betterment of the quality of life, it becomes both our professional and ethical duty and responsibility to extend these noble goals for all.

Reference:

[1] Angeli, A.D. and Brahnam, S. Sex Stereotypes and Conversational Agents. *AVI 2006 Gender and Interaction: Real and Virtual Women in a Male World Workshop paper*, (2006), 1-4.

[2] Beckwith, L., Burnett, M., Wiedenbeck, S., and Grigoreanu, V. Gender HCI: Results To Date Regarding Issues in Problem-Solving Software. *AVI 2006 Gender and Interaction: Real and Virtual Women in a Male World Workshop paper*, (2006), 1-4.

[3] Bruckman, A. Gender Swapping on the Internet. *Proceedings of INET'93*, (1993), 1-5.

[4] Churchill, E.F. Sugared Puppy-Dog Tails: Gender and Design. *interactions vol. 17, issue 2*. ACM Press (2010), 52-56.

[5] Foucault, M. *The History of Sexuality: An Introduction*. Volume 1. Vintage Books, (1990).

[6] Kvasny, L. Triple Jeopardy: Race, Gender and Class Politics of Women in Technology. *Proc. of 2003 SIGMIS conference on Computer personnel research*. ACM Press, (2003), 112-116.

[7] Wilchins, R. *Queer Theory, Gender Theory*. Alyson Books (2004).