

On Not Designing Tools

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INTRODUCTION

The reader is no doubt well aware of HCI's emphasis on the analysis of systems in which the computer plays the role of tool. The field encompasses positivist and pragmatic approaches in analyzing the products and the trajectories of use of technology (Coyne, 1995; Ihde, 2002; Preece et al., 1994), and many useful guidelines for the design of task-oriented tools have been produced as a result. However, use value and efficiency increasingly are leaving consumers cold; society has always needed things other than tools, and expectations of personal digital products are changing. Once utilitarian, they are now approached as experience, and Pat Jordan, for example, has successfully plotted the progression from functionality to usability to pleasure (Jordan, 2000). A precedent set by the Doors of Perception community (van Hinte, 1997) has seen slow social movements becoming more prevalent, design symposia dedicated to emotion, and traditional market research challenged by the suggestion that the new consumer values something other than speed and work ethics. This search for authenticity appears to be resistive to demographic methodologies (Boyle, 2003; Brand, 2000; Lewis & Bridger, 2000) yet underpins important new approaches to sustainable consumption (Brand, 2000; Bunnell, 2002; Csikszentmihalyi & Rochberg-Halton, 1981; Fuad-Luke, 2002; van Hinte, 1997). The next section introduces pragmatic and critical approaches to HCI before examining the importance of the artwork as authentic experience.

BACKGROUND

Pragmatism

HCI's activity revolves around tools. Its philosophical framework traditionally has been one of useful-

ness, demonstrated in terms of the workplace; it can show "tangible benefits that can be talked of in cash terms ... providing clear cut examples of case studies where ... costs have been reduced, work levels improved, and absenteeism reduced" (Preece et al., 1994, p. 19). Winograd and Flores (1986) defined the scope of their investigation as being primarily "what people do in their work" and saw the issues arising from this study to be pertinent to "home-life as well" (p. 143). Interaction design is focused similarly on optimizing the efficiency of the tool: "Users want a site that is easy to use, that has a minimum of download time, and that allows them to complete their tasks in a minimal amount of time with a minimal amount of frustration" (Lazar, 2001, p. 3). Both disciplines are increasingly taking into account the social situation of communities of users, and the constitutive nature of technology itself; that is, it is understood that the introduction of a technology into society often is merely the beginning rather than the culmination of the cycle of appropriation. It is this socially constitutive aspect of technology that requires HCI to embrace not only pragmatism but also critical design practices.

A Critical View

A critical stance questions the role of technology with respect to social and political structures and inquires into the future of humankind in light of its appropriation. Design carries with it the ethical implications of its impact on communities, no matter that trajectories cannot be predetermined: "Design ... imposes the interests of a few on the many" and is "a political activity" (Coyne, 1995, pp. 11-12). It raises questions about human activity in meaning making in contrast with passivity. McCarthy & Wright (2003), for example, evoke the Apple Mac as an "object to be with" but go on to ask whether we "passively consume this message or complete the experience ourselves" (p. 88). The situation at the

moment is such that any experience of computers that throws into relief the nature of the computer itself is critical in nature. In challenging pragmatism, the critical position raises questions about the need for socially grounded performative meaning making and about how truth is often seen to be embodied and presented by the technological reasoning of the machine. In practical terms, pragmatism in interaction design is characterized by an emphasis on the transparent interface, as championed by Winograd & Flores (1986) in the early visions for ubiquitous computing (Weiser, 1991) and by cognitive psychologist Donald Norman (1999); the critical nature of the artwork for HCI lies in its re-physicalization of technology. This physicality, or obstinacy, is dependent on the user's awareness of the interface in interaction, which platonic design seeks to minimize if not erase.

Phenomenology: Disappearance and Obstinacy

The notion of the tool is challenged by awareness; tools by definition disappear (Baudrillard, 1968; Heidegger, 1962). The phenomenologically invisible interface was described first by Winograd and Flores (1986) in their seminal book, *Understanding Computers and Cognition*, further elucidated by Steve Weiser (1991) in his visions for the paradigm of ubiquitous computing, and finally popularized by Donald Norman's (1999) *The Disappearing Computer*. These texts take as a starting point a phenomenological view of action in the world; that is, as soon as tools become conspicuous, to use a Heideggerian term, they are no longer available for the specific task in mind (or ready-to-hand), instead becoming obstinate and obtrusive (present-at-hand). As long as we approach a tool with the goal of using it for a specific task, such obstinacy will remain negative, but there does exist a different class of artifact where it becomes interesting, positive, and even necessary for the existence of the artifact in the first place. *Objection-able* might be an alternative to Heidegger's terminology, embodying the idea of a thing regaining its materiality, that existence that is dependent on performative human perception. Baudrillard (19698) talks about objects as being non-tools, about their being ready for appreciation, part of a value system created through appreciation.

They are the noticed artifacts in our lives, and as such are positioned to accrue the personal meaning that underlies truly authentic experience. This approach takes the concept of phenomenological disappearance and shifts the focus from the transparent interface to that of the visible object. The difference lies in the location of breakdown and in its recasting as an essentially positive part of experience. Winograd and Flores (1986) point out that meaning arises out of "how we talk about the world," emerging in "recurrent patterns of breakdown and the potential for discourse about grounding" (p. 68); in the design of transparent, seamless experiences, breakdown is something to be prepared against rather than encouraged. The authors apply Heidegger's readiness-to-hand to the design of systems that support problem solving in the face of inevitable and undesirable breakdown situations. This article presents a case for an alternative application of an understanding of the same phenomenological concepts towards the production of visible, objection-able artifacts. The following section introduces art as process and product, defined by objection-ability, and examines the human need for art in light of this quality.

ART

Philosophical Importance of Art

Art objects are those that are created expressly to spark cognition through a combination of order and disorder, through continuity and discontinuity (Pepperell, 2002). New languages are formed in expressing aspects of being in new ways. The artifact acts as a medium for expression (even if the intent of the artist is to erase authorship); but it is in the gap for open subjective reading, in the active articulation of pre-linguistic apprehension, that meaning is co-created (Eldridge, 2003). Thus, to conceive of a meaningful digital product is to intentionally invert the paradigm of the invisible computer. If we are designing products to become meaningful objects, then in order to trigger that articulation, we must introduce discontinuity, even Heideggerian breakdown, opening up the space for the intersubjective co-production of meaning (Baudrillard, 1968; Eco, 1989; Greenhalgh, 2002; Heidegger, 1962;

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