
Dark Intentions or Persuasion? UX Designers' Activation of Stakeholder and User Values

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DIS'18 Companion, June 9–13, 2018, Hong Kong
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ACM ISBN 978-1-4503-5631-2/18/06.
<https://doi.org/10.1145/3197391.3205417>

Abstract

Formalized frameworks that reference ethics and values have received increasing attention in the HCI community. These methods emphasize the importance of values in relation to design but provide little guidance to reveal the values that are present or have impact on designers' decision making. In this work-in-progress, we identify the values considered by student UX designers when conducting an authentic design task, allowing for interrogation of the possible intentions that underlie their decision making. Our exploratory analysis revealed that participants had sensitivity towards user values, but often contradicted these values through dark, often tacit, intentions to persuade users, thereby achieving stakeholder goals. We provide provocations for future research on the role of ethics and values in practice and design education.

Author Keywords

Values; ethics; decision making; dark patterns.

ACM Classification Keywords

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

Participants

Undergraduate and graduate students with a background in UX design were solicited through emails and flyers. To participate, students must have had at least one semester of UX design education and work experience as an employee or intern. Participants were randomly assigned to form a group representing multiple skill or educational levels. Overall, there were 3 male and 6 female students in the total of 9 students.

Data Collection

All sessions were audio and video recorded with two cameras. The audio of the session was transcribed and cleaned to allow for detailed analysis of speech acts, gestures, and design activities (e.g., sketching), with researcher memos added to the transcriptions based on field notes from each session.

Introduction

The importance of ethics in design and HCI activity has been well studied [1,7,8,15] and there have been numerous calls for an explicit commitment to ethics in design education to prepare practitioners for their ethical role (e.g., [3]). However, tools and methods to build and reinforce ethical awareness and the importance of values in design are scarce, even as scholars have called for better connections among academic research and the realities of practice [11]. This work-in-progress focuses on identifying patterns of ethical decisions and related intentions that emerge in UX design as designers complete an authentic task, including the balancing of user and stakeholder values.

Related Work

Existing design methods and research approaches address connections between design and ethical standpoints or value-related commitments. Some prominent approaches such as value-sensitive design (VSD; [1,7]), values at play[4], and value levers [15] have been proposed in the HCI and Science and Technology Studies (STS) literature. VSD implementations have generally focused on privacy concerns in relation to technology (e.g., informed consent in web cookies [1]), while more generally, Friedman et al. [8] have presented a list of human values with ethical import including human welfare, ownership, privacy, freedom from bias, usability, trust, autonomy, informed consent and accountability. In embodying these approaches through design action, Shilton [15] has more recently proposed the concept of *value levers* as a means of connecting value-related insights with design decisions. In the broader ethics literature, we also note the concept of "ethicist as designer," as proposed by van Wynesberge and

Robbins [16], where a pragmatist approach for discovering values has the potential to engage designers in ethical decision-making conversations. This framework includes uncovering relevant values, scrutinizing these values, and working towards the translation of values into technical content. While existing research has defined the content of values in a general sense, little work addresses the interplay of these values in design processes or how researchers might uncover underlying and explicit values present in designer's conversations.

In this work-in-progress, we build upon existing value-related methods, observing the ethical *intentions* student designers reveal through their design process when completing a design task. Our framing research questions for this study include the following:

1. What were the user values considered in designers' decisions, and why were they considered?
2. What underlying designer intentions pointed towards either user or stakeholder values?

Our Approach

We documented the discussions and design activities of student designers through a lab protocol study, a common approach to studying design cognition in the psychology and design studies literature (e.g., [9]). This study includes analysis of one-hour sessions with 3 groups of 3 students each, documenting them as they designed solutions to a real-world design challenge.

Lab Protocol Design

Each lab session including the following components: introduction of an authentic design task that required participants to navigate an ethically ambiguous space

Analysis of Design

Communication Structure

In the dialogue surrounding each design move, we identified both explicit and implied values. In this structure, the **<intention>** indirectly activates the user values considered by the designers. For example:

"this donate link is hard to see <problem>. Which should be, uh, made easier to access <intention of implementing the feature> because that's what they want <user mental model/need>."

Groups used different methods to identify the problems implicit in the design prompt.

- Group 1 targeted re-designing the landing page and donation form
- Group 2 re-designed the donation form only for usability issues
- Group 3 changed the existing website design into a different format

(5 mins); working on the design task (45 mins); and presenting design outcomes with follow-up questions (10 mins). Participants were asked to redesign the donation experience for a charity, contextualized with a current news topic during the data collection period: hurricane relief in Houston. They were asked to maximize conversion rates for this charity "by any means necessary," culminating in the generation of one or more appropriate solutions. After completing the task, students were asked to present their solutions explaining their decisions and how they addressed stakeholder and user values. Prior to each session, one of the participants was given a set of interaction design principles [14] and persuasive principles [5]. These primed the participant with examples of manipulation techniques that were written in a neutral language, anticipating the potential use of this material in relation to their decision-making processes.

Data Analysis

These data were analyzed through an interaction analysis approach [13], focusing on how actions related to teamwork, design outcomes, and conversation among participants. An existing analytic approach [16] was used to locate problem identification, provisional or final solution, and the relationship between these elements and the final goal. We observed a series of design moves with underlying intentions that led participants from identifying a *problem* in the existing design to generating a *solution*.

Findings

Common user values considered by the designers included: right to information, usability, security, flexibility, automation, optimization, trust, and aesthetics. Each of these values pointed towards

intentions that designers embodied and relied upon in guiding their decision-making process. Often these intentions were dark, often tacit, with the goal of persuading users. By dark intentions, we refer to designers' values that are activated in relation to user needs, but shift through design decisions to become more aligned with stakeholder needs, often at odds with known and defined user goals.

Designers identified improving presentation of information on the website as a priority. The user value "*right to information*" was considered the most essential to maximize conversion rates, and was translated into infographics, statistics and images in the solutions. While this value was often used in positive ways, designers also expressed their dark intentions of persuading users to donate for the charity. While an appropriate value was activated, the dark intention in relation to that value resulted in trade-offs between the ethics of presenting valid statistics and inflating the numbers to persuade, thus attracting more donations.

Another common value in play was flexibility and its relation to freedom of choice. A designer in group 1 identified no freedom of choice for the donors in terms of the donation amounts and payment methods, with the goal of increasing donations taking precedence over user agency. Designers in this group implemented a flexible entry of donation amounts by providing an empty box with hint text. Similarly, designers in group 3 implemented a donation box with a fixed minimum amount, showing that they were giving the donor a flexible option but with a control over an acceptable minimum donation. Designers in group 1 also provided the users with flexible choices of payment methods (e.g., PayPal, Venmo) to encourage donors with fewer

payment barriers. In these examples, freedom of choice was in conflict with persuading the user to take on the stakeholder's goals, resulting in a more explicit conversation about stakeholder versus user needs.

Other user values identified included optimization, automation, usability, security, and flexibility, and each criterion had similar implicit dark intention trade-offs. Activation of these values generally resulted in a streamlining of the current site to address major usability or UX pain points, rather than deeply interrogating the ethics of potential outcomes.

Discussion

The sensitivity of student designers towards user values did not necessarily impact their decisions or ethically-focused outcomes. In many cases, user values were acknowledged, only then to be leveraged in persuading users towards stakeholder-directed outcomes, activating potentially dark intentions on the part of the designer—design moves that seem to be in parallel with expectations of practicing UX designers. We see a relation here to the persuasive principles formulated by Fogg [5] and characterizations of dark patterns [12]. Currently, there is little guidance regarding how students and practitioners should recognize, articulate, and act upon their values in appropriate ways. Further investigation into designers' tendencies to enact unduly persuasive or dark patterns is needed to ensure designers' ethically sound practice.

Provocation and Future Work

While current literature is focused primarily on the activation of values through methods that often border on prescription (e.g., VSD) or academically-focused methods that are often difficult to activate in practice

(e.g., critical design [2]), we propose that additional sensitivity is needed to address ethics and values in a generative stance. What might methods look like that allow the designer access to their tacit and embodied knowledge, including potential tensions in user and stakeholder needs/goals? How might generative methods in the pragmatist ethics tradition allow greater access to one's normative position, and also facilitate the generation of more novel design outcomes?

To extend this research, we believe a linkography [10] of design moves, values, and decisions may provide more clarity to the emergent relationships among design task, values, and outcomes, illustrating connections among design moves, and leading to a more nuanced visualization of value interplay. Future elaboration of the connections among values, intentions, and outcomes may prove useful in characterizing the impact of value-related frameworks. We plan to extend this analysis by deepening our visualization approach and using complementary design tasks that more explicitly influence participants to foreground stakeholder goals and values.

Conclusion

In this work-in-progress, we have identified the emergence of values and designer intentions in the context of UX design activity, providing a means to discuss the role of values in UX design, and an initial approach to locate and characterize potential values. We found that participants often leveraged human values in their decision making to achieve stakeholder-focused outcomes, even when they had started their design activity in a user-focused way. Additional work is needed to discover how activated values and dark intentions result in solutions that manipulate the user.

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