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Re-imagining the Rhetorics of Human-Computer Interaction: Addressing HCI issues and problems in Non-Western cultures

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Abstract

The current Human-Computer Interaction (HCI) knowledge is designed and developed from Western thinking, neglecting the non-Western rhetorical and cultural situation that determines or at least informs users in Non-Western settings to react to the computer technology. In those Non-Western countries with communal and collective ways of living and communication, HCI needs to be responsive to these people's need. This research is to propose new approach to create better engagement in HCI through rhetoric as a practice for people from the Non-Western community.

Background

Many developing countries in the Global South, like Indonesia, South Africa, Argentina, India, and Bangladesh are underrepresented in the high-technology proliferation. The problems of computer usability and technology anxiety that still occur within the communities of developing countries can be considered as the result of the HCI's negligence of the marginalized, yet significant number of the world's population. HCI research has been focused on solving computer technology problems in rich and modernized Western settings, at the expense of less developed and modernized cultures [17].

Conjecture

The current HCI knowledge is designed, developed, and delivered in a hegemonic Western thinking, neglecting the non-Western rhetorical and cultural situation that determines or at least informs users in Non-Western settings to react to the computer technology.

The HCI research often generalizes the issues and problems situated in Non-Western settings, thus producing solutions that were generated mainly to support the modern Western lifestyle. HCI should consider shifting their focus from increasing the convenience level of modern lifestyles in suburban homes to create a health communication system for nurses and midwives in isolated islands, like those in Indonesia.

Significance of Research

The application of rhetorical lenses offers an explanation to our understanding of the rhetorical situation that is activated in HCI as a way to unravel the intricacies of situated interactions beyond the interface design and aesthetic values of virtual artifacts. The scholarly conversation on rhetorics and HCI has been limited to the rhetorical interaction between users, computer interface, and designers, leaving out the cultural situations in the space in which the technology reside that inform the interaction. The computer has been an embedded digital technology in everyday objects, transforming the surrounding environment into a physical-digital ecosystem. This technology development makes the user experience and user interaction design no longer isolated in computer interface. The spaces and situations where the technology resides are becoming essential elements to the design of artifacts.

The Intersectionality of Rhetorics and HCI

Rhetoric assists the understanding of HCI as means of persuasion technology. Aristotle defines rhetoric as, "finding any available means of persuasion in any given case." A rhetorical situation in a user interface happens at the level of function, where visual artifacts communicate the action [7]. The way a visual artifact is shaped and resonates with users navigates the degree of effectiveness of an interface design; a medium to persuade people to accomplish the designated goals. Rhetoric of HCI is also translated as a basic communication model to demonstrate dependencies and forces between three parties: designers, systems, and users in designing user interfaces [10].

The transfer of the rhetorical communication model to HCI design process can map the involved parties systematically and locate variables that contribute to a successful process. The idea of the rhetoric of HCI is also leaning towards a mode of persuasion rather than an influence [3], [6], [14]. The intersectionality of rhetoric and HCI aids the understanding on how rhetoric corresponds to design [2]. This notion of the interface as the only locus of rhetorical situation has segregated the human from their social world—their rich histories and cultural values, that determines or at least informs their reactions to technology.

The Rhetorics of User Experience/User Interaction

Rhetoric in UX is traditionally viewed as means of persuasion that lead users to an action to reach designated goals. The means of persuasion are located in the visual elements of an interface: images, layouts, sounds, font types, texts, animation, avatars, and videos. Ancient rhetorical concepts of *kairos*, *techne*, and *metis* are embodied in UX as interface, design, and usability uniting the most ancient knowledge with emergent media [16]. Experience is the totality of people acting, sensing, thinking, and meaning making including the sensation and perception left from an object [11]. Interaction and experience are intertwined, as an interaction of human and technology creates an experience with emotional consequences that lead to meaning making [9]. Specifically, the experience of technology refers to something larger than usability or satisfaction or attitude towards an object [11].

The Situated Action and Acting in the World theory have helped to contextualize action in HCI [8]. The action in HCI was isolated in the idea of the human response as another system in a computer that is scripted and planned. The openness of situations contravenes carefully planned responses, and any regularity emerges not as a result of plan-based action but as local responses to contingencies [15]. People acting cannot be separated from action, feeling, thought, and value, and the social situation that involves collective cultural historical forms of located, conflictual, and meaningful activity [11]. People acting in a situation know different things and speak with different interests and different levels of experience. The unit analysis in situated action is the person-acting-in-setting through culturally resources for learning and sense-making. Therefore, the concept of experience to technology is a dialogical process between a person's rich histories of experience engaging with the technology about what the technology is and could be, and what the person is and could be [11]. This dialogue is subjected to emotional, volitional, and intellectualism points to the aesthetic quality of experience.

The discussion above demonstrates how the openness of a situation is a rewarding element in human interaction with technology. A human mind cannot be separated with his/her experience that is informed by their local social and cultural values. A user's reaction to a technology is determined or at least informed by their previous experiences.

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