Critically Aware Multimedia

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ABSTRACT

Socially-aware multimedia research balances recognition of the import of human interactions with consideration for the media content itself. The goal of this form of mediated social communication work is both to achieve technical innovation and to provide a rich user experience. This motivation can be extended to encompass a broader exploration of the socio-cultural condition that uses the design and development of socially aware multimedia systems as a reflexive lens for examination and dialog. This form of critical technical inquiry moves beyond efficiency and user experience to more directly interrogate the values evident in the technologies themselves.

A critical approach advocates deep reflection on structural norms with a target goal of affecting change. The concept of "Critical Technical Practice" is attributed first to Phil Agre, who initiated the idea based on his personal experience as an artificial intelligence researcher [1]. Chaffing at the perceived constraints of his field, Agre embraced critical theory and in particular the philosophy of phenomenology to more concretely examine and interpret his life research and work. Critical reflection allowed Agre to deeply consider the concepts, methods and modes of inquiry in AI, in a framing that has been adopted by practitioners and researchers in a variety of technical fields including computer science, engineering and human-computer-interaction [2].

Much of this recent work owes an allegiance to the influence of the humanities and the arts. While we may be familiar with the role of critical theory in the contributions of philosophers and social scientists, we can also scan the artistic horizon for centuries of work integrating mediated reflection with acute social commentary. From Jonathan Swift to John Oliver, Laura Mulvey to Miranda July, the artist practitioner and commentator has functioned as a powerful conduit for provoking societal examination and dialog. Examining the impact of critical work across multiple disciplines which exposes both technical and social implications therefore presents considerable utility for social multimedia researchers. In the following sections, we present work bridging art, design, engineering and computer science as exemplars of work in this domain.

Critical designers create speculative products, systems and services with the aim of instigating public conversation and exchange about possible futures. Through the development of alternate reality games, performative what-if scenarios and design fiction movies, practitioners and institutions craft material expressions of possible worlds. These imagined artifacts, products and services are technically sophisticated, aesthetically rich and socially challenging, regardless of where they are encountered. A recent example is *Happylife*[1], a project created by James Auger and Jimmy Loizeau. *Happylife* investigates the emergence of 'real-time dynamic passive profiling techniques' by situating the technology in the home as a way to 'mediate and display human emotive states in a family'. Created in collaboration with computer scientists at Aberystwyth University, this project uses invasive thermal cameras, emotion detection algorithms and abstract visual displays to render complex personal feelings for familial contemplation. This particular collaboration points to the value of designing and developing critical mediated systems as a powerful reflexive tool for examining issues around national security, domestic technologies, privacy, and intimacy.

Adopting a different tack, the Critical Engineers[2] propose a terse manifesto advocating a radical reframing of the role of engineering in society. The manifesto calls for considered investigation of the systems and technologies of everyday living and the role of engineers in constructing them. Exemplar projects such as *Newstweek*[3] and *Artvertiser*[4] are of particular relevance to socially-aware multimedia researchers. *Newstweek* is a simple (and almost always illegal) wall-plug like device that when plugged in can hijack the streaming newsfeeds of prominent online organization to display alternative content. *Artvertiser* is another contestational art-advertising-swap system for real-time hacking of displays in public space. Ultimately these systems provide agency and power to humans as they navigate social multimedia spaces in public, quasi-public and domestic spheres.

This presentation will explore the technical innovation and socio-cultural implications of critical multimedia works in expanding our understanding of the opportunities and challenges for socially-aware multimedia.

Categories and Subject Descriptors

J.5 [**Arts and Humanities**]

Keywords

Critical theory; social multimedia; speculative design

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[2] Sengers, P. et al. "Culturally embedded computing," *Pervasive Computing, IEEE* , vol.3, no.1, pp.14,21, Jan.-March 2004

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[2] http://criticalengineering.org/

[3] http://newstweek.com/

[4] http://theartvertiser.com