

# What Kind of Work Do “Asshole Designers” Create? Describing Properties of Ethical Concern on Reddit

Colin M. Gray  
Purdue University  
West Lafayette, Indiana  
gray42@purdue.edu

Shruthi Sai Chivukula  
Purdue University  
West Lafayette, Indiana  
cshruthi@purdue.edu

Ahreum Lee  
Purdue University  
West Lafayette, Indiana  
lahreum@purdue.edu

## ABSTRACT

Design practitioners are increasingly engaged in describing ethical complexity in their everyday work, exemplified by concepts such as “dark patterns” and “dark UX.” In parallel, researchers have shown how interactions and discourses in online communities allow access to the various dimensions of design complexity in practice. In this paper, we conducted a content analysis of the subreddit “/r/assholedesign,” identifying how users on Reddit engage in conversation about ethical concerns. We identify what types of artifacts are shared, and the salient ethical concerns that community members link with “asshole” behaviors. Based on our analysis, we propose properties that describe “asshole designers,” both distinct and in relation to dark patterns, and point towards an anthropomorphization of ethics that foregrounds the inscription of designer’s values into designed outcomes. We conclude with opportunities for further engagement with ethical complexity in online and offline contexts, stimulating ethics-focused conversations among social media users and design practitioners.

## Author Keywords

Ethics; dark patterns; asshole design; Reddit.

## CCS Concepts

•Human-centered computing → Empirical studies in HCI; User interface design;

## INTRODUCTION

The rapid advancement of technological capability and ubiquity shapes our daily experiences and decision-making processes, but the ethical character of these technologies is often opaque and inaccessible to everyday users. HCI and STS scholars are increasingly focused on describing the ethical concerns present in everyday technologies (e.g., [25, 31, 56, 64]), providing mechanisms by which ethically-dubious technologies can be critiqued [2, 67], and providing guidance to practitioners on how to act in more value-centered ways [28, 55]. In parallel with these academically-focused discourses of ethical technology practice, practitioners have also led the conversation

in more pragmatic terms using concepts such as “dark patterns” or “dark UX” [7, 33, 42, 49] to describe how persuasive strategies (e.g., Fogg [21]) can be used by designers to create manipulative or evil design artifacts.

Debates about design ethics have recently extended beyond practitioners to everyday users, led by privacy and security concerns promulgated in the wake of crises such as the Cambridge Analytica scandal [36]. Thus, while there is continued value in uncovering the ethical complexity of everyday technology and design work on the part of practitioners [7, 42], there is also a concomitant need for everyday citizens to become aware of ethical issues that may impact their current and future lives. Thus, we seek to identify and explore a new strand of research that parallels practitioner engagement in ethics (dominated by the “dark patterns” literature), describing a space where everyday technology users can take on an informed ethical stance that may lead to further action. We begin by seeking only to describe that elements of this ethical positioning already exists, in latent form, in online social media communities.

In this paper, we seek to describe the felt ethical complexity of users as they share ethically-nuanced artifacts on Reddit, resulting in a user-focused description of ethical concern. We use a content analysis approach to characterize the ethical concerns presented in 1002 posts that were shared on “/r/assholedesign” primarily from July 2017 to November 2018. We describe an iterative coding of post attributes such as: interaction context, domain, presence of dark patterns, presence of company shaming, and medium of artifact presentation. This coding approach allows us to identify the types of exemplars that were shared by this community, the relationship of these posts to known dark patterns strategies [33], and new types of artifacts presenting different forms of malicious behaviors that are not well represented in existing ethics corpora. Through our analysis of these artifacts, we build upon existing notions of *dark patterns* to propose a community-grounded notion of the “asshole designer,” while also seeking to clarify the differences in awareness, intentionality, and aggressiveness of dark patterns strategies and asshole designer properties.

Our contribution through this work is three fold. First, we characterize the properties of *asshole design* through a content analysis of artifacts posted in the subreddit “/r/assholedesign.” This analysis enables a description of different mechanisms used and range of contexts in which these designs exist, building upon the *dark patterns* literature. Second, we distinguish *asshole design* from value-centered design and bad design,

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for components of this work owned by others than the author(s) must be honored. Abstracting with credit is permitted. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. Request permissions from [permissions@acm.org](mailto:permissions@acm.org).  
DIS '20, July 6–10, 2020, Eindhoven, Netherlands.

© 2020 Copyright is held by the owner/author(s). Publication rights licensed to ACM.  
ACM ISBN 978-1-4503-6974-9/20/07 ...\$15.00.  
<https://doi.org/10.1145/3357236.3395486>

providing a precise conceptual vocabulary to inform ethics-focused research in HCI contexts. Third, we characterize the capacity of an online community to engage in ethical argumentation “on the ground” without specific philosophical supports, opening new opportunities to study and support ethical deliberation without precise or articulated ethics vocabulary. The properties of asshole design and the capacity of the community to engage in this ethically ambiguous space provide a concrete space for the practice of pragmatist ethics, aiding researchers in identifying new methodological and discursive supports to increase ethical awareness and action.

## BACKGROUND WORK

### Discourses about Ethics

Among HCI and STS scholars, there has been a substantial discussion of issues relating to ethics and values (e.g., [25, 56, 66]). This is evidenced by the creation and dissemination of a wide range of methods, methodologies, and approaches that are intended to support a ethically-aware and engaged design practice such as: value sensitive design (VSD) [25, 26], values at play [19], value levers [55], critical and humanist design [2, 3], speculative design [15], reflective design [54], situational ethics [46], and in-action ethics [24]. Shilton [56] has provided perhaps the most thorough overview of these trends in the HCI community, which reveals numerous opportunities for future engagement in research and practice contexts. These value-centered approaches are dominant within the research discourse, but few have experienced widespread awareness or use in design practice. However, we position these discourses of ethics to be critical for future ethical action, as they impact sensitivity to ethics-related issues and shape the training of future designers through formal educational channels.

In parallel to the academic discourse, design practitioners have sought to establish their own vocabulary to engage with ethical concerns. Perhaps the oldest and most popular framing of ethics in UX practice is the notion of “dark patterns,” a concept created by academic-turned-practitioner Harry Brignull that describes “a user interface that has been carefully crafted to trick users into doing things [. . . that do] not have the user’s interests in mind” [8]. This neologism was originally coined to encourage the shaming of companies that engaged in practices deemed to be unethical, and has been supported by a website run by Brignull and others [8]. Recent work in the HCI community by Gray and colleagues has built upon this concept to describe these dark patterns as strategies that designers use to manipulate or persuade users, with a set of five proposed dark strategies: nagging, obstruction, sneaking, interface interference, and forced action [33]. In addition, articles in the popular press have brought attention to dark patterns and illegitimate forms of persuasion more broadly (e.g., [7, 27, 57]). Fansher et al. [17] have traced this concept in Twitter conversations among practitioners, finding that this term (indicated by the inclusion of #darkpatterns) is highly cohesive, and is used in predictable ways to highlight ethical concern in technological artifacts, albeit on a small scale. Other recent work has described the use of dark patterns in proxemic sensing [34]; contributed potential anti-patterns [44]; identified the use of dark patterns on online shopping websites [43]; provided accounts of end user perceptions of dark patterns [42];

and presented the use of dark patterns on Facebook to manipulate online disclosure [62]. In all of this literature, the concept of dark patterns has been used as theoretical framework, further connecting translational opportunities between academic and practitioner discourses. Moving beyond dark patterns, Nodder [49] has also written a practitioner-focused text describing how persuasive techniques are used to create dark design outcomes that make customers feel good about their decisions, even when companies are taking advantage of them. Most recently, Chivukula et al. [11] have identified a social media concept known as “asshole design,” which moves beyond practitioner discourses and notions of “dark UX” to focus on the engagement of end users on Reddit. We specifically seek to build and expand upon this work in this paper.

There is also a relevant connection to discourses among design researchers, particularly from a design studies perspective (e.g., [12, 37, 41, 52, 60, 65]). Within this framing, largely driven by modeling of ethics surrounding the manipulation, shaping, or nudging of human behavior, physical artifacts are often foregrounded [12, 37, 52], as is the role of design in shaping society on a systemic level (e.g., *ontological design*; [65]). While our primary contribution in this paper is to the HCI community, we do see value in these parallel discourses from a design perspective that show sustained interest in the ethical inscriptions and discourses of the designed world.

In addition to academic and practitioner engagement with ethics, there is increasing interest by policymakers in addressing issues of manipulation and coercion. Most recently, the DETOUR act [63] was proposed in the United States Senate that would ban the use of certain types of dark patterns, but only for large tech companies with more than 100 million users. This recent effort parallels interests in data protection and privacy as part of the EU GDPR directive [20], concerns about manipulation among contractors in the gig economy [53], and fallout from the Cambridge Analytica scandal [36, 39].

Across all of these discourses, with the exception of the “asshole design” subreddit, there is little prior work on ethical engagement from the perspective of end users, with Maier [42] as a rare example. In this paper, we seek to build upon these existing discourses, while also identifying a new space for ethical engagement that may have substantial implications for researchers, practitioners, and policymakers.

### Ethical Engagement in Research and Design Practice

While the previous section dealt primarily with discourses of design, and common concepts and language within each discourse, in this section we seek to link our work to existing codes of ethics in academia and practice, and the methodological challenges with assessing ethical behaviors and notions of design intent. Numerous researchers have addressed the importance of engaging with ethical practices, describing the impact on pedagogy [18], design philosophy [13, 47], sociotechnical research [23, 45], disciplinary codes of ethics [9, 22, 29], and design practices [5, 25, 31, 38, 56]. Through these efforts, several frameworks and methods have been proposed to identify how ethical considerations could be incorporated into designers’ everyday work; however, many efforts have been inconclusive in terms of impact on everyday design practices,

underscored by the prevalence of ethics violations in large technology systems and the lack of comprehensive and contractual ethical obligation in most technology fields. These multiple conversations regarding ethics present an opportunity to connect user, practitioner, and academic discourses, and to describe the ethical vocabulary already present in each of these spaces. This paper is focused on documenting the ethical discourse from the perspective of Reddit users, and we seek to begin the connective work proposed here in the discussion.

From an STS perspective, numerous scholars have proposed the concept of value inscription—a recognition that human values and “scripts” for operation are tacitly embedded in the artifacts designers create—and the role of the designer in understanding and managing this inscription process (e.g., [1, 16, 35, 61]). Building upon this mediation of ethical concerns, Gray & Chivukula [31] have proposed the notion of *ethical design complexity*, building upon prior work from Stolterman [58] to describe the central role of the designer—shaped by organizational and socio-cultural forces—in this inscription process. In this paper, we seek to evaluate the outcomes of design activity through resulting artifacts, particularly drawing from the notion of artifacts as being value-laden in their own right [66], rather than focusing on the direct (and indeed, not completely knowable) intent of the designer. In taking this artifact-focused framing, we rely upon the notion of inscription, particularly drawing from Verbeek [61], to identify value-laden assumptions and approaches that a designer might be likely to have taken on in the process of their design work as evidenced by designed outcomes.

## OUR APPROACH

In this study, we conducted a content analysis [48] of an intact online Reddit community with the goal of identifying and describing ethically-concerning artifacts posted by users, building upon the prior work of Chivukula et al. [11]. We consider these users as a self-selected sample of individuals who are capable of participating in casual conversations on ethical issues that they face in their everyday lives, but who are unlikely to be part of the ethics discourse as a researcher or practitioner. This is supported by the lack of use of industry terms such as “dark patterns” when raising issues of ethical concern. Beyond this non-practitioner status, we do not address the potential demographic characteristics of Reddit broadly or this subreddit specifically. Due to the pseudonymity of the Reddit context, we cannot consider the generalizability of these conversations beyond this specific subreddit. Using the artifacts shared within this community, we propose areas of ethical concern and identify the relationship of asshole design to other ethical phenomena in HCI and design contexts. Using this approach, we answer the following research questions in this paper:

1. What types of asshole design exemplars were shared by the community members?
2. What dark pattern strategies were present in these asshole designs?
3. What properties do asshole designers take on to implement their malicious intent?

## Research Context

We targeted the subreddit “/r/assholedesign/,” which has 1.1 million subscribers at the time of writing, to explore online discussions of ethical concerns present in everyday interactions. This subreddit aims—at a large scale—to collect examples of *asshole design*, guided by the sardonic tagline: “*Because nothing comes before profit, especially not the consumer.*” Based on this definition, we anticipated overlap with previous conceptualizations of dark patterns. This subreddit community is moderated, and includes a range of guidelines that are intended to focus posts on artifacts that intentionally create suboptimal user experiences to value profit over user experience. As described by a flowchart pinned to the community guidelines, this subreddit does not allow posts of “bad design,” nor does it allow posts of suboptimal designs that were not intentional (leveraging *Hanlon’s razor*). Thus, this community—based on its guidelines—promises to provide a qualified set of exemplars of asshole design, including explicit examples (e.g., images, videos, links) that demonstrate malicious *intent* to mislead users for specific purposes. In this section, we will describe how we collected the data, our selection criteria for the posts, and the data analysis approach used for this study.

## Data Collection

Using the Reddit API and a set of PHP scripts, we retrieved 4775 posts which were published in “/r/assholedesign,” primarily from July 2017 to November 2018, using three separate and overlapping data pulls. We cannot guarantee that all posts were collected due to API limitations and a rolling window of post availability, but the total posts captured is consistent with current observable posting trends on the subreddit. We collected all post data along with linked media content (through the “related URL” link, the post message, and all other metadata (e.g., user id, post id, timestamp of creation, permanent link, score, number of comments, upvotes/downvotes). All accessible comment data was also retrieved, but was excluded from analysis for this study. All post data was processed and compiled into a relational MySQL database with a unique post id tagged to each post for easy retrieval at later stages of analysis. To limit the number of posts to a reasonable volume for hand-coding, we randomly selected 1002 posts from 4775 using a random number generator. This subset represents our analysis focus for the remainder of this paper. These 1002 posts were written by 948 unique authors and had 32105 associated comments (AVG = 32.04; SD = 103.24; MAX = 1403; MIN = 0). Because the focus of our research questions was on the artifacts being shared, and not the community response to these artifacts, we have chosen to analyze only the shared post content (based on the media content and post description)—our unit of analysis for this study—bracketing aside any associated comments for future work.

## Data Analysis

We performed several iterative levels of content analysis using the dataset described in the previous section, gradually moving from preliminary codes to a consistent and robust vocabulary that described post content. In total, we performed multiple rounds of analysis on 1002 posts with a team of five researchers: two graduate level and three undergraduate level.

All researchers had a background in UX design and expertise in qualitative research techniques through coursework or prior engagement in research projects. This training in both UX design and qualitative research, in addition to sensitization to the subreddit prior to coding, gave the researchers the ability to contextualize the design artifacts being shared and conduct content analysis of these posts in a robust way. Our analysis has low risk for participants or redditors, since only shared artifacts were analyzed, with no description of user account information that would increase unnecessary discoverability. Two researchers began by lurking in the subreddit [4, 51] to familiarize themselves with the characteristics of the community and the posts. While we conducted this initial exploration of posts, we found not all shared artifacts aligned with the community definition of an “asshole design.” Therefore, we began by classifying the posts based on the types of design issues it presented: bad design, asshole design, or neither. We coded a post as *bad design* when it did not describe malicious intent by the designer, but rather caused inconvenience to users due to usability issues. We coded a post as *asshole design* if it was *intentionally* designed to restrict or obstruct user agency or autonomy through interruptions or undue persuasion, as defined by the community posting guidelines. Specifically, the posts were tagged as asshole design when the design elements *restricted* users from performing an action such as closing an advertisement or pop-up, changing settings of applications without choice, or otherwise misleading users. Posts that contained insufficient information or lacked an artifact that had a malicious or “asshole” intent was coded as *none*.

Based on this first round of coding, which included sensitization to the range of artifacts being shared, we identified an additional set of codes to represent the ethical concerns present in the posts. We found that asshole design(er) properties with overt manipulative properties could be easily demarcated from dark patterns, which use deceptive techniques in indirect, sneakier, and less detectable forms. This resulted in the following *initial* codebook:

- What types of ethical design issues were described? (*asshole design, bad design, or none*)
- How was the design artifact represented? (*image, video, or link*)
- What interaction context was described in the design artifact? (*physical, mobile, desktop*)

In addition to these codes from the first round, we identified and analyzed a series of open codes that focused on the context and purpose of the artifact using a bottom-up thematic approach [6]. This resulted in codes to describe the interaction domain, whether the artifact shamed a company, and what ethical concerns were most salient in the artifact. Further analysis of these codes led to the generation of an *extended* codebook:

- Is a dark pattern present? (*if so: nagging, obstruction, sneaking, interface interference, and/or forced action*)
- Does it call out or shame a company? (*yes or no*)
- What is the interaction domain? (*e.g., healthcare, gaming, social media, messaging, permissions, advertisements, email*)

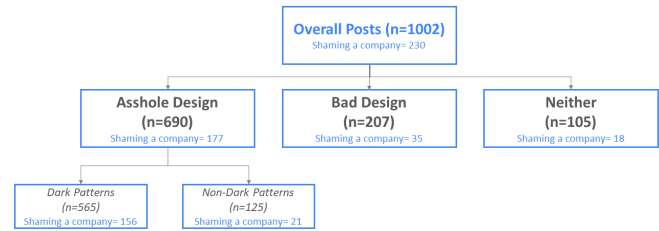


Figure 1. Inclusion Strategy for Posts.

Using this refined codebook, we coded 1002 posts using a custom online dashboard, applying codes non-exclusively. To ensure coding consistency and agreement, we divided the posts among five researchers using the same coding interface, discussing any posts where the meaning of the codes or their application was unclear. This coding process, and the regular conversations that the analysis encouraged, increased the rigor of our data analysis and built a shared understanding of all codes. After initial code application, all codes were confirmed by a second coder, with discussion until full agreement was reached. All codes were processed in a MySQL database for further data analysis and insight formulation.

Based on these coding results, we produced descriptive statistics to characterize the dataset. We began by excluding all posts that were not consistent with the community definition of asshole design (n=312), and all further analysis was conducted on the posts that remained (n=690). See Figure 1 for clarification of this inclusion/exclusion process. We used MySQL queries to retrieve quantitative results to answer RQ1, including the kinds of posts present and the frequency of various asshole qualities. To answer RQ2, describing how dark pattern strategies were used to further “asshole” aims, we retrieved all the posts that were tagged to use a dark pattern (n=565) based on each strategy proposed by Gray et al. [33]: nagging (n=112), obstruction (n=170), sneaking (n=179), interface interference (n=148), and forced action (n=168). These individual strategies do not add up to the total number of dark pattern posts, showing that there were multiple strategies used to create these artifacts, and thus, these posts were not coded exclusively. To answer RQ3, we focus primarily on the 125 posts that were categorized as “asshole design,” yet did not use any known dark pattern strategies. As the community members described the inscribed values of assholery in relation to possible or likely malicious intent of designers, we examined characteristics of these posts to formulate “properties of asshole designers.” While designer intent is not the only lens through which to view issues of ethical concern, this community did identify a primary role of their discourse in informing better or different design practices, thus explicitly casting these artifacts as having been designed with poor intent, outcomes, or both. This is particularly evident in the title of the subreddit: “When Assholes Design Things.” To analyze these posts and their qualities further, each post was further analyzed by two researchers and open coded based on the description and media content.

## FINDINGS

We present our findings regarding the nature of shared posts and ethical concerns raised by Redditors on “/r/assholedesign” in three related sections. First, we describe how the community members represented and perceived the exemplars in their daily lives, evidenced through the format of the post and the interaction context implied by the shared artifact. Second, using the concept of dark patterns as an analytic lens, we identify the frequency and role of dark patterns in asshole designs. Third, we list and articulate the unique properties of “asshole designers,” categorizing mechanisms by which designers deceive users that move beyond existing dark patterns strategies.

### Format of Asshole Design Posts

Exemplars were presented on this subreddit in three different representational forms: images, videos, or URLs. While images (e.g., screenshots, photos) tended to be used to explicitly pinpoint the design elements, videos (e.g., GIFs, image sequences, screen/video recordings) were used to specifically target the interaction flow over multiple screens. URLs were also used to link to articles, web pages, or media sources (i.e., video, images) on other platforms. Images (n=604) were used most frequently, followed by URLs (n=99) and videos (n=39). This is aligned with community posting guidelines, which recommend images such as screenshots rather than a direct link to websites, thus exposing and preserving asshole design techniques as a permanent record. These formats were generally well-targeted by the authors to visualize the specific ethical concerns being raised, with some ethical concerns requiring only a static screenshot or photo, while others required representation of the temporal dimension to show deception or manipulation being enacted over time.

Using these different representational forms, members shared artifacts in digital and physical contexts, differing from prior corpora of dark patterns that were primarily digital. The digital artifacts shared included both mobile and desktop interfaces, representing a wide range of digital interaction contexts. Physical artifacts included packages, infrastructure, and other physical products. In our dataset, 594 digital artifacts (mobile=324; desktop=270) and 94 physical artifacts were represented.

Building on the formats and interaction contexts of the shared posts described, we coded the intent of the posts by its *domain*, based on the artifact described in the post. The *domain* defines the category or topic of interaction implied by the posted artifact. Domains found in our dataset included common applications shipped by large companies (n=214), advertisements (210), social media (99), e-mail (82), gaming (70), physical products (65), permissions (58), shopping (39), messaging (27), food (26), physical infrastructure (13), and healthcare (4). These domains were applied non-exclusively, with an average of 1.33 domains (SD=0.64) per posted artifact. The most frequently observed domains were applications by large companies and advertisements. 214 posts that related to mobile or desktop applications by companies such as Google, Microsoft, Apple, Facebook, Instagram, and Tumblr, were coded as ‘large company applications.’ Authors of these posts expressed negative emotions when posting the artifacts, and explicitly called out the company’s name (n=162),

shaming them for their design decisions. This is resonant with Brignull’s original call for dark patterns to facilitate the “naming and shaming” of offending companies [7]. ‘Advertisements’ (n=210) included pop-ups, flyers or interfaces that targeted the selling of brand name products, although only 36 of these posts included explicit company shaming. The second tier of most frequently occurring domains included social media applications or features, physical artifacts which also included infrastructure, games and communication channels like messaging and e-mail. Other less frequently applied domains included shopping (digital or physical), food, security settings such as permissions, and healthcare. In the next section, we will describe how the community members recognized dark pattern strategies in different domains and used these characteristics to expose them as asshole designs.

### Dark Patterns Strategies in Posts

Among the 690 posts we coded as containing “asshole designs,” 565 (81.88%) included dark pattern strategies that enabled the asshole designs to manipulate user behavior. The remaining 125 (18.12%) posts used different strategies—moving beyond known dark patterns—which are explained later as preliminary properties of asshole designers. In this section, we will focus on the 565 posts to present how dark patterns strategies were incorporated in asshole designs posted in this community, providing evidence of the ethical concern of these users aligning with known ethical issues already documented within the practitioner community. The notion of “dark patterns” was not explicitly called out in any post titles or messages, even while artifacts were shared that clearly exhibited these “dark UX” characteristics.

Among the five dark pattern strategies proposed by Gray et al. [33], sneaking (31.68%, n=179) was most frequent and nagging (19.82%, n=112) was least frequently used in posted artifacts. The other dark pattern strategies occurred roughly a quarter of the time: obstruction at 30.09% (n=170), forced action at 29.73% (n=168), and interface interference at 26.19% (n=148). These strategies were coded non-exclusively, with an average of 1.38 strategies (SD=0.64) applied per post. Post authors explicitly called out the name of companies 27.61% (n=156) of the time, shaming them for their design decisions. These companies were primarily large technology companies such as: social media apps (Facebook, Instagram, Snapchat, Reddit), online shopping sites (Amazon, Staples, etc.), online resource sharing forums (Tumblr, Dribbble), and other basic applications (Paypal, Duolingo). Dark pattern strategies were used in all identified interaction domains at roughly similar proportions. In the following subsections, we will describe each dark pattern strategy as aligned with the ‘asshole design’ content represented in the post.

#### Nagging

Nagging “manifests as a repeated intrusion during normal interaction, where the user’s desired task is interrupted one or more times by other tasks not directly related to the one the user is focusing on.” [33]. This dark pattern was observed primarily in domains of large company applications (36.61%), advertisements (31.25%), and social media (18.75%). To illustrate this, one post included a screenshot with a bundle of

notifications from Trivia on their mobile, which nags every 2 to 3 hours, with a subtext to persuade the user to play. The author posts saying “*Fuck you Trivia Crack. Spamming my notifications and nagging me to play isn’t making me want to play anymore.*” The notifications read ‘You’re the chosen one. Nah!.. Just play’ or ‘Roses are red. Violets are blue, why don’t you just play...’. This nagging behavior is positioned as a motivation to discontinue use of the application.

#### *Obstruction*

Obstruction is defined as “impeding a task flow, making an interaction more difficult than it inherently needs to be with the intent to dissuade an action” [33]. The posts that relied upon this strategy included restricting service if the user was unwilling to provide required information, advertisements blocking the access of information, disabling functionality in pop-ups, continuous updates from other unsubscribed channels, and notifications for subscriptions. Across the domains, obstruction did not show any notable difference compared to the other dark pattern strategies; however, authors mentioned large company apps more frequently in the posts (41.18%). In one example of this strategy, the user posted their experience of reading a blog where their service was interrupted with the requirement of signing up for the blog to read the entire article by paying; they reflected their inconvenience in their post title: “*Don’t worry. It’s not like I wanted to finish what I was reading.*”

#### *Forced Action*

Forced action as a strategy manifests “any situation in which users are required to perform a specific action to access (or continue to access) specific functionality” [33]. The community tended to call out companies more frequently using this strategy, perhaps due to the more transparent manipulation present in this strategy that may align well with user notions of “asshole design.” This strategy was primarily present in domains dealing with large company applications (41.67%), advertisements (25.00%), social media (18.45%), email (14.29%), and permissions (12.50%). To illustrate this strategy, one author posted a video of their interaction with a desktop application where she evaluated the required ‘agree’ to Terms and Conditions by saying “*If your “subscribe to our newsletter” box is a requirement to accept your terms and conditions, you will be sent to hell*”. In this video, the ‘Done’ button is activated only when the user subscribes to their newsletter, exemplifying the forcing of specific user actions.

#### *Sneaking*

Sneaking is defined “as an attempt to hide, disguise, or delay the divulging of information that has relevance to the user” [33]. Sneaking was the most frequent strategy used in asshole design posts but paradoxically, the community members were less likely to shame the creators as compared to other dark patterns (18.89% of all sneaking examples). Sneaking was frequently found in posts exposing manipulation in physical interaction contexts such as physical products (18.99%) and food (8.38%), as compared to the other dark pattern strategies. The community members shared posts related to package designs that caused consumers to misestimate the size or quality of its contents. For instance, an author posts a photo showing a large gap between the package and the actual size of its

contents, criticizing the company’s sale tactics: “*There’s 50% air and 50% candy.*” In digital contexts, sneaking was the most frequently observed in games (13.41%), with dark patterns that were focused on advertisements (e.g., fake close button) and payments. In one posted example, an app promotes a ‘1 week free trial,’ which when the user tries to download the app, then indicates ‘free trials only for 3 days.’ The author identifies that this inconsistency in language is illegal and should be monitored by organizations such as the app store provider.

#### *Interface Interference*

Interface interference is defined “as any manipulation of the user interface that privileges specific actions over others, thereby confusing the user or limiting discoverability of important action possibilities” [33]. This strategy was primarily used in advertisements, large company applications (24.32%), social media (15.54%), and emails (15.54%), often through the inclusion of fine prints or by toying with user’s emotions. This strategy can be illustrated through posts that tagged advertisements that were disguised in a web page as if they were part of the regular content, thereby misleading the users to click them more often. These interactions were shamed (23.65%), even while considering the potential monetary gain for business.

### **Properties of Asshole Designers**

In this section, we will focus on 18.12% (n=125) of the asshole design posts that mislead or manipulate users without the presence of dark pattern strategies. We seek to move beyond the community’s ability to identify artifacts consistent with dark strategies already well known to design practitioners, identifying a set of properties that lead towards a community-grounded notion of the “asshole designer.” Using the logic of Gray et al. [33] in applying descriptors to the designer rather than the artifact—thereby amplifying the notion of designer responsibility—these properties point towards a designer’s potential motivation, intent, or other shaping factors (cf., [10]) that result in an artifact that is deemed to be an “asshole design.” We have identified six properties, including: automating the user away, being two-faced, being controlling, entrapping, nickling-and-diming, and misrepresenting. These properties are described as qualities of asshole designers, illustrated using post contents, and compared with their resemblance to dark pattern strategies in the following section.

#### *Automating the User Away*

Designers who *automate the user away* automate the process of performing tasks without user’s consent or confirmation, redirecting the agency to lay partially or completely with the system to perform a particular action. This property questions the agency of the user, allowing the system to act on the user’s behalf. For example, one post read “*Windows 10 automatic updates without choice. Now that’s asshole design.*” The author of this post shared a screenshot of Windows update screen which started the process of update without the user confirming the respective action. The post was supported by others narrating similar experiences when automated actions were performed, often in critical moments, without any warning or opportunity to consent. In these cases, the system is deemed to be more intelligent and capable than the user, with portions of the user’s autonomy being replaced by system functionality.

Property Of Asshole Designers	Description
<b>Automating the User Away</b>	Designers automate the process of performing essential tasks without the user’s confirmation, thereby removing agency and the ability to consent.
<b>Two-Faced</b>	Designers provide contradictory and conflicting information, confusing the user.
<b>Controlling</b>	Designers interrupt or restrict the user’s task flow, explicitly directing the task flow.
<b>Entrapping</b>	Designers mislead the user, setting a trap that the user cannot avoid or correct.
<b>Nickling-And-Diming</b>	Designers disguise the full payment needed, continually asking users to pay more, and often restricting interaction until payment is provided to continue the flow.
<b>Misrepresenting</b>	Designers provide ambiguous and incorrect information in a direct way to trick users.

Table 1. Properties of Asshole Designers

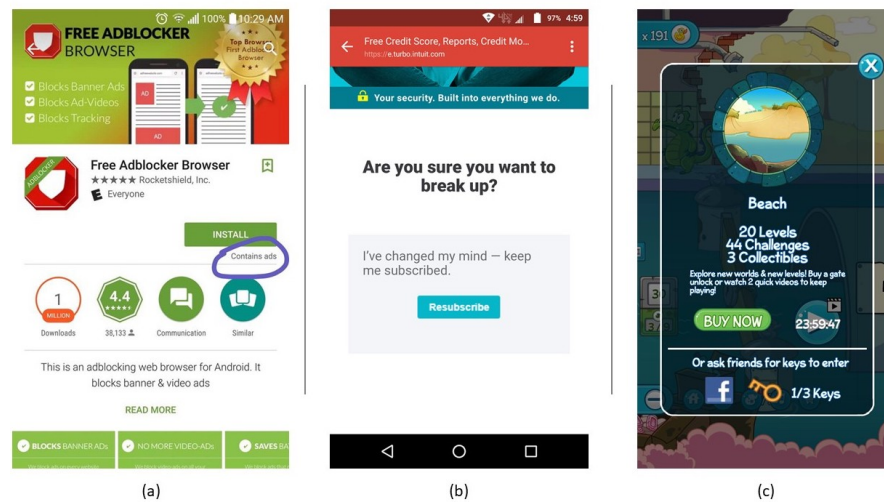


Figure 2. Examples of Asshole Designer properties: (a) Two-faced, (b) Controlling, and (c) Entrapping.

### Two-faced

Designers who are *two-faced* create interactions that provide the user with contradictory and conflicting information with the goal of confusing the user into following a predetermined path, often through disjointed textual information. For example, one post illustrates (Figure 2(a)) an ad blocking application which includes fine print that indicates “Contains Ads.” The post author shares a sardonic description: “Want to get rid of ads? Too bad.” A similar example was posted, which tagged a fitness application that showed pizza delivery ads. In both cases, the authors question the conflict created between the stated purpose of the app and the designers’ inclusion of ambiguity or contradicting information that confused the user. In these cases, subterfuge in language and hierarchy can nudge the user to follow a predetermined path if they do not pay attention (interface interference), but even if they are paying attention, major discrepancies confuse the proper path.

### Controlling

Designers who are *controlling* create interruptions or restrictions in the user’s task flow, explicitly directing the task flow. This control of the task flow can be implemented through techniques such as unskippable pop-ups, placing ads in awkward contexts, or providing a lack of options for selection. These interruptions do not nag the users, as in the dark pattern “nag-

ging”, and they are not subliminal or sneaky forms of control, as in the dark pattern “obstruction”. Instead, this property indicates explicit and transparent manipulation of the user task flow that is visible to the user. For example, as shown in Figure 2(b), a user posted: “TurboTax is like a psycho significant other; the only button at the confirm unsubscription page is ‘resubscribe.’” In this case, the user was trying to unsubscribe to the service, which directs to a page where there is only a “Resubscribe” option. This interaction interrupts the task flow, restricting the user from complete their goal of unsubscribing. Another example of controlling behavior is showcased in a post where a YouTube user is restricted from manually selecting the video quality accessible over mobile networks. The user posted: “I pay my own data bill, so how about I decide thank you”. In these cases, restriction and control of user choice decreases user autonomy in ways that are transparent to the user, yet unavoidable.

### Entrapping

Designers who *entrap users* seek to mislead the user into performing an action that is advantageous to the shareholder, which is difficult or impossible to avoid or correct. This approach makes it difficult for the user to exert control over the task flow, and often results in decreasing levels of autonomy and agency after the “trap has been sprung.” For example, in

Figure 2(c), an author posts a screenshot of a pop-up while playing a game with a description stating: “To unlock the next level I can either buy it or watch 3 ads. But, after every ad there is a 24 hour cool down before I can watch the next one.” In this design, the user either has to pay using “Buy Now” or watch the ads which means that the user cannot return to the game for three days due to cool down period of a day after each ad. Here, the user is trapped in the designed system and may “choose” to pay to continue the game immediately. Other examples include instances where the user “Can’t delete credit card information before uninstalling the app,” resulting in a conflict between losing confidential information or uninstalling the app. In these cases, the trap is transparent to the user (thus different from the dark pattern strategies of “obstruction” or “forced action”), yet the user has minimal control over responding to the trap in ways other than those intended by the designer.

#### *Nickling-And-Diming*

Designers who *nickle-and-dime* the user seek to make users pay more than they intend, often by failing to disclose the full cost of engaging with the service. This approach impacts the monetary expectations of the user, using progressive disclosure to hide aspects of the service and its monetary impact in ways that are advantageous to the user. This property is illustrated through a post which states: “Want to play on Switch? Fuck you, pay twice the price.” In this case, where the user have to pay more if they use the Stream service as opposed to a standalone version of the game. In another example, an author posted an e-mail from their credit card company with a subject line that reads “Hey, you haven’t maxed out this credit card, what do you think this is?!” This type of interaction is persuading them to max-out their usage of the credit card, thus leading to other future opportunities for fees that would benefit the shareholder.

#### *Misrepresenting*

Designers who *misrepresent* a system to users provide ambiguous and incorrect information, leading the user to perform tasks in the interests of the shareholder. In comparison to the dark pattern “*sneaking*,” the misrepresentation is implemented in a direct and explicit way, rather than in a sneaky and hidden manner. Within this approach, designers do not make the effort to hide or disguise information, but instead provide false information. For example, a post included a fake notification on the top of the website which directs the user to a login page, sending a pop-up/ alert asking the user to rotate their device so that they can present a “crappy ad.” Another website showed different costs and discounts on different product pages to make the user feel that they were saving on the purchase, while also providing contradictory information. On a ticket website, a designer incorporated fake ticket deadlines to impart a false sense of urgency, while bringing up dialog boxes with fake virus warnings. In these cases, lying and deception were the most brazen and transparent, relying on a user’s sense of resignation or naïveté [14], which may particularly impact already disadvantaged or dis-empowered groups.

Beyond these properties, which appeared multiple times across our dataset, we also found some weak examples that warrant

further investigation, such as “*subterfuge*” and “*creating busywork*.” Designers engage in *subterfuge* when they ask users to give up personal information while also disguising the task flow, restricting the user from understanding how their data might be used in the background. By *creating busywork*, designers create a system of interactions which requires the user to engage in similar, repetitive tasks to achieve a goal when other ways are possible to make it easier for users.

## DISCUSSION

Through our content analysis, we have identified and described ethical concerns that are presented by Reddit users. We have focused our analysis on the nature and diversity of these shared artifacts (RQ1), their relationship to known dark pattern strategies (RQ2), and forms of malicious behavior present in these artifacts that move beyond the dark patterns literature towards “asshole design” behavior (RQ3). Through these findings, we have identified ethical concerns being discussed “in the wild” by community members, and the ways in which artifacts are used as a vehicle for conversation. Our findings indicate numerous opportunities to engage with ethics in an everyday sense, providing a foundation through which to propose a community-grounded notion of the “asshole designer” that may shape future ethics research, ethically-grounded design practice, and policy implementation. In this section, we wish to identify the impact of our findings in relation to these communities. First, we synthesize our work on asshole designs, characterizing and contrasting properties in relation to definitions of dark patterns, value-centered design, and bad designs by proposing a model of value inscription in design activity. Second, we provide a theoretical account of designer responsibility that focuses on the anthropomorphization of ethical properties, detailing how designers inscribe manipulative or user-centered values into designed outcomes. Third, we identify opportunities for engaging with and supporting ethical conversations “on the ground,” building on the capacity of this online community to language ethical concerns.

### **Distinguishing Asshole Design, Dark Patterns, Value-Centered Design, and Bad Design**

With the introduction of “dark patterns” to the academic ethics literature [33, 34], the role of stakeholders, intentions, and motivations regarding ethically-centered or evil practice has become increasingly blurry. In this section, we seek to compare and contrast the definitional components—including parallels and overlaps—among the concepts asshole design, dark patterns, value-centered design, and bad design. To do this, we first need to differentiate these terms by origin. While value-centered design largely has its origins within the HCI and design academic traditions, notions of bad design are more strongly indicated by the work of practitioners, as contextualized by a specific, but not always fully articulated design philosophy (e.g., “less is more,” efficiency, emancipation, hedonic power). The notion of “dark patterns” was created for uptake in design practice [7], and is roughly paralleled by the notion of “asshole design,” which has gained resonance by social media users, which may also incidentally include design practitioners and technologists. Thus, we can first identify three separate communities that may be of interest in future



work: the design practitioner, the academic researcher, and the everyday user.

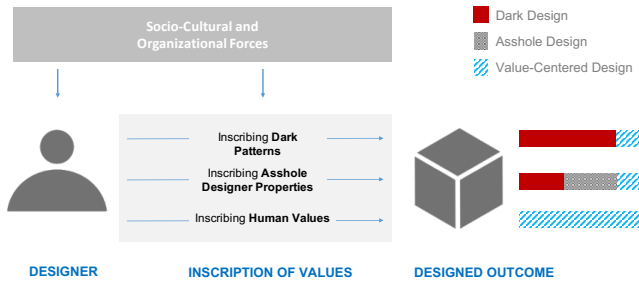


Figure 3. Designer’s inscription of dark, asshole, and human values.

### Working Definitions

We propose a preliminary set of connections among these concepts and communities in Figure 3, framing the figure as a generative schema [47] rather than as a prescriptive or predictive model. This schema is built with the following four working definitions in mind, building on Gray et al. [33]:

- We define *asshole designer properties* as instances where designers explicitly assert control over the user’s experience, implementing obnoxious, coercive, or deceitful behaviors that are almost solely in the shareholder’s best interest. These properties are primarily associated with a designer who possesses some kind of malicious intent which is inscribed explicitly and wantonly into a designed outcome, with the goal of *intentionally* designing to restrict or obstruct the user from their task flow through various mechanisms.
- Gray et al. [33] define *dark patterns strategies* as “instances where designers use their knowledge of human behavior (e.g., psychology) and the desires of end users to implement deceptive functionality that is not in the user’s best interest.” Designed artifacts incorporating dark patterns may be considered a potential superset of artifacts with asshole design properties, where designers inscribe “darkness” by carefully applying manipulative strategies through inconspicuous or sneaky means; however, the inclusion of asshole properties or dark patterns may result in dark or evil outcomes.
- We define *value-centered design* through instances where designers seek to provide value to users and stakeholders, consistent with an overarching philosophy of design that prioritizes certain types of design decisions and resulting user experiences. Value-centered design activity is the result of designers prioritizing “human values,” supporting user needs over stakeholders needs.
- We define *bad design* through instances where designers seek to provide value to users and stakeholders, but partially or completely fail in this goal due to lack of technical skill or knowledge of user needs. In this case, the designed artifact itself is not properly constructed, causing user inconvenience and potentially hurting the user, but without the intent of manipulation.

### Inscribing Ethics through Design Activity

We expand on these concepts through the relationship formed between a designer and the designed outcome. As visualized in Figure 3, we contend that a designer actively inscribes

values as an outgrowth of their own design philosophy and the socio-cultural and organizational forces that surround them [10, 30, 31, 61, 65]. A designer may alternately inscribe values attributed with dark UX, asshole, or human values—and these values may be inscribed either in combination or moderated through various persuasive techniques in the form of dark pattern strategies [7, 33], asshole design properties, and human values [26]. As a result, these inscription pathways shape the designed outcomes that may tend towards dark design, asshole design, and value-centered design. The presence of asshole design properties in our corpus appears to increase the likelihood of dark patterns being present, while dark patterns may also exist independently of asshole design properties due to its focus on sneaky, less detectable forms of manipulation. The presence of asshole design properties perhaps indicates an aggressive, explicit act on the part of the designer to engage in unethical practices, while dark patterns could be considered as a surreptitious, yet premeditated form of “dark UX.” The presence of human values does not necessarily guard against the presence of dark or asshole approaches, thus we depict dark patterns and asshole designer properties as potentially (although not always) coexisting with human values. The concept of a design that is *fully* value-centered is presented as an edge case, unlikely to be fully reached in reality. Because *bad designs* fail at the conceptual or technical phase [50], we do not include these in the schema, although they too may include dark or asshole properties, either unintentionally (as a result of poor quality) or intentionally.

### Anthropomorphizing Ethics

Through our analysis of artifacts, we identified preliminary properties of asshole designers: automating the user away, being two-faced, being controlling, entrapping, nickling-and-diming, and misrepresenting. In parallel with prior work on dark patterns strategies by Gray et al. [33], we saw these properties not as descriptive aspects of artifacts in the world, but rather as evidence of inscription—likely with intent—by a designer. In this section, we expand upon the role of anthropomorphizing ethics, positioning these evil or dark outcomes as evidence of intentional design *by a designer*, rather than as something that can be bracketed away from evil or dark intent. Thus, we highlight the inscribed values of asshole in Table 1 as qualities of “asshole designers” that points towards explicit human qualities that warrant further investigation. These properties resemble common and easily identifiable human qualities of being coercive, manipulative, or aggressive, closely matching popular conceptions of the “pushy” or “used car salesperson.” For example, what might motivate a person to be “two-faced” or “controlling” in the real-world? How might these properties exist as an extension of mediation tensions present in an organizational environment (cf., [32])? It is possible that these properties are the result of the inscription of ethical tensions—even miscalculated tensions—into the technological artifacts they are designing.

Building upon this *anthropomorphizing ethics* approach, we do not position only single designers as culpable. In contrast, we found that users on this subreddit blamed various many stakeholders such as writers, movie producers, marketing strategists, subtitle designers, and users that built inappro-

priate communities on social platforms. Thus, we position the properties of “asshole designers” as impacting multiple stakeholders. By positioning these tensions or potential impacts as common human responses to stress, tension, or the desire to attain capitalist ideals, we view asshole designs as the product of a broken system—with a multiplicity of structural forces at work—rather than simply the work of bad actors, which can easily be set aside as an aberration. Further consideration of these ethical qualities, in all of their instantiations, may allow further investigation into how designers explore, extract, identify and select useful information from limited and complex resources that shape the creation of designed outcomes.

### Community Capacity in Ethical Deliberation

Ethical deliberation has been primarily discussed in formal settings by researchers and practitioners [31, 42, 56, 64]. In this study, we focused on the dynamics of online communities to demonstrate how users perceive the ethical complexities of technologies, setting the stage for further ethical argumentation. The subreddit under study is composed of citizens—users who are unlikely to have experienced professional training on design values or ethics. However, we found that these community members were capable of identifying, sharing, and elaborating on the definition of asshole design in ways that move beyond academic and practitioner discourses of dark and unethical design practices. Although ethical issues are considered a difficult topic for non-experts to discuss, these community members actively engaged in ethical argumentation by exposing and shaming the creators of asshole designs. Indeed, at the time of writing, this subreddit ranked 82nd among the most active subreddits with high levels of user participation [40]. What encourages the active engagement of these users in ethical argumentation, and how does the community create the capacity to engage in this conversation? A possible answer comes from a post pinned by a community manager of “/r/assholedesign” (100% upvoted) on the occasion of the subreddit reaching one million subscribers [59]. The community manager stated: *“Every time you call out a company for their bullshit, you are helping to reinforce the sentiment that we are not simply mindless consumers.”* This call-to-action for the community also included additional context, recognizing the tensions experienced by designers of technological systems: *“We aren’t asking for the impossible. We’re not asking that everything on the internet be free and immediately available for everybody everywhere. [...] But we want the respect that comes from a two-way relationship. We give them website hits and business, and in return they don’t try to force us to jump through hoops just so they can get a teeny-tiny bit more out of us. We are users, but we don’t like being used.”* These arguments underscore a sense of shared responsibility for counteracting malicious tricks while also arguing for user rights, demonstrating a *community capacity* for subreddit members to engage in ethically-nuanced conversations.

### IMPLICATIONS AND FUTURE WORK

Our findings in relation to the properties of asshole designers, anthropomorphization of ethics, and community capacity suggest multiple areas for future work, as well as implications for the study of ethically-grounded design activity and

education. First, while this work has highlighted the capacity of community members to propose “asshole designs” for deliberation, the community response to these artifacts also represents a substantial opportunity to describe “in the wild” ethical discourses and means of argumentation, independent from academic notions of ethical engagement. Through our engagement in this community, we have observed how community members have unique and varied ethical frames and strategies to describe and examine salient ethical concerns, which may motivate a new strand of research activity on the ethical awareness of social media users. Although the size of the subreddit “/r/assholedesign/” and the goals of the community members have potential value to inform future work on ethical discourses “in the wild,” this Reddit community may exhibit skewed characteristics. In this regard, we suggest that researchers consider other forms of end user engagements as a form of data triangulation to point toward community capacity in ethical deliberation. Second, the malicious intent present in members’ articulation of asshole designer properties warrants further investigation, focusing on directionality and amplitude of intent, and the person or persons that these users feel is culpable. While our set of properties, presented as a set of anthropomorphizing qualities, humanizes the inscription of values, our research context does not allow access into the mediating tensions that cause a designed outcome to become dark or asshole-inscribed. Future research should address the lifecycle of asshole and dark design, including the intentions of designers and stakeholders as well as the perceptions of these motivations by end users. Finally, our work strongly indicates the need for more engaged ethics education in UX and HCI programs, including a detailed account of how students navigate value-centered, dark, and asshole outcomes in their everyday work. Illuminating the trajectories of value inscription, including the role of value-centered methods in building awareness of this inscription, is an ideal area for future work.

### CONCLUSION

In this paper, we have provided results of content analysis of posts from the subreddit “/r/assholedesign,” pointing towards ethical considerations relating to dark patterns and the properties of asshole designers. We detailed the range of artifacts shared and their resonance with existing frameworks of dark UX, demonstrating a substantial overlap between the concepts of dark patterns and asshole design as identified from an end-user perspective. Building beyond this overlap, we proposed a set of properties that an asshole designer takes on when inscribing values into their work, distinct from extant dark pattern strategies. We identify how these properties anthropomorphize ethics in productive ways that allow access to the inscription and mediation processes of designers. We conclude by highlighting the capacity of this community to engage in online discourses about ethics, proposing future research to describe engagement in ethical complexity among social media users and design practitioners.

### ACKNOWLEDGEMENTS

We gratefully acknowledge the data analysis efforts of Zexi Zhou, Jingle Chen, Simran Bansal, and Chris Rhys Watkins. This work is funded in part by the National Science Foundation under Grant Nos. 1657310 and 1909714.

## REFERENCES

- [1] Anders Albrechtslund. 2007. Ethics and technology design. *Ethics and information technology* 9, 1 (March 2007), 63–72. DOI : <http://dx.doi.org/10.1007/s10676-006-9129-8>
- [2] Jeffrey Bardzell. 2011. Interaction criticism: An introduction to the practice. (2011). DOI : <http://dx.doi.org/10.1016/j.intcom.2011.07.001>
- [3] Jeffrey Bardzell and Shaowen Bardzell. 2015. *Humanistic HCI*. Vol. 8. Morgan Claypool Publishers. 1–185 pages. DOI : <http://dx.doi.org/10.2200/S00664ED1V01Y201508HCI031>
- [4] Tom Boellstorff, Bonnie Nardi, Celia Pearce, and T L Taylor. 2012. *Ethnography and Virtual Worlds: A Handbook of Method*. Princeton University Press.
- [5] Alan Borning and Michael Muller. 2012. Next Steps for Value Sensitive Design. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '12)*. ACM, New York, NY, USA, 1125–1134. DOI : <http://dx.doi.org/10.1145/2207676.2208560>
- [6] Virginia Braun and Victoria Clarke. 2012. Thematic analysis. In *APA handbook of research methods in psychology, Vol 2: Research designs: Quantitative, qualitative, neuropsychological, and biological.*, Harris Cooper, Paul M Camic, Debra L Long, A T Panter, David Rindskopf, and Kenneth J Sher (Eds.). American Psychological Association, Washington, 57–71. DOI : <http://dx.doi.org/10.1037/13620-004>
- [7] Harry Brignull. 2013. Dark Patterns: inside the interfaces designed to trick you. (2013). <http://www.theverge.com/2013/8/29/4640308/dark-patterns-inside-the-interfaces-designed-to-trick-you>.
- [8] Harry Brignull, Marc Miquel, Jeremy Rosenberg, and James Offer. 2015. Dark Patterns - User Interfaces Designed to Trick People. <http://darkpatterns.org/>. (2015).
- [9] Peter Buwert. 2018. Examining the Professional Codes of Design Organisations. In *Proceedings of the Design Research Society*. DOI : <http://dx.doi.org/10.21606/dma.2017.493>
- [10] Shruthi Sai Chivukula, Chris Watkins, Rhea Manocha, Jingle Chen, and Colin M Gray. 2020. Dimensions of UX Practice that Shape Ethical Awareness. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI'20)*. ACM Press, New York, NY. DOI : <http://dx.doi.org/10.1145/3313831.3376459>
- [11] Shruthi S Chivukula, Chris Watkins, Lucca McKay, and Colin M Gray. 2019. “Nothing Comes Before Profit”: Asshole Design in the Wild. In *CHI EA '19: CHI'19 Extended Abstracts on Human Factors in Computing Systems*. LBW1314. DOI : <http://dx.doi.org/10.1145/3290607.3312863>
- [12] Nathan Crilly. 2011. Do users know what designers are up to? Product experience and the inference of persuasive intentions. *International Journal of Design* 5, 3 (2011), 1–15. DOI : <http://dx.doi.org/10.1.1.712.2100>
- [13] Clive Dilnot, D S Friedman, Victor Margolin, and Stanley Tigerman. 2005. *Ethics? Design?* Archeworks.
- [14] Nora A Draper and Joseph Turow. 2019. The corporate cultivation of digital resignation. *New Media & Society* 21, 8 (Aug. 2019), 1824–1839. DOI : <http://dx.doi.org/10.1177/1461444819833331>
- [15] Anthony Dunne and Fiona Raby. 2013. *Speculative Everything: Design, Fiction, and Social Dreaming*. MIT Press, Cambridge, MA. DOI : <http://dx.doi.org/10.1080/17547075.2015.1051844>
- [16] Daniel Fallman. 2011. The new good: Exploring the potential of philosophy of technology to contribute to Human-Computer interaction. In *Proceedings of the 29th SIGCHI Conference on Human Factors in Computing Systems*. 1051–1060. DOI : <http://dx.doi.org/10.1145/1978942.1979099>
- [17] Madison Fansher, Shruthi Sai Chivukula, and Colin M Gray. 2018. # darkpatterns: UX Practitioner Conversations About Ethical Design. In *Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems*. ACM, New York, New York, USA, LBW082. DOI : <http://dx.doi.org/10.1145/3170427.3188553>
- [18] Alain Findeli. 2001. Rethinking Design Education for the 21st Century: Theoretical, Methodological, and Ethical Discussion. *Design Issues* 17, 1 (2001), 5–17. DOI : <http://dx.doi.org/10.1162/07479360152103796>
- [19] Mary Flanagan and Helen Nissenbaum. 2014. *Values at play in digital games*. MIT Press.
- [20] Luciano Floridi. 2018. Soft Ethics and the Governance of the Digital. *Philosophy & technology* 31, 1 (March 2018), 1–8. DOI : <http://dx.doi.org/10.1007/s13347-018-0303-9>
- [21] Brian J Fogg. 2009. A behavior model for persuasive design. In *Proceedings of the 4th international Conference on Persuasive Technology*. ACM, 40.
- [22] Mark S Frankel. 1989. Professional codes: Why, how, and with what impact? *Journal of business ethics: JBE* 8, 2 (Feb. 1989), 109–115. DOI : <http://dx.doi.org/10.1007/BF00382575>
- [23] Christopher Frauenberger, Amy S Bruckman, Cosmin Munteanu, Melissa Densmore, and Jenny Waycott. 2017a. Research Ethics in HCI: A Town Hall Meeting. (2017), 1295–1299. DOI : <http://dx.doi.org/10.1145/3027063.3051135>
- [24] Christopher Frauenberger, Marjo Rauhala, and Geraldine Fitzpatrick. 2017b. In-Action Ethics. *Interact. Comput.* 29, 2 (March 2017), 220–236. DOI : <http://dx.doi.org/10.1093/iwc/iww024>

- [25] Batya Friedman and David G Hendry. 2019. *Value Sensitive Design: Shaping Technology with Moral Imagination*. MIT Press.
- [26] Batya Friedman, Peter H Kahn, and Alan Borning. 2008. Value sensitive design and information systems. *The handbook of information and computer ethics* (2008), 69–101.
- [27] Sidney Fussell. 2019. The Endless, Invisible Persuasion Tactics of the Internet. *The Atlantic* (Aug. 2019). <https://www.theatlantic.com/technology/archive/2019/08/how-dark-patterns-online-manipulate-shoppers/595360/>
- [28] Elizabeth Goodman. 2014. Design and ethics in the era of big data. *Interactions* 21, 3 (May 2014), 22–24. DOI: <http://dx.doi.org/10.1145/2598902>
- [29] Don Gotterbarn, Amy Bruckman, Catherine Flick, Keith Miller, and Marty J Wolf. 2017. ACM code of ethics: a guide for positive action. *Commun. ACM* 61, 1 (Dec. 2017), 121–128. DOI: <http://dx.doi.org/10.1145/3173016>
- [30] Colin M Gray and Elizabeth Boling. 2016. Inscribing ethics and values in designs for learning: a problematic. *Educ. Technol. Res. Dev.* 64, 5 (2016), 969–1001. DOI: <http://dx.doi.org/10.1007/s11423-016-9478-x>
- [31] Colin M Gray and Shruthi Sai Chivukula. 2019a. Ethical Mediation in UX Practice. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. ACM, Paper No. 178. DOI: <http://dx.doi.org/10.1145/3290605.3300408>
- [32] Colin M Gray and Shruthi Sai Chivukula. 2019b. Ethical Mediation in UX Practice. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems - CHI '19*. ACM Press. DOI: <http://dx.doi.org/10.1145/3290605.3300408>
- [33] Colin M Gray, Yubo Kou, Bryan Battles, Joseph Hoggatt, and Austin L Toombs. 2018. The Dark (Patterns) Side of UX Design. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (CHI '18)*. ACM, New York, NY, USA, 534:1–534:14. DOI: <http://dx.doi.org/10.1145/3173574.3174108>
- [34] Saul Greenberg, Sebastian Boring, Jo Vermeulen, and Jakub Dostal. 2014. Dark Patterns in Proxemic Interactions: A Critical Perspective. In *Proceedings of the 2014 Conference on Designing Interactive Systems (DIS '14)*. ACM, New York, NY, USA, 523–532. DOI: <http://dx.doi.org/10.1145/2598510.2598541>
- [35] Don Ihde. 1993. *Philosophy of technology : an introduction*. Paragon House, New York. <http://www.worldcat.org/title/philosophy-of-technology-an-introduction/oclc/610813485>
- [36] J Isaak and M J Hanna. 2018. User Data Privacy: Facebook, Cambridge Analytica, and Privacy Protection. *Computer* 51, 8 (Aug. 2018), 56–59. DOI: <http://dx.doi.org/10.1109/MC.2018.3191268>
- [37] Jaap Jelsma. 2006. Designing ‘moralized’ products. In *User Behavior and Technology Development: Shaping Sustainable Relations Between Consumers and Technology*, Peter-Paul Verbeek and Adriaan Slob (Eds.). Springer Netherlands, Dordrecht, 221–231. DOI: [http://dx.doi.org/10.1007/978-1-4020-5196-8\\_22](http://dx.doi.org/10.1007/978-1-4020-5196-8_22)
- [38] Christopher A. Le Dantec, Erika Shehan Poole, and Susan P. Wyche. 2009. Values As Lived Experience: Evolving Value Sensitive Design in Support of Value Discovery. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '09)*. ACM, New York, NY, USA, 1141–1150. DOI: <http://dx.doi.org/10.1145/1518701.1518875>
- [39] Kalev Leetaru. 2018. MS Windows NT The Problem Isn’t Cambridge Analytica: It’s Facebook. (2018). <https://www.forbes.com/sites/kalevleetaru/2018/03/19/the-problem-isnt-cambridge-analytica-its-facebook/#c9057f358a5b>
- [40] Reddit List. 2019. (2019). Retrieved September 4, 2019 from <http://redditlist.com/all?page=1#assholedesign-activity>.
- [41] Dan Lockton. 2012. POSIWID and Determinism in Design for Behaviour Change. (April 2012). DOI: <http://dx.doi.org/10.2139/ssrn.2033231>
- [42] Maximilian Maier. 2019. *Dark patterns: An end user perspective*. Master’s thesis. Umeå University.
- [43] Arunesh Mathur, Gunes Acar, Michael Friedman, Elena Lucherini, Jonathan Mayer, Marshini Chetty, and Arvind Narayanan. 2019. Dark Patterns at Scale: Findings from a Crawl of 11K Shopping Websites. (July 2019).
- [44] Alexander Mirnig and Manfred Tscheligi. 2017. (Don’t) Join the Dark Side: An Initial Analysis and Classification of Regular, Anti-, and Dark Patterns. In *PATTERNS 2017: Proceedings of the 9th International Conference on Pervasive Patterns and Applications*. 65–71.
- [45] Cosmin Munteanu, Amy Bruckman, Michael Muller, Christopher Frauenberger, Casey Fiesler, Robert E Kraut, Katie Shilton, and Jenny Waycott. 2019. SIGCHI Research Ethics Town Hall. In *Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems (CHI EA '19)*. ACM, New York, NY, USA. DOI: <http://dx.doi.org/10.1145/3290607.3311742>
- [46] Cosmin Munteanu, Heather Molyneaux, Wendy Moncur, Mario Romero, Susan O’Donnell, and John Vines. 2015. Situational Ethics: Re-thinking Approaches to Formal Ethics Requirements for Human-Computer Interaction. *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (2015), 105–114. DOI: <http://dx.doi.org/10.1145/2702123.2702481>
- [47] Harold G Nelson and Erik Stolterman. 2012. *The design way : Intentional change in an unpredictable world* (2nd ed.). MIT Press, Cambridge, MA.

- [48] Kimberly A Neuendorf. 2016. *The Content Analysis Guidebook*. SAGE.
- [49] Chris Nodder. 2013. *Evil by Design: Interaction Design to Lead Us into Temptation*. John Wiley & Sons, Inc., Indianapolis, IN.
- [50] Don Norman. 2013. *The design of everyday things: Revised and expanded edition*. Basic books.
- [51] S Pink, H Horst, J Postill, L Hjorth, T Lewis, and J Tacchi. 2016. *Digital ethnography: Principles and practices*. Sage Publications Limited.
- [52] Gordan Savičić and Selena Savić. 2013. *Unpleasant Design*. G.L.O.R.I.A. <https://play.google.com/store/books/details?id=Yke2oAEACAAJ>
- [53] Noam Scheiber. 2017. How Uber uses psychological tricks to push its drivers' buttons. *The New York Times* 2 (2017). <https://www.nytimes.com/interactive/2017/04/02/technology/uber-drivers-psychological-tricks.html>
- [54] Phoebe Sengers, Kirsten Boehner, Shay David, and Joseph 'Jofish' Kaye. 2005. Reflective design. In *Proceedings of the 4th decennial conference on Critical computing: between sense and sensibility*. ACM, 49–58.
- [55] Katie Shilton. 2013. Values Levers: Building Ethics into Design. *Sci. Technol. Human Values* 38, 3 (May 2013), 374–397. DOI : <http://dx.doi.org/10.1177/0162243912436985>
- [56] Katie Shilton. 2018. Values and ethics in human-computer interaction. *Foundations and Trends® Human-Computer Interaction* (2018).
- [57] Natasha Singer. 2016. When Websites Won't Take No for an Answer. <https://www.nytimes.com/2016/05/15/technology/personaltech/when-websites-wont-take-no-for-an-answer.html?mcubz=0&r=0>. (2016).
- [58] Erik Stolterman. 2008. The nature of design practice and implications for interaction design research. *International Journal of Design* 2, 1 (2008), 55–65.
- [59] TestZero. 2019. One Million Subscribers. (26 May 2019). Retrieved August 25, 2019 from [https://www.reddit.com/r/assholeddesign/comments/bt6szp/one\\_million\\_subscribers/](https://www.reddit.com/r/assholeddesign/comments/bt6szp/one_million_subscribers/).
- [60] Nynke Tromp, Paul Hekkert, and Peter-Paul Verbeek. 2011. Design for Socially Responsible Behavior: A Classification of Influence Based on Intended User Experience. *Design Issues* 27, 3 (July 2011), 3–19. DOI : [http://dx.doi.org/10.1162/DESI\\_a\\_00087](http://dx.doi.org/10.1162/DESI_a_00087)
- [61] Peter-Paul Verbeek. 2010. *What things do: Philosophical reflections on technology, agency, and design*. The Pennsylvania State University Press, University Park, PA.
- [62] Ari Ezra Waldman. 2019. There is No Privacy Paradox: How Cognitive Biases and Design Dark Patterns Affect Online Disclosure. *Current Opinion in Psychology* (Aug. 2019). DOI : <http://dx.doi.org/10.1016/j.copsyc.2019.08.025>
- [63] Mark R Warner. 2019. Deceptive Experiences To Online Users Reduction Act. (April 2019). <https://www.congress.gov/bill/116th-congress/senate-bill/1084/text>
- [64] Jenny Waycott, Cosmin Munteanu, Hilary Davis, Anja Thieme, Wendy Moncur, Roisin McNaney, John Vines, and Stacy Branham. 2016. Ethical Encounters in Human-Computer Interaction. In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '16)*. ACM, New York, NY, USA, 3387–3394. DOI : <http://dx.doi.org/10.1145/2851581.2856498>
- [65] Anne-Marie Willis. 2006. Ontological Designing. *Design Philosophy Papers* 4, 2 (June 2006), 69–92. DOI : <http://dx.doi.org/10.2752/144871306X13966268131514>
- [66] Langdon Winner. 1980. Do Artifacts Have Politics? *Daedalus* 109, 1 (1980), 121–136.
- [67] Richmond Y Wong, Deirdre K Mulligan, Ellen Van Wyk, James Pierce, and John Chuang. 2017. Eliciting Values Reflections by Engaging Privacy Futures Using Design Workbooks. *Proc. ACM Hum.-Comput. Interact.* 1, CSCW (Dec. 2017), 111:1–111:26. DOI : <http://dx.doi.org/10.1145/3134746>