
Participation and World Machines

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Abstract

The new economic and political realities of cloud computing, data mining, and crowd sourcing in a condition of dominant market rhetoric create a situation that challenges a fundamental assumption of participatory design: that people speak with ultimate authority about their own condition. Yes, people speak with authority but they do not and increasingly, *can* not know what their own condition *is*. They have been divided from their own information and that information is used by others in their own recombinations, for their own unaccountable purposes, and reflected back to the individual in an unrecognizable form. *World machines---* computational power with social agendas that challenges the dominant market rhetoric by “crowd-sourcing public engagement with shared world issues”--- cannot fulfill their utopian goals without a deep analysis of how they interact with these challenges to the idea and conditions of participation.

Author Keywords

power, identity, feminist design, critical design, participatory design

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Information 2.0

The former head of SUN Microsystems famously said that we all should “get over” our attachment to privacy. If we reject this position, what are our options? Some

may seek to become digital hermits and, indeed, non-participation might reduce the information about an individual accessible for commodification; however, it also seems futile; companies such as Facebook create “ghost” profiles that accumulate information even about people who have not themselves joined. Google similarly identifies faces in photographs. The notion of *world machines* is a very enticing alternative to digital hermitage. It is a utopian vision that turns the tables. It embraces the creation of systems that combine computational power with an agenda, but that agenda is no longer the production of compliant consumers. It is instead to challenge the dominant market rhetoric by “crowd-sourcing public engagement with shared world issues”.

However, the notion of world machines must be a sophisticated one that does not rely on simple-minded and easily abused trust. We have already been promised that the purveyors of new technology will “not be evil.” We are already being told that companies gather information anonymously (even though we can be identified through three transactions in a database of a 1,000,000+ [2]), and that the information that is gathered is used for our benefit. Now we need to ask “Whose benefit?”

World machines cannot fulfill their utopian goals without the probing and on-going analysis of how they interact with the idea and material conditions of participation---and related entailments such as privacy that are deeply tied to justice, quality of life, and freedom.

Moving forward, we see a multi-part strategy that revolves around many of the long-standing commitments of participatory design (PD). We take the core com-

mitments of PD to involve not only (1) striving towards interaction with participants as co-equals, but also (2) education about larger systems (although not necessarily with the grand narrative of Marxist thought that so dominated the European version of the PD movement in earlier years), and (3) action through through design, advocacy and intellectual inquiry that probes the meaning of design at all levels of inquiry: from the minutia that constitute the everyday experience of being human to the larger systems that are enforced by culture, law and economics---and that often have unintended and unknowable consequences. The new challenges that are emerging for participatory design and therefore for the design of world machines feature positioning ourselves with respect to aspects of design that address hard-to-see, possibly global aspects of technology and human existence. Part of our job is to envision and help create the utopian future; part is to speak truth to power through design; part is to continue to seek to see aspects of human behavior that we do not yet describe perspicaciously.

PD has always emphasized participation and struggled with the contradictions inherent in the extraction and production of knowledge as a technology designer and expert. The many responses to this problem must continue.

But, when we create world machines, we must examine the ways in which those systems can give power to others and result in other unanticipated consequences. We must be willing to illuminate and probe distal effects that do not advantage our process or production. This changes the fundamental design space in which user experience, human-computer interaction, and the larger notion of participatory design occurs. We must

seek to understand the larger implications of the systems. As Tufekci noted in her recent CSCW plenary, a finding such as a relationship between commute time and length of time holding a job may sound like a neutral piece of information influencing hiring decisions---until a person pulls back and considers how length of commute becomes a proxy for race and class in a segregated society [3].

To know how to do all these things requires inquiry that may take us even further away from design implications than HCI has ventured in recent years. We must reconsider the kinds of questions that most social science has asked about behavior and beliefs, as we continue to probe the power of the device.

Conclusion

The next ten years has challenges inherited from the previous 50. Some of these are the result of well-intentioned applications of ICT; others were the result of interaction of those technologies with other forces, particularly globalized capital. Our role in that complex ecology of disparate kinds of forces may be abstracted as by Ehn, into the dialectic between tradition and transcendence [1].

Participatory design has also moved towards a concern with equity by introducing concerns with critical movements and approaches including feminist design, critical design, and queer theory. However, this work is part of a call to develop those movements into more robust practices with positive design directions.

This paper is part of a complex dialogue amongst not only those committed to participation, but the myriad others involved in designing and deploying information

technology. We certainly invite elaboration of the list of problems, principles, and strategies. Further, we invite alternative interpretations of the current directions in information technology. In some ways, PD, arising as a social-democratic approach to worker control of production, started in approximately the same tenuous condition as the current call for a design response in this new order. Although our research (and other people's) contains the seeds of a response, the main thing may be to keep world machines in mind long enough to figure out how to do them sufficiently well.

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