Values, Design, & Worthwhile Relationships

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Abstract
This paper builds on perspectives in HCI and design literature concerned with value(s) and technology to discuss the relevance of considering human values throughout the design process as a means to develop more valuable or worthwhile consumer-product relationships. Moreover, this paper presents a perspective linking notions of values and worth within the broader context of HCI.

Keywords
Values, Value-Sensitive Design, Material Aesthetics

ACM Classification Keywords
H5.m. Information interfaces and presentation

Introduction
As emphasis in the Human-Computer Interaction (HCI) community transitions from the workplace to everyday life, significant challenges lie in adapting and adopting appropriate theoretical and methodological perspectives to support these new contexts [1]. This shift in focus toward contexts of everyday life, paired with greater concern for human experience, is increasingly referred to as the third wave of HCI [1]. In what follows, I offer a (i) brief review of HCI research that has raised concern over values and technology design, (ii) present

related notions in recent design literature, and (iii) propose a perspective linking notions of values, design, and worth in HCI.

Values, Design, & Everyday Life

As the HCI community continues to move beyond the workplace, developing a sensibility for understanding human relationships within the material ecologies characterizing everyday life is imperative. While efficiency and functionality are standard metrics to evaluate workplace productivity, they may become problematic when applied to particular aspects of life outside of the office. Previous research in HCI has raised concerns over the commodification of values, such as production and efficiency, within everyday objects and the possible subversion of new meaning making opportunities that may result [5, 8-10]. These perspectives raise concerns over the values and assumptions latent in the design of objects that implicitly procure and idealize a lifestyle of efficient work coupled with mindless pleasure [5]. This scenario has in part been linked to a historical bifurcation between work and play, where Western culture has transitioned from lifestyles "in which work, play, and other forms of experience are inextricably intertwined, to one in which most people separate their work life from a private (and often less societally valued) life of fun and play" [10]:19. Collectively, these perspectives reflect the importance to critically consider the underlying values engrained in and projected through technologies that populate contexts of everyday life.

Values are central qualities in design, providing the basis from which designers form their concepts and reflecting key human motivations and ideals. Values signify the common ground where designers and consumers meet. Decisions made during the design process play a key role in determining how technology will support or undermine human values while objects are in use as well as impact on the human condition. Friedman and others have investigated the implications of these issues in their development and application of the Value-Sensitive Design (VSD) framework, which is rooted in moral and ethical considerations to account for human values throughout the design process [4]. VSD is characterized by the consideration that computer technology design ought to incorporate values of trust, accountability, freedom from bias, access, autonomy, privacy, and consent [4].

Similarly, reflective design incorporates notions of VSD and a variety of other critical approaches to consider the values, attitudes, and worldviews implicitly built into technologies and the subsequent effects [8]. A core motivation of reflective design is to critically espouse "unconscious aspects of experience to conscious awareness, thereby making them available for conscious choice. This critical reflection is crucial to both individual freedom and our society as a whole" [8]:50. Broadly, the reflective design framework outlines principles and strategies aimed at (i) engaging designers in reflection on their role within the design process and (ii) designing objects to support users in their own reflective processes and interpretations of the objects themselves. Various design case studies described in [9] explore this emerging area and, in particular, the role that concepts of interpretive flexibility and ambiguity can play in provoking users to critically develop and reflect on subjective meanings arising through interactions with particular objects, systems, and environments. Analogous to this theme, Krippendorf asserts a core concept of human-centered

design as transitioning “from imposing intended functions of products, even enforcing particular uses of technology through training or certification, to allowing people to use them in their own terms” [6]:39.

The perspectives and approaches reviewed in this section emphasize the intentional consideration of human values in the design process. The manner through which values are consciously considered by designers and the process through which values manifest in the interactional relationship between humans and objects are collectively part of a larger philosophical debate. However, these perspectives are united by the common theme that humans should be treated as active, self determining agents in their own lives and design ought to support, rather than subvert, this goal.

Ensoulment & Material Aesthetics

In [7], Nelson & Stolterman discuss notions of value and meaning as they relate to the concept of *ensoulment*. In this context, value is described as appreciation of a product’s intrinsic qualities and meaning as the value of this design in relation to something larger. The notion of ensoulment is characterized by the relationship that emerges when “the meaning and value of a design is taken in as a feeling of being deeply moved and as consequence, a feeling of being significantly changed” [11]:269. In short, ensoulment refers to the deep appreciation of a product’s essential quality and character as it is involved in one’s life. While empirical research investigating ensoulment and the nature of human-product relationships is in its developing stages [2], a core assumption in this approach is that if products become ensouled, consumers are more likely to develop worthwhile relationships and care for these products over time. However, the question remains: what principles should guide designers to develop products more likely to become ensouled and deeply worthwhile?

In articulating a material aesthetics perspective, Peter Paul Verbeek discusses culturally sustainable products—those that people develop attachments with on the basis of their sensorial and material experience of use [11]. To cultivate such attachments Verbeek proposes the design criteria of *transparency* and *engagement*. *Transparency* is characterized by the notion that a product’s functionality should be understandable and accessible, which allows users to repair and renew objects as they age as well as “makes it possible for people to become involved with products as material entities. For when a product is transparent, it is not only functionally present but it exhibits how it is functioning” [11]:227. This criterion is particularly relevant to computing technology, where the trend toward miniaturization increasingly separates the user from the device itself. Building on the foundation of *transparency*, the notion of *engagement*, calls for products to be more dependent on human operation, than less, and integrated into everyday life in more involving and alluring ways.

The design criteria of *transparency* and *engagement* collectively form a material aesthetics perspective, asserting that “if products are to be designed to encourage attachment, it is necessary to design them so that humans deal with the products *themselves* and not only with what they do or signify” [11]:232. By virtue of transparent and engaging interactions, worthwhile consumer-product relationships emerge and

are sustained over time. At its core, the material aesthetics argument reflects values of user autonomy, freedom from bias, and, ultimately, self determination.

Conclusion

The ideas discussed in this paper provide a perspective on how the relationship between human values, design, and worth can be conceptualized within HCI. While based on a working assumption, the core message of this perspective is that by considering particular human values throughout the design process, one can develop products that consumers are strongly attached and attribute great worth to. Products open to consumers fluidly understanding, using, and appropriating them into their everyday lives, on their own terms, creates an engaging space of possibilities where users develop a deeper sense of a product's role in their life and, consequently, how their life relates to the product. It is in this co-shaping process that values of self determination are reinforced and worthwhile relationships are developed. Over time, through this complex and evolving process, consumers develop a sensibility for taking care of worthwhile products as they age and change with them. In particular, this scenario has direct implications for emerging values-oriented perspectives in HCI relating to environmental sustainability. While the approach proposed in this paper argues for the consideration se of human values as a means to create worthwhile relationships, differing somewhat from previous value & worth-centered discourse [3], it supports the underlying call for HCI to recreate itself as a design discipline.

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