Human-Computer Teaming in the User Experience (UX) Field: Towards More Symbiotic Relationships with Technology

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This research explores the possibility for human-computer teaming in the User Experience (UX) field drawing on theories from science and technology studies (STS) with a specific focus on feminist technoscience, which foregrounds questions around gender and bodies. Specifically, our work is concerned with the power relations informing the development, deployment, and maintenance of AI and other emerging technologies in order to better understand and shape the evolving relationship between people, machines, and society. As design researchers, we draw on design methodologies such as participatory design and design futures in order to actively shape the narratives (and resulting technologies) that might play a role in more balanced and equitable power relations.

In one current project, based on over 20 interviews with UX professionals, we are investigating the role of gender with respect to the lived experience of tech workers navigating a volatile job market. Many of our informants anticipate a greater use of artificial intelligence (AI) in the UX field and elaborated on ways UX professionals are working to position themselves and their work as valuable vis a vis the promises (and threats) of AI. In this case, a shift to a human-computer teaming narrative and approach, might serve to re-orient both managers and UX professionals away from the dominant humans vs. machine narrative, which implies that current forms of employee labor are under threat of being replaced by automation. Yet, at the same time, even with a shift to a human-computer teaming model, we are skeptical that managers will not seek opportunities for cost-cutting that result in job cuts for talented UX professionals.

In a previous project, Reimagining Work, funded by the Open Society Foundations, we used participatory and speculative design to engage social and economic justice advocacy groups in Chicago in creating visions for the future of work that would benefit marginalized and vulnerable groups including immigrants, formerly incarcerated people, women, youth and people of color. The project included qualitative interviews, a historical game about technology and labor, and a speculative prototyping activity. In this project, we developed an approach called *counterfactual actions*, to move beyond the creation of artifacts and towards more situated, embodied, and performative engagements. We argue that a focus on counterfactual actions supports a more relational approach to understanding the politics of socio-technical systems and infrastructures, allowing participants to gain a meaningful understanding of the ways in which technology could be designed otherwise in line with ethics, values and social justice concerns.

This work builds on Forlano and Glabau's recent book, *Cyborg* (MIT Press 2024), which includes a chapter on Cyborg Labor. In this chapter, which uses both examples from science fiction films and academic research the authors explore several dominant narratives about technology and the future of work including human vs. machine (replacement) and human-machine collaboration focusing on well-known sites such as Amazon warehouses. Specifically, the book argues that the questions about who will benefit or lose out during times of technological innovation, depends on the conceptual frameworks that we use as well as the development of viable counternarratives. For example, while Amazon warehouses that use greater automation and robots might be more efficient, they are more repetitive for human workers and result in higher injuries according to *New York Times* reporting.

As part of this workshop, we hope to connect with scholars in other disciplines engaging in human-computer teaming and cyberinfrastructures, and explore possible points of reflection and intervention in the development of such systems:

1. How can developers and designers prioritize and anticipate ethical implications as a vital part of their work?
2. What are important considerations in balancing workplace protections and increased technological integration?
3. How much agency do employees have in the development and practice of human-computer teaming initiatives?
4. How is the value of labor affected by increased automation?

References

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