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From the Book Review Editor

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ABOUT THE AUTHOR  
Dr. Edenfield has been at Utah State University since 2016. His research agenda works at the intersections of professional communication and community-embedded workspaces with specific attention to cooperatives, collectives, and nonprofits. His research interests include theories of participation, rhetorics of empowerment and democracy, and community engagement in professional communication. Avery’s work has appeared in Journal of Technical Writing and Communication, Nonprofit Quarterly, and Technical Communication.

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Game Design Documentation: Four Perspectives from Independent Game Studios

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ABSTRACT
Changes in technology, development philosophy, and scale have required game designers to change how they communicate and mediate design decisions. Traditional game design studios used an extensive game design document (GDD), a meta-genre that described most of the game before it was developed. Current studies suggest that this is no longer the case. We conducted interviews at four independent game studios in order to share their game design documentation processes, revealing that, while an exhaustive GDD is rare, the meta-genre functions are preserved in a variety of mediated ways.

CCS Concepts
• Software and its engineering~Documentation

Keywords
game design, game design document, genre, workplace studies, documentation, technical communication

INTRODUCTION
While game developer design processes have received a fair amount of professional and popular attention in online discussion boards and books (a casual search suggests thousands of examples), scholarly study of actual practice is not as widespread. There are myriad of complicating factors that often inhibit such study. For one, changes in technology, scale, and expertise in the maturing industry have led to a constantly shifting landscape (Walinsky, 2016). This is compounded by the fact that many in the industry find it difficult to put processes into words (Kultima, 2010) or “games themselves have become a kind of lingua franca” (O’Donnell, 2014, p. 42), which is to say that comparisons to and interpretations of other games are primarily used when communicating design decisions. This leads to “autobiographical design” (Hagen, 2010), leaving designers with idiosyncratic or subjective experience as the primary way to communicate game ideas.

In addition to the dynamic landscape and game-centric process descriptions is the secrecy under which most game studios operate. Game studios seek not only to protect their intellectual property before it can be fully realized in a game making researcher access difficult (Ruggill, McAllister, Nichols, & Kaufman, 2017), but their design processes are often treated as propriety endeavors (O’Donnell, 2014), protected from other studios that might want to steal the recipe. After a four-year participant observation study of various game studios, O’Donnell (2014) described game development as a labyrinth, writing, “Developers have typically made a headlong plunge in, with no way to get back, or even untangle where they have been” (p. 78).

This headlong plunge is a vexing problem for technical communication research as there is often an absence of persistent artifacts and documentation within a game development process. Greene and Palmer (2014) surveyed nine industry professionals about their design processes and found that, while design documentation was used, there was no industry standard, and their survey method did not provide them access to these documents.

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the most accurate representation of professional design practices. O’Donnell (2014) makes only a brief mention of a hypothetical wiki page as a type of design documentation. While not a specific focus of their study, Ruggill, McAllister, Nichols, and Kaufman (2017) named a variety of written documentation types such as “central vision documents” (loc. 646) in programming, “art test documents” (loc. 1641) in art, “milestone documents” (loc. 3881) in production, “design documents” (loc. 4775; loc. 4278) in QA, and various legal documents in business, and yet, these references are the extent of what we hear about how those documents mediated the design processes of their informants. McDaniel and Daer (2016) conducted a three-month, single case study of n-Space, a venerable game studio responsible for over 40 games. In their examination of development discourse at the studio, McDaniel and Daer found a hodgepodge of written and interactive assets at the center of a cross-disciplinary and cross-cultural process responding to technical constraints and conflicts, but they did not share the specifics of those documents.

In studies of game studios, communication between programmers, artists, designers and managers was a common topic (McDaniel & Daer, 2016; O’Donnell, 2014; Greene & Palmer, 2014; Ruggill, et al., 2017; Hagen, 2010). And yet, that communication is often ephemeral, and the resulting game the only lasting manifestation of the collaboration. How game studios communicate internally during design and production processes is a compelling question of importance to technical communicators and those studying workplace communication. While larger studio design practice is of interest, a few studies have offered that perspective (Hagen, 2010; 2009; O’Donnell, 2014; McDaniel & Daer, 2016). Smaller studios better reflect an activity of practice where studio programmers, artists, designers, and managers have more input on the overall game design and, as a result, we might see different methods for communicating design decisions. Furthermore, many game developers start at smaller studios, and increasingly, large studios will often contract with smaller studios to create assets (O’Donnell, 2014), suggesting that both large and small developers will find benefit in such study.

In this article, we begin by charting a brief history of game design processes and documentation. In particular, we describe how game design documentation serves as a type of meta-genre (Giltrow, 2002) that persists in various forms to mediate design decisions even as the genre changes over time. We then turn to four interviews we conducted with small to medium sized independent game studios to show design documentation motives and practices. As we show in these interviews, there are opportunities for technical communicators to both learn from and contribute to design communication practices in game design studios.

The Game Design Document
In the history of game design, we have witnessed two historical shifts, each with concomitant documents mediating game development. The earliest games were often designed by a single author who programmed the game mechanics, the graphics, sound, and story. They designed games mostly for themselves (Meier, 2016), and wrote notes mainly to themselves. Richard Garriott, designer of the Ultima series, preserved a large selection of these notes and design documents that he donated to the special collections at the University of Texas Austin. With the commercial success of games that followed, and the increasingly sophisticated expectations of audiences, larger teams were required, and with it, more audience-focused and formalized documentation. The resulting design documentation earned status as its own genre: the Game Design Document (GDD).

The GDD took on significance as it defined narrative-heavy and puzzle games that larger studios began to develop in this first shift in the history of game development. As Sansone (2014) points out in his analysis of GDDs from this period, they contained scripts, story beats, puzzles, game flow, and visuals, mediating on paper the content that artists and programmers integrated into the final game. The GDD became an important part of game design as it began to give game developers a framework to communicate their design decisions, a descriptive blueprint, with varying levels of specificity depending on the rhetorical exigence. As such, the GDD functions as a meta-genre that directs game design as an activity. Meta-genres provide background knowledge in how to produce and distribute genres within an activity system (Giltrow, 2002; Russell & Yanez, 2002), but they also mediate the uptake and circulation of other genres within its genre system (Bazerman, 1994), specifically genre ecologies, which are “an interrelated group of genres... used to jointly mediate the activities that allow people to accomplish complex objectives” (Spinuzzi & Zachry, 2000, p. 172) and include even unofficial genres needed to complete a project such as white board notes or dynamic wikis (Spinuzzi, 2004). The GDD is an amalgamation of situated expressions that function as an antecedent to the game that it ultimately helps define (Giltrow, 2002).

As a meta-genre, there is no consistent set of genre conventions, only typifications that are stabilized through practice (Schryer, 2002), but Tim Ryan (1999, October 19; 1999, December 17) on Gamasutra, the foremost online resource for working game development professionals, wrote a comprehensive breakdown of his approach to the GDD. Ryan describes two main genre functions of the GDD: a game proposal (which acts as a game vision statement for the development team and publishers) and technical specifications (See appendix for a full outline of a traditional GDD, according to Ryan). The game proposal begins with an introduction, which acts as a vividly written one-sentence game pitch, a background that describes similar existing games, a game description, key features of the game that make it unique, an explanation of the game’s genre, a list of platforms the game can play on, and concept art for the game (Ryan, 1999, October 19). The technical specifications include game mechanics, which describes the core gameplay, game flow, or a detailed description of what happens when the game is played, characters, physics, which should stay descriptive without including actual code, and a description of how artificial intelligence in the game should act. The technical specifications also cover a description of the game’s interface, music, art, and video. This prescriptive top-down approach is intended to mediate the uptake of the situated expressions in the GDD across multiple specialized development teams: the artists need only reference the interface and art, whereas the level designers need only reference game flow and the physics (Ryan, 1999, December 17).

Because the activity rules that meta-genres include are often both tacit and explicit, they are hardly prescriptively static or codified. Instead, the genre conventions and stated rules within meta-genres are constantly and contingently renegotiated by their discourse community as the purposes and needs for different genres within the activity system change over time (Giltrow, 2002; Swales, 1990). Resistance to specific genre forms arises when contexts and social requirements for the genres change. During the early game design period, coding was so laborious and expensive that most software development consisted of the waterfall design process,
where developers carefully programmed one section of code at a time before moving on to the next. Within this design model, GDDs needed to carefully document every part of the design process before programming began. To reflect the waterfall design process, GDDs catalogued what Spinuzzi and Zachry (2000) would classify as a closed-system. This design method, however, created a significant problem in game design as it led to game mechanics that limited player agency. Noted game designer Richard Garfield highlights this problem when he compares games to puzzles: “the most a puzzle solver can aspire to is general is what the puzzle designer intended. An excellent game will allow them [players] to surpass and surprise the designer” (quoted in Scholder & Zimmerman, 2003, p. 18). Thus, a “good” game is a complex and dynamic system. Carefully documenting every choice, even those not considered by the designer, would be difficult if not impossible. Thus, the technical specification function of the GDD as an exhaustive catalogue soon fell out of favor for many projects simply because it became so large that “nobody bother[ed] to read it” (Hagen, 2010, n.p.).

In addition to changes in context, diversity in and development of technologies, philosophies, and scale have led to design processes that do not always benefit from exhaustive pre-planning, leading to the next shift and current practice in game development. Two technological developments in particular have changed game design drastically. First, most current games are based on a modular design. Artists do not need to code their visuals—they can use tools to create and design the visual elements of the game and then insert those visuals into the game. Sound and music are similarly modular so that different parts of the process can more easily be added or removed at any stage of design (Kaufler & Butler, 1996). Additionally, game design tools such as the Unreal Engine and Unity have made software design more efficient, allowing for rapid prototyping, and thus eliminating the need for exhaustive pre-planning. As a result, the GDD has shifted mainly to the game proposal function (Ryan, 1999, October 19) or vision document: a way to keep a team working on multiple, specialized modules in sync, as it includes a conceptual plan for graphics, sound, mechanics, and narrative and explanations for how they fit together to achieve the game’s central premise (DeAnda & Kocurek, 2016; Hagen, 2010). The GDD has even been used as a rubric, with Carolyn VanEseltine describing how QA testers’ responsibility was simply because it became so large that “nobody bother[ed] to read it” (quoted in Scholder & Zimmerman, 2003, p. 18). Thus, a “good” game is a complex and dynamic system. Carefully documenting every choice, even those not considered by the designer, would be difficult if not impossible. Thus, the technical specification function of the GDD as an exhaustive catalogue soon fell out of favor for many projects simply because it became so large that “nobody bother[ed] to read it” (Hagen, 2010, n.p.).

Changes in software development philosophy have also led to changes in game design philosophy. When the Manifesto for Agile Software Development was published in 2001, it was a culmination of critique on traditional design that sought to replace careful planning with dynamic and organic collaboration, creation, and prototyping (Beck et al., 2001). One of the technical communicator participants in Zhang and Saari Kitalong’s (2015) study found that she was more involved in the creative design processes with Agile development compared to her work “at the end of the product cycle” (p. 208) of waterfall development. No doubt, Agile and other iterative development processes such as Scrum (Takeuchi & Nonaka, 1986) or spiral (Boehm, 1988) have become popular, and books on game design have discouraged GDDs and waterfall design (Schell, 2008) in favor of quickly prototyping game ideas, playtesting the prototype with gaming audiences, and then refining the game further within an iterative, open-system (Spinuzzi & Zachry, 2000) and a reflexive design process (Sansone, 2014; Schell, 2008).

The change in design philosophy from waterfall to more Agile-inspired design processes was also enabled by a shift in how many corporate structures work, especially within areas of design and engineering. Spinuzzi (2015) argues that many corporations have moved from stable bureaucratic structures of controlled hierarchy with rigid rule-systems to a more informal, networked model or adhocracy in order to better innovate. Instead of being defined by set structures, the adhocracy loosely comes together in order to complete a single project and often regroups or disperses completely after project completion. Communication within an adhocracy is flattened and open to all so that the group can quickly adapt and reorganize according to the shifting demands of the project. Because adhocracies can be likened to swarm formations that can take any organizational form around completing a project, members can synthesize multiple design philosophies to meet their own ends, often creating hybrids as we show in our study later.

Other social forces have pushed game development beyond the corporate realm, leading to still other adhocracy formations, and the evolution of the GDD as more of a vision statement within game development. Beyond development, there is currently less need for large corporate backing and distribution of games. User-focused funding sites, such as Kickstarter, and distribution networks like Google Play, the Apple App Store, Steam, and itch.io, allow designers to market and distribute their games without the need for traditional retail space, even if these new systems often reach a smaller niche audience (Jenkins, Ford, & Green, 2013). As a result, there has been an impressive increase in the number of small and independent studios (“Indie Game Development,” 2013), and with these small teams comes less of a need for detailed technical documentation.

However, while the GDD has largely shifted from exhaustive record of the waterfall method to a leaner vision statement, especially for smaller, independent design companies, the genre conventions the GDD utilizes still vary widely within game development (Greene & Palmer, 2014) and a more comprehensive GDD is still used within large design companies, especially if they are structured in traditionally corporate ways. For instance, Gamasutra has featured no less than four articles spanning the last decade and a half on writing a GDD (Freeman, 1997; Ryan, 1999; Bakker, 2009; Friesen, 2014; Gonzalez, 2016), with the most recent of these claiming “using a GDD is a thing of the past” while contradicting this statement by going on to describe how to write a GDD, if not a bit shorter than it has been traditionally defined (Gonzalez, 2016). Meanwhile, in 2013, then studio director of the large studio BioWare, Yanick Roy, posted an image of a three-inch binder to Twitter, writing, “First pass at Design Document for the next Mass Effect! #sorryforthetrees.” Both of these examples illustrate that while the GDD persists within game development, the genre conventions can markedly differ depending on the demands of the design activity systems they mediate and the ad hoc form that the design team takes.

The multitude of genre permutations for the GDD is to be expected though because, as a meta-genre, it directs diverse and complex game design activity systems that also take on many adhocracy forms (Giltrow, 2002; Spinuzzi, 2015). In fact, Giltrow argues that sharp differences of the same genre form such as the GDD could mean that it is a site of “contest and domination” (p. 199), which may be the case as independent developers rush to inhabit spaces
in the game market not filled by major developers, and certainly, a pared down GDD vision statement reflects differences in values and development that suggest flattened communication, loose collaborative structures, and creativity over tight structure and corporate control (Spinuzzi, 2015).

Furthermore, the lack of genre consistency for the GDD is a primary reason that game development would benefit from the expertise of technical communicators (Eyman, 2008; Mason, 2013), particularly as technical communicators understand how to analyze and write for multiple audiences with diverse purposes (Greene & Palmer, 2014). In fact, Eyman (2008) argues that because games follow a similar development process as other types of software, it would follow that technical communicators could facilitate communication within game development in similar ways, and both Eyman (2008) and Mason (2013) specifically mention documentation as one of those ways. Even more specifically, within their study of the GDD, Greene and Palmer (2014) discovered that within game development there is often a disconnect between “concept design and programming-implementation” (p. 24), a gap that the GDD is meant to fill but often fails. They argue that technical communicators could use their rhetorical skills to mediate communication between these two aspects of development.

Our study was also prompted because we saw the GDD as a varied and contested genre. Specifically, we wanted to understand how its various genre conventions influenced the activity of design and how design actively reflexively influenced its various genre conventions within Agile to more traditional work environments. Our research question then asks: how are game design decisions made, communicated, and made manifest in the games produced from small to medium-sized studios? Of particular interest are what genre functions of the GDD mediate current design decisions, and whether such documentation is responsive or dynamic in game design practice?

METHOD
In an IRB reviewed study, we conducted face-to-face interviews with a purposeful sample of four different sized game design studios in the Colorado area: Megan Fox from Glass Bottom Games, Kevin Zhang from Serenity Forge, Jordan Coombs from Warballoon, and John Whitmore from Backflip. Our intent in the research was to show practice in context and not to generalize (Patton, 2002), and our selection scaled studio size, from ostensibly a handful of developers to the much larger Backflip with dozens of artists, designers, and programmers.

With the consent of the participants to reveal their studios and names, we recorded and transcribed semi-structured, in-depth interviews. One author interviewed Zhang, Coombs, and Whitmore, and the other author interviewed Fox. We only were asked to sign a Non-disclosure Agreement (NDA) at one studio, Backflip, but it did not impact our interview. Our interview questions were in four categories: biographical, including past games and inspirations for games; description of game design processes; how game design processes were reflected in a GDD; and attitudes and beliefs about game design. We composed questions in these categories to create a Non-disclosure Agreement (NDA) at one studio, Backflip, but it did not impact our interview. Our interview questions were in four categories: biographical, including past games and inspirations for games; description of game design processes; how game design processes were reflected in a GDD; and attitudes and beliefs about game design. We composed questions in these categories to capture context about participants’ life-world (Kvale, 1983), their training, and game ideaion experiences (similar to Hagen, 2009 and Kultima, 2010), and their processes (similar to Ruggill et al., 2017 and O’Donnell, 2014). We did not intend to present models of game design as much as we wanted to share what drove these developers to design and the methods they used to communicate that design (Engeström, 1999). While we did make sure to ask at least one question about GDDs, our interview stance remained flexible and intended to capture how game design was conducted and documented in these studios, including the implicit and explicit rhetorical exigencies that determined how design documentation was written or used.

We coded the interview transcripts using a two-cycle content analysis (Saldaña, 2009) approach. On the first cycle, we focused on looking at emergent patterns that developed from our research question (Mayring, 2000). In the second cycle, we compared participant response patterns within the context of their separate game design experiences and sought connections in how meta-genres operated in the workflow of each participant’s process. Our conventional content analysis (Hsieh & Shannon, 2005) and comparative coding, in turn, preserves the diversity of the different experience. We did not intend for these four designers to be generalizable, so we did not norm for intervaler reliability of our coding scheme. Instead, we coded patterns that emerged from the data to understand how design documentation and design context may influence design processes. We noted a reciprocal relationship, and we organized them under subheadings in the results and discussion section that follows. Thus, the patterns we coded were as follows:

1. The GDD exists to ensure design consistency as a vision statement. Here we included any statements that discussed how the GDD was meant to act as a vision document or to ensure consistency.
2. The GDD exists within a reciprocal relationship to design. Here we included any statements that discussed how either the GDD or the design evolved together and how they changed each other as a result.
3. Designer skill sets influence the GDD. Here we noted any mention of designer skills, paying specific attention to ways that these skill sets changed genre conventions within the GDD.
4. Game genre differences influence what is included in the GDD. Here we coded for any mention of how game genre differences changed GDD genre conventions.
5. Design company size influences GDD genre conventions. Here we paid attention to how size impacted communication and how the GDD mediated this communication or not.

Studies to date, as well as our own, confirm that game development is heterogeneous (Greene & Palmer, 2014; Ruggill et al., 2017) when studied in context and through the perspective of the developers and designers. Continuing this trend, we share these four perspectives to add to the literature of game design approaches so that technical communicators and game designers might better understanding the meta-genre functions of design documentation in practice.

RESULTS AND DISCUSSION
While neither generalizable nor exhaustive, our interviews revealed five noteworthy findings in the way design documentation was used at independent game studios. GDDs still directed the activity of design, but they did so in a reciprocal way, which is to say that design documentation changed along with design. We also found that design documentation functions and conventions were
influenced by designer backgrounds, the game genre, and studio size.

The GDD as Meta-Genre

In our study, we discovered that as a meta-genre that directs the activity of design, the primary purpose of the GDD was to ensure consistency with the overall design vision of the game—a genre purpose that was consistent for all four participants of our study regardless of design studio size or the type of game that was being designed. Game developers, more than any other software developer, recognize that games are fundamentally more than a list of components and assets. If a game is not a fun experience for players, it is not worth playing. Consequently, the GDD as vision document communicates a cohesive experience for the player (Greene & Palmer, 2014; Hagen, 2009; 2010; Schell, 2008). This overall purpose of experiential vision for the GDD is echoed on Gamasutra by Ryan (1999, October 19), who wrote that “the purpose of design documentation is to express the vision for the game.” Within our study, Whitmore, a veteran game developer, said about the GDD, “Once you’ve got the goals established, and you know what the experience is supposed to be at the end, you can test those builds against something that you’ve already kind of agreed on. In the absence of that kind of vision statement, you end up iterating in a lot of different ways.”

As an example of how the GDD ensures design consistency, Fox described the game’s themes in the beginning of the GDD, creating a genre convention unique to other GDDs, in order to ensure the rest of her game design—the plot, characters, and other elements—fit well within her game’s vision. The prominent theme in Fox’s game, Hot Tin Roof, is gender as the protagonist is female, but, although queerness is not included in Fox’s vision, the protagonist is also a lesbian, making queer identity a major theme as well. She described her writing process for the GDD: “I get down to writing a character story for Suzie. Okay, is it about Suzie the straight girl? It doesn’t work. Suzie is a lesbian. Just making sure that all of those fit.” The rhetorical exigency of the GDD is to ensure consistency with the design vision, which should be clearly laid out in a descriptive overview within the GDD. This exigence ensures that the daily quotidian rhetoric of game development—the minutia of coding, scripting, or animating characters that designers are often too busy to think of in rhetorical terms—stays consistent with the overall vision.

As a meta-genre that controls the design consistency of the game, the GDD also mediates the expression of a whole ecology of other documents related to the game’s design, even when other mediating genres take the place of some of its genre conventions (Spinuzzi & Zachry, 2000). As Giltrow (2002) has described, “meta-genres flourish at the boundaries, at the thresholds of communities of discourse, patrolling or controlling individuals’ participation in the collective” (p. 203). For instance, a GDD historically has often had a short one to three paragraph introduction that pitches the vision of the game with a compact description. Ryan (1999, October 19) describes the purpose of the introduction like this:

The introduction to your game concept contains what are probably the most important words in the document—these words will sell the document to the reader. . . Include the title, genre, direction, setting, edge, platform, and any other meaningful bits of information that cannot wait until the next sentence. The edge is what’s going to set this game apart from the other games in the genre.

While the introduction still shares the coherent vision of the game with the rest of the design team, it also pitches the game vision to potential investors and distributors. However, while the other three game designers we interviewed did not mention omitting the introduction, Fox’s GDD for Hot Tin Roof did. Instead of an introduction, Fox has a vividly descriptive and pithy game pitch memorized and also relies on a multimodal game trailer and a set of slides to communicate the game’s vision when pitching to investors. If possible, she also has a short but playable game demo. However, her pitch still introduces the game’s focus for Hot Tin Roof: “L.A. Noir meets Metroid with an Inspector Gadget gun.” Consequently, even though the introduction in Fox’s GDD has been largely replaced by other pre-existing genres such as the pitch and multimodal game demo, the purpose of the introduction in her GDD still directs and mediates these genres, even in its absence: visceral descriptions of the game that clearly communicate the game’s focus.

The GDD Constitutes a Reciprocal Relationship to Design

While ensuring overall vision consistency throughout the design process, as a meta-genre, the GDD seems to have a reciprocal relationship with the design process as it articulates the activity of design (Christensen, Cootey, & Moeller, 2007; Russell & Yanez, 2002). For all four of our participants, the GDD directs the design as an overarching blueprint, but the design details of the document also evolve throughout the design process as new parts of the game are added or parts are deleted because they are not fun to play, are too difficult to design, or do not enforce the overall vision for the game. Coombs described the GDD as “a living document.” He added that “a lot of things change as we go.” Fox writes the GDD as she is designing the game, including any additions she programs but also taking anything out of the game or the GDD that conflict with the consistency of her plot. Fox, in fact, wrote her entire GDD for Hot Tin Roof as a list, which she frequently added and deleted from as she designed the game. While the GDD’s purpose remains constant—that of ensuring plot and character consistency within the game’s overall vision—the content and form the GDD takes changes on a contingent basis in order to meet the design needs of the game. Whitmore described the game design process as reflected within the GDD as follows: “What you start with is not what you end with. One of the things that’s most difficult to get younger designers to understand is, if you do something the first time, it is never right. You will go back and do it over, and several times. If you don’t like doing that, you really can’t be a designer.”

Designer Strengths Influence GDD Conventions

Because of the GDD’s reciprocal relationship with design, we discovered within our study that the genre conventions were often constantly changing and contingent as they depend upon the differences in design processes that individual designers have, design processes which are often, in turn, created by the strengths that each individual designer brings to the process. For two of our participants, these design strengths also influenced the writing of the GDD as well. For instance, Fox has a degree in mathematics, so one of her strengths is developing algorithms for specific game mechanics. To begin Hot Tin Roof, she did not do much writing for the GDD beyond describing an initial game idea. Instead, she quickly prototyped the core mechanic of the game in a 48-hour
in order to figure out how to play the game without a tutorial. As an adventure game, creating a new game genre. Consequently, no genres of first-person melee action with that of a mystery-driven added to the game’s technical woes.

levels for it.” While she described her game’s content in detail in 3-D platforming tech. That took a while. . . . I couldn’t let anyone “For Hot Tin Roof, I had to make the base game, including that 2-D, 3-D platforming tech. That took a while. . . . I couldn’t let anyone play the game until all of that basic systems design was done. And it’s a content-driven game, so I had to make content. I had to make levels for it.” While she described her game’s content in detail in the GDD, the fact that no one could play test the game for so long added to the game’s technical woes. Hot Tin Roof/blend the game genres of first-person melee action with that of a mystery-driven adventure game, creating a new game genre. Consequently, no one had the antecedent genre knowledge (Jamiesson, 1975) needed in order to figure out how to play the game without a tutorial. As she herself admitted, this was “dangerous” as during this lengthy amount of time she also did not know if anyone would enjoy the game: “And I’m just counting on my own instincts of ‘I think it’s fun. The mechanics are fun. It will be fun once the content is done.’” Knowing that she had to dramatically change her design process for future games, working rapid prototyping into her process so that her game could be played tested throughout its design, she decided that her next game would consist of only one genre—a basic melee brawling game called Spartan Fist. She decided on this genre because she could quickly design the core fighting game mechanic—a process which was dramatically shortened at two months—and have a playable game that she could also keep refining by adding content to it. This change in design process also led to a shorter GDD. Because a melee brawler consists mostly of a core fighting mechanic, there is not as much content to describe as there is in a mystery-driven adventure game: there are no puzzles, the plot is dramatically shortened, and there are not as many characters.

For Serenity Forge, the game design process and resulting GDD also varied tremendously between games. Zhang described their process similar to testing a hypothesis. Consequently, workflow for each game differed because it consisted of a different set of hypotheses tested differently each time. This varied design process also meant that any documentation, including a GDD, could vary tremendously as well. Zhang stated that “it’s been a lot more about forming a hypothesis essentially and then testing it out and realizing it works or it doesn’t work, then continuing to do that over and over again for all aspects of game design and game design documentation.” Because of Serenity Forge’s hypothesis-driven design philosophy, Zhang went on to further explain that “our design process is constantly in flux in terms of experimenting with new types on processes and seeing what works and seeing what doesn’t.” In fact, he speculated that the company’s design process could change so much in the future that they could throw out design documentation entirely if doing so suited the type of game they were designing.

**Game Studio Size Influences GDD Conventions**

Finally, because as a meta-genre, the GDD directs the activity system of game design, within our study, many genre convention differences within the GDD were also due to the size of that activity system (Russell & Yanez, 2002), which also influenced the type of adhocracy and requisite design philosophies that formed to meet design needs. For the three small, independent game design companies within our study, Glass Bottom Games, Warballoon, and Serenity Forge, this activity system often only included a handful of designers who did coding and artwork themselves. These three small companies tended to follow aspects of Agile philosophy, using pared down or bits of a GDD to describe, often from the perspective of players, the visceral experiences of the game, while the specific technical details of programming such as setting up algorithms, or even creating specific artwork, were left up to the individual creativity of those completing those tasks and were not really included in much detail in the GDD (Beck et al., 2001). However, this Agile-inspired process was dynamic and evolved to meet changing design needs. For instance, there was no need for a formal Scrum design system with a backlog, Scrum master, or Product Owner because members were already in constant communication with each other and often just did what was needed to complete the game (Singhal & Gupta, 2014).

One specific aspect of the GDD where design company size mattered
within our study was recording evolving game design changes within the GDD. Even though the GDD exists within a reciprocal relationship to the design process, small design companies did not always record game design changes within the GDD because it was easier for everyone to discuss these changes in person. For instance, Zhang stressed the importance of documenting large changes but downplayed the importance of documenting small changes:

It’s important that everyone’s on the same page. I would say [changes to the GDD are] a case by case basis. If the change is so big that it’s like oh here’s a fundamental mechanic that we’re going to change to something else, then it’s worth going back and actually jotting it down on the design document. If it’s a series of small iterations and we know that even if we jot down these iterations this week by the same time next week they’re going to change again, then usually we feel like it’s not really worth writing it down.

In fact, Coombs downplayed the importance of updating a GDD even for big changes because it was easy to quickly communicate the changes with his small team, illustrating how meta-genres consist of the attitudes surrounding an activity—an activity which can be implicitly or explicitly stated depending on the nature of these surrounding attitudes (Giltrow, 2002). However, Coombs still documented changes in more ad hoc documents, which the GDD still mediated as the controlling meta-genre (Spinuzzi & Zachry, 2000). Coombs discussed with the team about games’ mechanics, iterating both internally and externally, so that the documentation manifested across more than a single GDD: “We’re documenting all this, but white boarding it, some Google docs a little bit, a little bit of everything, some notes and stuff like that.” The process is messy, and Coombs conceded that, at least in his experience in advertising and in talking to other small studio game developers, “I think most companies do work like this until you get to AAA where it’s like, once you have an investor, stakeholders and things like that.”

In contrast, large game design companies have diverse teams and usually need the GDD to direct and coordinate many groups, documenting extensively as a result. Within our study, Whitmore, a veteran game designer of 20 years, described how specific genre conventions within a GDD directed the activity system of a large group of designers for a AAA game created within a formal bureaucratic corporate structure:

Documents became very large. When I was working on something like Metroid Prime, we had about a thousand pages of documentation, including one of the level docs. . . . We started to break the document down into a bunch of sub-documents that laid out the systems. Whoever was responsible for coding or creating those systems would have one document they’d look at, and they wouldn’t need to worry about the other documents.

For teams of this size, Whitmore explained that the GDD has three different audiences: marketers who need a product description written from the perspective of players early on in the design process, programmers who need to specifically know what to code, and visual artists who need to know what to draw. Consequently, the GDD also had specific sections written for these specific audiences, but each audience would only look at the subsection designated for them and would not look at the rest of the document.

As the one participant in our study who was not part of a small, independent game design studio, Whitmore works in a mid-size studio with 20 to 50 developers at Backflip. Although he tries to use some Agile philosophy in design, he also explained that this is not always possible. The process he described sounded more like an adhocracy, but one that still uses some of the formal organizational structures of a corporate bureaucracy. For instance, he has the formal title and corporate role of Director of Design, although in adhocracy-style, he attempts to be in open communication with his team, avoiding more formalized, bureaucratic chains of communication. As such, he described preferring a fairly detailed GDD to productively direct the activity of his larger team: “We need a comprehensive design document that starts with a kind of overview that lays out the goals of each system, what they’re supposed to accomplish in the context of the game, and then breaks that down into very specific rule sets, asset lists, and so on.” However, within the adhocracy formation of Backflip, Whitmore has adapted some design philosophies to meet his design needs while abandoning others. For instance, he still favors some Agile-inspired design processes such as a prototyping, playtesting, and redesign. Although he favors full and constant documentation, this documentation exists on a dynamic wiki that can change alongside design changes, reflecting more of an Agile-inspired design process.

Furthermore, as Backflip exists within a type of adhocracy form, Whitmore explained that the GDD was necessary to enable open communication with a large team, communicating even small changes in game design as the game progressed, especially as there is still a reciprocal design relationship between the design process and what is written in the GDD. The GDD communicates a design vision to the artists and programmers but also creates a way for the programmers and artists to communicate their design process in order to shape the GDD.

There’s a lot of spreadsheets there and a lot of rule sets to be written. It’s generally fairly dry. It’s meant to be read by the programmers and the artists, so that they can kind of figure out what they need to build. That gets reviewed as well, and we’ll sit down with the programmers and say, “Hey, is this possible? Can we do this?” Go to the artists and say, “Hey, can we really generate the assets? Do you know how you’re going to do this?”

In this way, the programmers and artists still designed with a reciprocal relationship to the GDD. If artists could not create assets for part of the game, they could suggest workarounds that could then contribute to changing the visual aesthetic of the game, which would also lead to changes in the GDD. Similarly for the programmers, if parts of the design did not work well when coded and play tested, they could make suggestions for the design that affected this part of the code, changing that part of the GDD along with it. Even in a larger company then, the GDD articulates the quotidian parts of the design process and helps prevent larger potential exigent crises such as art that is not well rendered or game-ending bugs. Even in larger companies, the GDD both acts upon and is acted on by the designers and artists, existing within a reciprocal relationship to the design process.

CONCLUSIONS

The expectation of technical communicators new to the game development industry might be that rapid software development using Scrum/Agile practice and user-centered iterative design have
largely replaced documentation practices like the GDD (Beck et al., 2001; Sansone, 2014). However, our study suggests that the GDD as meta-genre still plays an important role in game development by becoming a vision statement, which in turn forms a reciprocal relationship with design (Christensen, Cootey & Moeller, 2007). Consequently, as a meta-genre that both shapes and is shaped by the activity of design, the genre function of the GDD within our study varied depending on the size of the project, the type of project, the number of people involved, and the experiences and design strengths of the developer as well as the shape of adhocracy the design studio takes (Spinuzzi, 2015). As a result, similar to the findings of Ruggill et al. (2017), McDaniel and Daer (2016), Greene and Palmer (2014), and Hagen (2010), we found no standard documentation practice but a dynamic activity system that borrows bits and pieces of a traditional GDD along with propriety, specialist, and game-focused design documentation. Sansone (2014) has argued that GDDs were no longer used and that, “Documentation...exists, but it is developed in small chunks and in response to iterative needs” (p. 120). However, our interviews suggest a revision of this claim—in fact, some studios, especially studios that are working on larger projects with external IP, still need GDDs that are more than a “concise expressions of theme, tone, and vision communicated simply and emotionally” (p. 120).

Furthermore, even some of these concise expressions and small chunks are abandoned in favor of pure prototyping, as we saw in Fox’s 48-hour game jam prototype, and potentially in the future at Serenity Forge. Within our study at least, the GDD in its varied forms is a genre mediating a dynamic activity system (Schryer, 2002) that borrows bits and pieces of a traditionally typified GDD but also makes revisions to these genre conventions that are more in line with design strengths of designers and differences in game genres. This finding strongly supports the argument that technical communicators would benefit from understanding the genre functions of the GDD as well as its malleability as a meta-genre, as is evident from the various manifestations design documentation took in the independent studios we describe here.

The role of the technical communicator in these situations is multilayered. For one, as we saw from Coombs at Warballoon, the design process is dynamic, but there is still need of documentation. With smaller studios, having one person in charge of just design documentation is not feasible, but determining processes and systems of common documentation that technical communicators can impart to studios through consultation is viable, a theme echoed in recommendations from Greene and Palmer (2014). Beyond consultation, it is apparent that we should be aware of the practice of game design documentation. While none of our developers used what might be considered a traditional GDD, they all used parts, whether only a vision statement, a list of game features, or a full game encyclopedia complete with art and algorithmic specifications. Understanding the genre, not to dutifully fill in the blanks but to see when a feature is rhetorically effective for a given situation and needed to fulfill a purpose in the design process, is important for technical communicators.

Our study shows technical communicators how the meta-genre can potentially both influence and be influenced by the activity it is directing. Gilthor (2002) argues that the meta-genre is important to study as it often clearly shows how the context and purposes of a rhetorical situation shapes its genre conventions—as well as potentially some of the genre conventions of the genres within its activity system that it mediates (Bazerman, 1994; Russell & Yanez, 2002). Within our study, the GDD existed in a reflexive relationship with design, directing the overall vision for design, but also evolving along with any design changes (Christensen, Cootey, & Moeller, 2007). In this way, the design documentation described within our study shows how the uptake or discarding of specific genre conventions can be created by needs within the design process, existing within a reciprocal relationship to the design activity.

Our study also shows how meta-genres can potentially operate in patrolling the boundaries of genre systems within a particular activity system, and, as a result, direct the uptake of other genres, specifically within genre ecologies, mediating to a certain degree what genre conventions are used within them and how they are used (Spinuzzi & Zachry, 2000). The genre functions within the meta-genre also change as a result to the changes in the surrounding genres. For example, within our study, while traditionally a GDD has opened with a vividly written, compact game introduction that acts as a game pitch for the project (Ryan, 1999, October 19), Fox did not include one in her GDD because she expressed the introduction in the form of a series of multimodal slides, a game trailer, and a memorized one-sentence description. These pre-existing, alternative genres formed a genre ecology mediating the purpose of the introduction within the GDD, even if the introduction was omitted.

Furthermore, our interviews illustrate to technical communicators how genre conventions within the meta-genre can potentially change on an emergently contingent, ad hoc basis depending on the needs of the activity system. Specifically, our study illustrates that genre conventions within the GDD can change depending on differing strengths of the development team, the type of genre under development, and the size of the development team, especially as it is part of an open design system (Spinuzzi & Zachry, 2000). For instance, because Whitmore was in charge of a large development team, he favored a detailed GDD, including even small changes that did not fundamentally alter the team’s vision for the game in a dynamic wiki. He thought noting even small changes to the document was necessary to constantly stay in communication with the entire team and avoid potential bugs. However, Coombs downplayed the importance of careful documentation in the GDD because he was in constant direct communication with his small design group. However, he still noted design changes using other types of media and genres, which existed within an evolving and dynamic genre ecology.

Finally, as a meta-genre, our study illustrates to technical communicators that the genre conventions that the GDD uses can depend on the size of the game design studio and the type of adhocracy that the game development team has formed. For instance, the designers in Warballoon, Serenity Forge, and Glass Bottom Games all favored light fully documented GDDs that served more as vision guides (Schell, 2008). However, they were in small studios that only consisted of a few people, so they could easily stay in constant, direct communication. As Whitmore put it, “If everyone on the team knows where the designer is sitting, and you can go and talk to [him or her] whenever you run into a future question, [light documentation] works pretty easy.” In contrast, Whitmore worked in a medium-sized company. The adhocracy that his design studio had formed consisted of still including formal roles such as director of design but was pushing for open communication within the game development team (Spinuzzi, 2015). As such, Whitmore preferred documenting game design changes within the GDD, but
using a dynamic wiki, so that his entire design team of developers could stay informed.

Clearly, additional study is warranted. While there are some similarities across our developer interviews with each other and previous studies, we still maintain that game design is a heterogeneous activity. We should continue to study changes in design documentation and processes, including large studios. Both Coombs and Whitmore shared expectations and experience in large studios, but these are just two cases. However, we see hints at changes in large studios. For example, Blizzard Entertainment, developer of World of Warcraft, Diablo, and Starcraft, has been around for well over two decades, and their release schedule has moved at a glacial pace, suggesting a complicated design process with multiple layers of design documentation. However, when “Team 5,” a small internal group at Blizzard was asked to put together something new, they created the now popular and quickly iterated Hearthstone that started with “literal pieces of paper. . . There were no pipelines to push assets through, no politics, no nonsense: just two guys in a room with a pen and paper and a handful of crazy ideas that might just work” (Serrels, 2014). Understanding how documentation has evolved within larger studios as a primary focus of study rather than the day-to-day operations and attitudes might seem less intrusive to studios with many corporate layers and Non-Disclosure Agreements.

Of course, studying design documentation artifacts becomes a worthy aspiration. No study to date has had access to design documentation during game development; Sansone (2014) looked at older GDDs easily available on the Internet. While some informants in our study were willing to show these documents, we were not allowed to share any part of them in this article. Given the smaller barriers, independent studios offer the most promise to analyze documentation artifacts, but as our studies show, such studios also are less likely to have extensive documentation on hand.

While we are resistant to generalize, we can say with confidence that documentation in game design is heterogeneous. This is not surprising given our understanding of communicative and rhetorical activity systems. Yet, we also saw across our interviews that developers with a few too many years of experience, trained in game design or not, or designing multiple games or only a few, all knew what a GDD was—not a single one asked us to clarify what we meant or what we expected such a document to be. The practice of documenting and communicating game design still exists, sometimes as a vision statement but also as an explicit and previous studies, we still maintain that game design is a heterogeneous activity.
Background (optional): Describes any products, properties, licenses, etc. covered in the introduction

Description: Describes the game from the player’s perspective in one to three paragraphs; uses second voice

Key features: Lists game features that make the game different from other games.

Genre: Describes the game genre using pre-existing games as a reference.

Platform(s): Lists the platforms the game will be played on.

Concept art (optional)

Functional Specifications:

Game Mechanics: Describes “the game play in detailed terms, starting with the vision of the core game play, followed by the game flow, which traces the player activity in a typical game. The rest is all the infinite details” (para. 16).

- Core game play
- Game flow
- Characters/Units (if applicable)
- Game physics and statistics
- Artificial intelligence (if applicable)
- Multiplayer (if applicable)

User Interface: “[S]tarts with a flowchart of the screen and window navigation, then breaks down the functional requirements of all the screens and windows” (para. 26).

Flowchart

Functional requirements

Mockup

GUI objects

Art and Video: Lists all art and video assets in the game.

- Overall goals
  - 2D art and animation (if applicable)
  - 3D art and animation (if applicable)
- Cinematics
- Video

Sound and Music: Lists all sound effect and music assets in the game. The overall goals describe the themes and mood the music evokes.

Overall goals

Sound effects

Music

Story (if applicable): Describes the game’s story, including backstory and character descriptions.

Level Requirements: Lists level requirements. The level diagram is a chart of all game levels. The asset revelation schedule charts when assets will be revealed to players within each level. Level design seeds includes any paper sketches for level design.

Level diagram

Asset revelation schedule

Level design seeds

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Usability Testing for Oppression

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ABSTRACT
This study examines a document produced by the United States Department of Homeland Security handed out to immigrant parents during the “Family Separation Policy” crisis of 2018. The article examines whether such a document could be ethically tested for usability. Ultimately, the text argues that by the standards of the Belmont Report and the best practices in usability research, such a document would be extremely difficult (if not impossible) to test ethically. It argues that, while usability testing is an excellent tool for exploring how users interact with texts that can have life-changing consequences, it may also be used as a tool to perpetuate injustice and marginalize potential users.

CCS Concepts
Human-centered computing~Usability testing

Keywords
Usability testing, ethics, immigration, Belmont Report

INTRODUCTION
On April 20, 2018, the New York Times published a story by Caitlin Dickerson revealing that at least 700 children were separated from their parents at the southern border of the United States. The story was grounded in the experience of a mother who had been separated from her 18-month-old son, but revealed that since October of 2017, at least 100 of those 700 children were under the age of 4 years old. Throughout the summer of 2018, courts stepped in demanding that the federal government make every effort to reunite children with their adults. This task was made more difficult by the decision of the federal government to not keep records regarding who the children arrived with, where they went, or where the adults they traveled with were.

One of the material that CNN, a news network based in the United States, obtained was a flyer handed out to immigrant parents titled “Next Steps for Families” (Levenson & Gallagher, 2018; U.S. Customs and Border Protection, 2018) (Appendix A). The document, bearing the logo of the Department of Homeland Security, shows four steps (and several substeps) that explains the actions a parent may take to be reunited with their child. The document is written in both English and Spanish. The document itself, at the time of writing this article, is available on the Department of Homeland Security’s website.

Once my anger and astonishment about the existence of this family separation policy became manageable, my training as a researcher and teacher in technical and professional communication piqued my attention to the design of the “Next Steps for Families” document itself. In particular, I was struck by how poorly it was composed. This was the sort of document that, if something less ethically challenging but similarly written were submitted by my students, I would likely have spent a fair amount of time trying to workshop the document to make it better.

For instance, the first step in the handout contains two sentences:

• You are currently in the custody of the U.S. Department of Homeland Security (DHS) Customs and Border Protection (CBP).
You have been charged with the crime of illegal entry in the United States.

As these are the first two sentences in the document, the message is clear: the reader is in criminal custody of a foreign government. As far as “Step 1” goes, there is not much in the reader’s power to ameliorate the situation. There is no action the reader can take in response to this “step” in the procedure. Instead, the document offers definition and context for the reader’s detention. This sort of message, one could only imagine, functions to reinforce the dynamics of power between the U.S. Department of Homeland Security and the detained reader. Any further steps that come will be read through this power dynamic. This document becomes what Jones & Williams (2018) call a “technology of disenfranchisement,” as its design is complicit in the marginalization of a group of people. In this case, those people are immigrants seeking asylum through the southern United States border.

Later steps give the reader something actionable to do; there are some phone numbers listed (for both outside and inside Immigration and Customs Enforcement (ICE) facilities), as well as email addresses for families and friends to contact both ICE and the Office of Refugee Relocation (ORR). The document was reportedly given to both detained immigrant parents and United States-based potential immigration sponsors for the children (children both accompanied by their parents and those arriving unaccompanied by any adult). The policy that the flyer represents appears to have been unsuccessful in slowing down the influx of migrants to the United States, but instead set up a situation where relatives based in the United States were reluctant to identify themselves as potential sponsors, for fear that their own immigration status might come under new scrutiny by the federal law enforcement. These potential sponsors are concerned about the potential legal repercussions of coming out of the shadows by sponsoring an immigrant child, and so as a result, as of September 2018, the United States is sheltering nearly 13,000 migrant children. This number is up from about 2,400 in May of 2018, soon after the policy was first widely reported (Dickerson, Shelters Near Capacity As More Youth Migrants Are Detained Than Ever, 2018). The administration’s policy seems to not have impacted the influx of immigration at the southern United States border, but has resulted in striking fear in the minds of those already in the country, setting up a humanitarian crisis as the administration must now care for a growing number of migrant children caught in the middle.

While not my primary concern in the throes of this crisis, and perhaps driven in part from the comfort of my privileged position as a United States-born white male who will probably never need to fear the consequences of this sort of document in challenging his own liberty, I wondered if anyone had tested the document to see if the intended audience could use it properly. I wondered this not because I want to make a document designed to assist in the oppression of Latino and Hispanic people more user-friendly in a way that conforms to plain language principles yet operates to inspire aggressive, potentially dangerous, and often illegal action, in the name of ecological sabotage nonetheless poses a challenge to the seemingly inherent ethical value of plain language writing. Ross provides a useful research methodology to test the ethical implications of plain language practice, and such a method may also be appropriate in charting how ethics operate in other, newer, and emerging theories in TPC.

With the recent expansion of Technical and Professional Communications (TPC) programs offering courses in user-centered design and usability research methods (Melonçon & Henschel, 2013; Chong, 2016), the move toward a more user-centered practice would seem to be a great win for restoring humanity in otherwise faceless audiences. The focus on “users” in this sense provides a seeming ethical value in the object of its study. Surely, a designer who is thinking about her user and how her user interacts with her work could not in turn create something that would end up propping up a system of oppression, at least not on purpose, right?

Ross (2015) poses a similar question by wondering if a document that conforms to plain language principles yet operates to inspire aggressive, potentially dangerous, and often illegal action, in the name of ecological sabotage nonetheless poses a challenge to the seemingly inherent ethical value of plain language writing. Ross provides a useful research methodology to test the ethical implications of plain language practice, and such a method may also be appropriate in charting how ethics operate in other, newer, and emerging theories in TPC.

Borrowing from Ross’ approach, this article shifts testing how ethical a practice is from plain language to usability testing. The research questions explored in this article are twofold:

1. Can the separation of families document be tested for usability in accordance with human subject testing standards?

2. If the document can be tested for usability, what can TPC
and document design professionals learn about the ethics of usability testing in a broader sense?

One of the central arguments of this article is that the ethical concerns of usability research and the tools practitioners use need to be continually reevaluated as technological, social, cultural, and political tides continue to turn. This article provides a methodology for performing a robust evaluation of emerging tools in TPC.

This article moves through four sections. First, the article revisits the circumstances that led to the “Next Steps for Families” flyer to be produced in the first place, tracking the origin of the policy to provide context to the document. In offering this context, I am also arguing that designers and writers should likewise be immersed in the contextual circumstances in which they create, and that their ethical conduct take the totality of the rhetorical situation into account as they begin their work. Second, the article offers a review of how ethics is discussed in two areas: user experience professional contexts and TPC scholarship. The fact that this section draws from multiple areas of research speaks to the larger challenge in the disciplinarity of user experience and usability research—particularly regarding its intellectual and theoretical genealogy. While this text will not attempt to map out such a genealogy, I believe the nebulous intellectual “home” of usability research makes the act of codifying (and revisiting) ethical practices difficult. Moreover, this section will assess the role of deontological codes of conduct as ethical frameworks within research design. This leads up to the third section, in which I sketch a speculative research study, including a research protocol, that would perform the sort of usability work testing that would be expected to help enhance the document. In the fourth section, I use the work of the Belmont Report to assess my research methods and ponder if the methodology I outlined in part three would be approved by a research university’s Internal Review Board (IRB) human subject testing standards. It is here where I answer the first research question. This article closes by identifying methodological implications that can stem from this study, and issues recommendations that speaks to the many different stakeholders and intellectual homes for user experience testing. Using the two research questions to guide the discussion, the article explores the relationship between usability and ethics, and charts a course for the future that grounds usability and user-centered research in an ethical framework that is designed to be continually revisited. To this end, this article posits guidelines that hopefully elicit thoughtful consideration, and encodes an ethic of social justice as a part of the professional practices of usability research.

THE “ZERO TOLERANCE” BORDER POLICY

This section offers a brief synopsis of the circumstances that led to the implementation of the “Zero Tolerance” policy enforced at the southern United States border. The policy lends context for the “Next Steps for Families” flyer, and, as is apparent from the way in which it is used, how the flyer operates in an ecology of circumstances within the administration executing this policy. This synopsis, while attempting to be fair in representing reporting on the crisis, nonetheless is composed operating from an assumption that the policy itself was conceived and carried out as an act of oppression against a marginalized group. Such a bias is hard to mitigate in writing this entire article; if I’d thought that the “Next Steps for Families” flyer was an appropriate document, acting in accordance with liberatory and social justice-oriented principles, the urgency of this writing would surely be different. Therefore, what I cannot mitigate in bias I attempt to at least be honest about to my reader.

While Attorney General Jeff Sessions announced the “Zero Tolerance” border policy on April 6, 2018, an April 20th New York Times article makes clear that the policy was in place since at least October of 2017 (Dickerson, Over 700 Children Taken From Parents at Border, 2018). The “Zero Tolerance” policy was first suggested in public in March 2017 by then Secretary of Homeland Security (and later White House Chief of Staff) John Kelly. Kelly told news organization CNN that he was considering separating families at the border so that adults who tried to cross into the United States would be taken into custody by the Customs and Border Patrol. This was a substantial change in policy as the prior administration would release families into the United States after processing while their case was adjudicated (Diaz, 2017).

The public rationale for the policy has consistently been that such a policy would deter families from trying to cross into the United States through the southern border. The logic follows that if families know there is a chance that parents and children will be separated from each other, they will perhaps elect to not enter the United States in the first place. Besides the underreported suggestion by Kelly that the administrating might move to separate families at the southern border, there was little fanfare to this change in policy. It seems that Customs and Border Patrol employees were the first to inform these families of the changed policy. However, it also appears that once the families were in custody, they did not have many options to change their minds about crossing the southern border in the first place. If the objective was to deter attempts to enter, the administration failed to notify potential entrants of the change of policy before they were in custody.

Immigrant children who entered the country with their families were handed over to the Department of Health and Human Services’ Office of Refugee Resettlement (ORR). The ORR would then place children with shelters run by nongovernmental organizations. The nongovernmental organizations were charged with trying to find relatives of the children located in the United States. If no such relative could be found, the child could indefinitely remain in a detention facility. Likewise, some relatives and sponsors could be identified, but choose not to come forward because they feared doing so would imperil their own immigration status. Dickerson further reports:

Sponsors — usually relatives or family friends — tend to be undocumented immigrants, and policies introduced by the Trump administration have made it easier for immigration authorities to find and arrest potential sponsors who come forward to claim a child. As a result, some potential sponsors have stopped coming forward out of fear. Those who come forward anyway are having to wait longer because of added red tape. (A Look at What’s Behind Young Migrants’ Transfers To a Tent Camp in Texas, 2018)

The larger issues relating to the internment of children is compounded by the general sense of fear that faces undocumented immigrant families. Anyone who considers coming forward to sponsor an interned child must weigh that child’s welfare against his or her own, as well as potential family members and associates who may become exposed to immigration authorities in the process.

Subsequent reporting, including reporting on an unpublished
internal investigation by the DHS, characterizes the entire enterprise of the “Zero Tolerance” family separation policy as “troubled from the outset by planning shortfalls, widespread communication failures and administrative indifference” (Miroff, Sacchetti, & Kim, 2018). As of this writing, the administration still wrestles with the impact of the policy. While it is possible that once this article sees publication, the issue has been resolved (perhaps by policy change or legal challenges), the lasting effect of the policy offers a case study in poor execution at best, or the inhumane treatment of children at worst. This is to say nothing of the sorts of documentation that surround the larger context of the policy. Those documents, such as the “Next Steps for Families” flyer, serve as artifacts in this case. These sorts of documents need to be scrutinized by TPC scholars to better understand what went wrong and how technical and professional writers can resist being party to such endeavors in the future.

ETHICS AND USABILITY TESTING
This section explores some of the intersections between ethics and usability testing as they appear in the literature of both User Experience professionals, and the academic work of TPC.

User Experience Professionals
In September 2005, the Usability Professionals’ Association (UPA) adopted a robust code of professional conduct to provide direction in ethical issues that may arise in practicing usability research. The document makes clear that any member of UPA (and its subsequent incarnation, the Usability Experience Professional Association, (UXPA)) are expected to accept this code in their professional practices. The 4-page document is guided by general “Principles” and then elucidated further by offering examples that can guide practicing these principles. The Principles involve verbiage that is common to many qualitative research methodologies:

1. Act in the best interest of everyone.
2. Be honest with everyone.
3. Do no harm and if possible provide benefits.
4. Act with integrity.
5. Avoid conflicts of interest.
6. Respect privacy, confidentiality, and anonymity.
7. Provide all resultant data.

In offering advice on practices that encompass the Principles, the UPA provides examples of how one could “Do no harm and if possible provide benefits” in their research:

3.1 Usability practitioners shall not expose participants to any unreasonable physical, mental or emotional stress.
3.2 Usability practitioners shall take reasonable steps to avoid harming their clients or employers, study participants, and others with whom they work, and to minimize harm where it is foreseeable and avoidable.
3.3 Usability practitioners shall review for special needs when working with the elderly, the disabled, and children. Precautions taken to avoid risks associated with such groups shall be clearly identified and reviewed by the client or employer.

This set of practices is robust if we interpret the spirit of how they were written. While point 3.3 does not explicitly mention undocumented immigrants and other marginalized communities, it does call for researchers to be attentive to vulnerable populations.

The UPA (and now UXPA) Code of Conduct, while not exhaustive (and could perhaps use some updating) provides a framework for professionals and instantiates an ethical center to their professional identity. Unfortunately, this framework does not persist through many central texts in the field. Major textbooks in usability research have a hit-or-miss relationship with the Code of Conduct. Rubin & Chisnell (2008) instruct readers to become familiar with the Code of Conduct as a part of a section discussing “Getting the Most out of Your Participants” (p. 52). Likewise, in the book they at times reference when a particular practice is not ethical (pps. 160, 220). Still, several other textbooks such as those by Albert & Tallis (2013), Barnum (2011), and Sauro & Lewis (2012) lack any discussion of ethics as they pertain to usability and user research design and practices in their pages.

Likewise, the major journal of the UXPA, the Journal of Usability Studies (JUS) has few articles that explicitly deal with ethical conundrums that may arise in professional practices. The conversations about ethics tend to focus more on the relationship between researchers and their unchecked biases (Rosenzweig, Nathan, Manring, & Racherla, 2018) and conflicts of interest (Albert, 2015). To be sure, these are important components to consider in exploring ethical practices in usability research. There is also room, it would seem, to extend these conversations further into other areas of research design. Many of the articles in JUS posit ways of tinkering and revising user research methods.

Even among practicing designers there have been conversations expressing frustration that ethical standards are not more widely discussed or transparent (Monteiro, 2019). While there have been headways to assert ethical principles in design, such as creating design that is more inclusive and accessible (Holmes, 2018), these discussions have been relatively isolated. Clearly, this is room for a more robust discussion regarding ethics in usability and design.

Technical and Professional Communication
As mentioned earlier, scholars in TPC have discussed issues pertaining to ethics in the field for years (Katz, 1992; Ross, 2015; Willerton, 2015). Miller’s “Humanistic Rationale for Technical Writing” (1979) argues that “a course in scientific or technical writing can profitably be based upon [a] kind of self-examination and self-consciousness” (617), thus connecting a rhetorical approach to TPC to the sort of introspection that marks many studies in the humanities. For about forty years, the field of TPC has thought about and wrestled with balancing positivism and humanism in its courses and programs. This concentrated discussion has been ongoing but tends to bend toward the humanistic; it asserts the humanity of the audiences, and the primacy of ensuring that communication centers the needs of users in the myriad shapes they take.

Likewise, discussions about the role of writing and design and social justice have taken on a sense of urgency recently (Jones, “The Technical Communicator as Advocate: Integrating a Social Justice Approach in Technical Communication,” 2016; Jones, Moore, & Walton, “Distracting the Past to Distract the Future: An Antenarrative of technical Communication,” 2016). Recent work offers researchers in TPC positions through which they can engage feminism (Frost, 2016; Petersen & Walton, 2018), narrative inquiry
(Jones, “Narrative Inquiry on Human-Centered Design: Examining Silence and Voice to Promote Social Justice in Design Scenarios,” 2016), and LGBT rhetorical theory (Cox, 2018), to name just a few approaches, can inform the social justice turn in the field. Jones (2016) argues that, “A critical approach to diversity and social justice helps to legitimize TPC by providing scholars a way to acknowledge the impact of communication as a way of mediating the human experience” (p. 343). Colton & Holmes (2018) likewise draw upon Ranière to argue that technical communicators can enact social justice initiatives independent of their work in institutional contexts. This call toward social justice speaks to the emerging consciousness of the field itself, especially as it gains a fuller sense of substance in university departments across the country (Melonçon & Henschel, 2013). As the field charts its own course and distinguishes itself as a distinct from its disciplinary predecessors, it is necessarily evolving its own sense of ethics.

The research implications of such machinations are clear in the recent research the field. For instance, Agboka’s (2013) research on the “poorly localized” (p. 32) documentation accompanying pharmaceuticals that were intended for Ghanaian users seeks to uncover what might previously have been ignored: the role colonial, economic, linguistic, legal, and socio-political dynamics become inscribed in technical documentation. Agboka’s work addresses a cross-cultural, but specifically international context in the transmission of technical documentation from often Chinese designers to Ghanaian users. Nonetheless, the “unenfranchised and disenfranchised” (p. 29) nature of the users he identifies mirror closely to the Latino and Hispanic audiences that are expected to engage with the “Next Steps for Families” document. Similar calls from Rose (2016), Putnam, Walton, Rose, & Kolko (2009), and Shivers-McNair, Gonzalez, & Zhyvotovska (2018), argue for approaches to information design that are better situated among the communities these design serve. The work of all these scholars offer important ideas regarding information design and user testing that can be informative towards researchers and practitioners alike. Indeed, their work calls on TPC scholarship to consider a larger plane of considerations in its endeavors. The disposition toward a holistic, birds-eye view of how technical documents are immersed in their cultural sites is a major influence on the study in this article.

Clearly, much research strives to give us an idea for what inclusive user design looks like, and while that is important, we also must theorize how to respond spaces where communities impacted by design have no recourse to improve a flawed design system. Ideally, design is community based, and the practices discussed by Shivers-McNair, Gonzalez, & Zhyvotovska (2018), and Rose (2016) give us great insight into how to create and sustain those sorts of structures. But in the present case, the “Next Steps for Families” document already exists in a context in which racist and colonial ideologies are normative. Technical communicators must come up with tools that help understand and potentially dismantle these approaches to document design and user-centered research.

The TPC field has engaged the topic of ethics more generally regarding research practices as well. Barton (2001) argues that the interdisciplinary nature of writing and rhetorical research demands an interdisciplinary framework for conducting such research. She creates guiding principles for research that draw from both medical and language studies in the service of research discourse about medicine. She later (2008) focuses more intensely on the ways that composition and rhetoric understand the nature of communication. She acknowledges how in her own research on the recruitment of medical subjects the task of recruiting participants is inherently rhetorical. Thinking beyond the role of federal regulations and IRB review, she examines the role of communication within the complex power dynamic between a research and a subject. Her work is instructive later as this text examines more fully the role IRB review plays in generating a hypothetical research methodology for the “Next Steps for Families” document.

Barton’s concentration on the role of ethics in researching medical rhetoric draws a clear line between danger to participants and research methodologies. Although she is not drawing blood or removing organs, she is interacting with people concerned about their mortal welfare. In these contexts, even seemingly minute discussions about wellness can carry with them the heavy gravity of life itself, if not livelihood. While other researchers in TPC certainly discuss issues like informed consent in digital spaces (Kim, Young, Neimeyer, Baker, & Barfield, 2008), TPC as a field appears to be unprepared for the more dangerous possibilities of what our research could entail. Perhaps the more recent focus on social justice impels researchers to take on studies that have messier, trickier, and maybe more dangerous subjects for their study.

Besides research in the rhetoric of medicine, there is little in the way of TPC research that could be designed as potentially dangerous for research participants. Even Katz’ (1992) and Ward’s (2014) work appears well after the document was used by its Nazi audience, and focuses mainly on how the documents themselves operate rhetorically in their own organizational contexts. Mortal danger may become a more important ethical concern as the field better understands it social justice mission. While the field may borrow and amend research methods from medical rhetoric, it also must chart its own course and draw necessary lines where it must for the sake of protecting subjects from mortal harm.

As opposed to using such “technologies of disenfranchisement” to better understand the rhetorical implication of technical documents, this study posits that there are also ethical challenges posed to the tools that researchers use, including usability testing. This study opens a larger discussion about how ethics and research methods are conceptualized in the early stages of a research project and poses questions for researchers to ponder while they shape their research designs.

Deontology, Technical and Professional Writing, and Ethics

This article will use the Belmont Report (authored by the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, and named after the Belmont Conference Center where parts of the document were drafted) as a stand-in for a standard of ethical research. While the Belmont Report has taken its place in informing the ethics of human-subject research testing in IRBs at universities across the United States, it is not without its critics. Some, like Richard B. Miller (2003), argue the text is too vague to be useful. Others have argued that the document reflects reliability on a formalized western process that may not export itself well in other global contexts (Hirschon, et al., 2013). While this article acknowledges that the ethical theories that underpin the Belmont Report may be up for debate, it also acknowledges the Belmont Report’s place in guiding principles related to academic research.

However, my decision to use the Belmont Report as a lens through
which I analyze the potential ethical challenges posed by my speculative usability study requires that I address the Kantian deontology at work in the report. Deontology, an ethic that asserts the role of obligation or duty in decision making, shapes the way researchers adhere to the standards put forth in the Belmont report. Within TPC, Paul Dombrowski (2000, pp. 47–54) has done a wonderful job of contextualizing how deontology can operate in our field. The fact that university IRBs typically draw substantially from the Belmont report in crafting their own research standards means that deontological ethics have had some role in framing almost all published work in the field. Moreover, the Code described by the UXPA likewise operates as a deontological ethic. To this end, my decision to focus on the Belmont Report as a framework is less about whether I think deontology is the best ethical system to respond to the exigencies of user-centered research and more connected to the fact that this ethical standard already regulates much of the research performed in the academy and the industry.

The deontological ethics that underpin the IRB processes (and by extension, perhaps, the Belmont Report itself) are well challenged within TPC itself by scholars examining feminist-informed research ethics, such as those presented by De Hertogh (2018) and Bivens (2017). Likewise, Barton (2008) wrestles with the place of rhetoric and persuasion in the act of recruiting potential study participants. She wonders if an initial refusal by a potential study participant to take part in a research study be considered the final refusal, and if not, what sort of standards should exist to inform the sort of arguments recruiters should and should not make to try to get a participant to change her mind? She ultimately argues that, "...my experience suggests that it is the principle-based ethics of rights that is the framework that is here to stay in research regulation: my experience also suggests that a context-based ethic of care is too unwieldy to be applied in this context of ethics in volume. But I also see how a principle-based ethics in IRB review can be critically complicated by incorporating insights from the framework of an ethic of care." (p. 624)

I would like to think that this article takes up Barton on her challenge—that as a field we can form principles that propel an ethical approach to usability testing which draws from insights provided by the robust work being done in understanding the role of social justice in the context of TPC. I also readily admit that, due to the speculative nature of this study, I cannot foresee the same sorts of challenges as De Hertogh since this study is speculative in nature (while De Hertogh can draw from the experiencing of a completed study) and that my own assumptions will necessarily guide my imagination. Still, the decidedly deontological point of departure I am asserting here can help us conceptualize how the first steps in our research may run afoul of our own ethical standards well before we are able to perform material harm to real people.

The larger contribution of this study may be that when we speak about ethics, we should be speaking of ethics at different stages in the research design process. Perhaps a deontological ethic helps best situate the speculative work of designing a study, as we are dealing in abstracts hopes about what the study will entail. Once the study is under way, perhaps the feminist and care ethics are more appropriate, as they can help a researcher respond more nimbly to the practice-level challenges that arise in data collection. Still there may be another ethic that better informs preparing a manuscript for publication. What I propose in this paragraph is outside the scope of this study, but such an approach that centers different ethical theories around different stages in the research process could not only help resolve the tension Barton identifies, but also give researchers more tools in dealing with ethical challenges in research.

**DESIGNING A USABILITY STUDY FOR THE “NEXT STEPS FOR FAMILIES” FLYER**

This section poses a speculative usability test for the “Next Steps for Families” flyer, building upon the theories discussed in the prior section. This usability study is designed assuming that there is no cooperation from the agencies that created the “Next Steps for Families” document itself. While there may be some affordances in terms of accessing the design process in working with the document designers, there are larger issues of trust that I will discuss later that would perhaps make soliciting participants more difficult if the agency is views as “close to” the research site.

This section of the article draws upon Rubin & Chisnell’s *Handbook of Usability Testing, Second Edition* (2008) “Test Plan.” The Test Plan, they argue, helps define the parameters of a usability testing protocol, going over, even briefly, all the major components of a usability test. The plan includes nine parts, although Rubin & Chisnell recognize that different circumstances may warrant degrees of formality. For the purposes of this article, the plan offers a barebones understanding of what usability testing for the “Next Steps for Families” document could look like, and how one might articulate the research to have it approved by an IRB review.

I should make clear here that I have no evidence to suggest that the “Next Steps for Families” flyer was ever designed to be usable in the first place. The document seems to be the sort of “technology of disenfranchisement” that Jones & Williams (2018) discuss in that the creators of the flyer seem primarily focused on reinforcing the uneven power dynamic between them and their users. Of course, I also have evidence to suggest that the document was designed to be unusable. I believe I must assume that the document presents itself at face value: as a flyer that will help separated families become reuinted. Assuming the position that the document is designed in an earnest attempt to resolve a user issue, usability testing becomes an appropriate check on how well it fulfills its mission.

The following nine subsections are specific responses to the nine parts of Rubin & Chisnell’s “Test Plan.” All the answers are earnest yet rooted in observations drawn from the larger political context in which the “Next Steps for Families” document is immersed.

**Purpose, goals, and objectives of the test**

The reason we will perform this test is to determine the usability of the “Next Steps for Families” document. In particular, we want to observe places where the document could be clearer, or perhaps better explain components of its procedure. The document as it stands right now is an important text for parents and sponsors who would like to reconnect with their family members, especially children. Prior to the implementation of the recent policy precipitating the document, research made clear some of the mental health stresses that family separation has on Mexican and Central American families (Torres, Santiago, Walts, & Richards, 2018). This research is needed urgently in order examine if adjustments need to be made to the document to ensure speedy family reunification.

Research Questions

Several research questions drive the usability testing described in this plan. Among them are:

1. What obstacles stand in the way of users properly utilizing the directions described in the document?
2. Does the language delivery (as the document is bilingual) impact the uptake of users who are following the directions? For instance, will different language delivery predict different amounts of time to complete the directions?
3. Does the process described on the document mirror the user’s experience in the process of reuniting? In which places are the directions inconsistent with the procedure?
4. How do users respond when they encounter errors? Where or who do they turn to for clarification of the directions?

Participant Characteristics

Necessarily, the participants for the usability study envisioned here should be representative of the individuals who would use the “Next Steps for Families” document. Rubin & Chisnell suggest that participants “backgrounds and abilities” be “representative of your product’s users (p. 115).” However, in this case, it is difficult to get a firm grasp on the nature of the users. So far, there has not been a systematic census of those who have been detained and separated from their families by CBP. CBP does, however, keep track of Southwest Border apprehensions on an annualized basis. The most recent data represents Fiscal Year 2018 (October 1, 2017 – August 31, 2018), which encompasses the duration of the Zero Tolerance policy. While the statistics available on the CBP site offers month-specific information about border apprehensions at specific sectors, it does not inform readers of how many of the apprehensions went through the family separation process.

Statistics show that in Fiscal Year 2018, CBP apprehended 89,441 family units (“Family Unit here represents the number of individuals including children and adults apprehended with a family member). Of these individuals, almost half (42,757) came from Guatemala. 33,123 came from Honduras, while 11,525 arrived from El Salvador. The remaining 2,036 came from Mexico (U.S. Customs and Border Protection, 2018). To this end, the commonality among the users of the “Next Steps for Families” document is that they are generally from a country in Central America.

While there may be a prevailing view that Central American immigrants speak the Spanish language, the truth is more complex. In Guatemala, while the official language is Spanish, the country also recognizes 21 other Mayan languages as well as two other indigenous languages. The most widely spoken Mayan language, K’iche’, is estimated to be spoken by about 1 million of Guatemala’s 17 million people. Indeed, reporting has made clear that the linguistic diversity of undocumented immigrants has been a challenge for CBP, requiring them to outsource for help in communicating with recently arrived immigrants (Creek, 2018). While the “Next Steps for Families” document itself offers a Spanish translation, the linguistic and literacy assumptions underpinning the document still may not respond fully to the reality of the situation.

Even with these recognized limitations, a usability study of the “Next Steps for Families” should include both English and native Spanish speakers, as the document is composed in both languages. The participants should also include younger (ages 18–32) adults who may be in a position to have young children. The participants should also represent the countries from which recent undocumented immigrants originate.

All participants will be paid $100 per hour for each session they participate in. This amount is meant to recognize the immense risk participants take on in this research. Participants will also have an opportunity to speak with an immigration attorney on the premises before after their test if they would like, free of charge. We will expend every effort to mask their identity as they interact with government organizations.

Of course, an ethical issue rises in trying to assess the appropriateness of recruiting undocumented immigrants to test the document.

Test Design

The “Next Steps for Families” document offers three “Actions” (and two subactions under action 3) listed under “Step 3,” and we will design testing in accordance with those actions. Ideally, there will be 8 groups, one group for each of the first two “Actions” and an additional two groups who will take on the two subactions under “Action 3.” There will be one group that will perform the test in Spanish using the Spanish directions, and a group performing the test in English using the English directions. The users will operate using the direction for contacting ICE and ORR from outside ICE facilities. This means that the prospective participant has been released from custody. At present, we will not perform a usability test for those presently in federal custody.

Participants will also complete pre- and post-testing questionnaires. Participants will also be interviewed about their experiences.

Task List

The tasks each group will engage are defined by the “Actions” themselves. Since the “Next Steps for Families” document does not explain what happens once a user contacts the organization, we cannot test beyond the scope of the users getting a hold of someone at ICE or ORR. If the contact is successful, we may add other components to the test to explore the usability of the process once initial contact has been made with authorities.

Test Environment, Equipment, and Logistics

Participants will use untraceable cellular phones, laptops, and email addresses in their initial contact. There will be no video recording so we may protect their anonymity, although we will use voice recorders to log all phone interactions and print all email communication between participants and ICE or ORR authorities.

Test moderator role

The moderator’s primary role is to protect the anonymity of the test participant. Moderators will check all outgoing emails and listen to all phone conversations and intervene and end testing sessions when testing participants potentially reveal too much of their own immigration status, names, addresses and other identifying information.

Since there will be no video recording equipment, it may be necessary for the moderator to have assistants in the room taking notes on the user’s response, recording changes in body language and tone of voice. To this end, test moderators and any assistants should be fluent in the language of the testing participants.

Data to be collected and evaluation measures

The primary data will be the voice recordings and printed email
exchanges between the participants and federal authorities. Secondary data, in the form of session notes, timing apparatuses, and post-testing debriefing questionnaires. We will interpret this data through the lens of the aforementioned research questions.

**Report contents and presentation**
The findings will be reported to ICE, ORR, the Department of Homeland Security, and both house of the United States Congress. The report will identify flaws in the document and offer actionable remedies to make the document more user-friendly. The report will include the anonymized words of the testers. The recommendations will span both design- and policy-level decisions. To this end, the report is meant to be a robust and thorough distillation of the testing and all aspects of user interaction with the document.

The principle investigator(s) will make themselves available for presentations if any of the government agencies would like to discuss the usability report with more depth.

Finally, the research will be shared with academic and designer audiences in the service of adding the general knowledge of the field through this case study.

**“NEXT STEPS FOR FAMILIES” FACES THE INTERNAL REVIEW BOARD (IRB)**
This section puts the usability test for the “Next Steps for Families” flyer described in the prior section through an imaginary, yet realistic IRB process. In short, the IRB process described in this section will “test” the ethics of performing the testing method described in the prior section.

While there is no one set of codified IRB standards that all researcher must follow, the practices are remarkably similar from institution to institution in higher education. Part of this similarity is statutory, as federal regulations governing human subject testing issued by the Department of Health and Human Resources underpin such research. The authority of US Code governing human subjects testing is recognized in 18 of 20 Federal Agencies. To this end, the process I describe likely does not deviate vastly from most university IRB panels. Universities subscribe to human subject testing standards consistent with the basic principles contained in the Belmont Report (1978, authored by the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research). Among these basic principles are: “1. Respect for Persons, 2. Beneficence, and 3. Justice.” The report goes further to examine the ways in which these principles can be applied into practice. This article assumes that its audience has at least a cursory knowledge of these principles and will not spend time rearticulating the entire report. The report itself is widely available online. It will, however, structure its discussion using the report’s principles and applications.

**Principle 1: Respect for Persons**
Respect for persons incorporates at least two ethical convictions: first, that individuals should be treated as autonomous agents, and second, that persons with diminished autonomy are entitled to protection. (p. 4)

The first principle the two ethical convictions that inform it cut to a central question: can potential research participants give their autonomous consent to participate in the research? In the context of the “Next Steps for Families” flyer, this sort of question is loaded. The Belmont Report suggests that, “The capacity for self-determination matures during an individual’s life, and some individuals lose this capacity wholly or in part because of illness, mental disability, or circumstances that severely restrict liberty” (p. 4). The report then goes on to specifically outline the circumstances regarding using prisoners as research participants. Although not specifically prisoners, the impact of policies forged by the federal administration, especially in its dealing with Latino and Hispanic individuals (as citizens, immigrants, and visitors) requires us to rethink what it would mean to say an individual operates in a “circumstance that severely restricts liberty” (p. 4). At times like these, the all-encompassing wording of the report allows research to both broaden and narrow the focus of their work.

This article will not go through the task it attempted earlier in articulating the many ways in which the administration’s actions have placed the liberty of Latinos and Hispanics into legal limbo. However, a brief review is helpful in assessing the context for how Latinos and Hispanics may reasonably lack trust in the administration’s intentions.

The Washington Post (Sieff, 2018) reported that the administration has stepped up an attempt to investigate “citizenship fraud,” leading to “passport applicants with official U.S. birth certificates are being jailed in immigration detention centers and entered into deportation proceedings. In others, they are stuck in Mexico, their passports suddenly revoked when they tried to reenter the United States.” While the Post recognizes that such actions had occurred since the early 2000s under a prior administration, it also suggested that the more recent administration had enhanced its investigations of prior passport holders and individuals with Birth Certificate from the United States, especially if they were issued near the southern border. Likewise, since early in the administration’s tenure, arrests by ICE officers for immigration offenses rose substantially (Dickerson, 2017). An uproar about ICE officers staking out courtrooms for potential suspects (Amaro, 2018) led to judges and lawyers across the country to pressure the agency rethink its policy, which it did. Of course, there has been usability testing performed on prisoners who were incarcerated at the time of the testing (Boyd, Bond, Gallagher, Moore, & O’Kane, 2017), but in this case the legal status of the prisoner was more clearly defined, and the research conducted was designed to enhance quality of life for the prisoners. There is nothing in that study to suggest that participation in the test might itself lead to legal challenges beyond what the prisoner-participants were already facing.

While certainly most Latinos and Hispanics should not have to worry about being in a state of diminished liberty, the practices of the administration make it difficult for a researcher to assure a potential research participant that the work of the study will keep them safe from being bothered (or worse). In the scope of identifying the persona of an individual who might use the “Next Steps for Families” document, researchers must recognize the present political exigency that the document exists within. While in name the persona may be not be incarcerated and therefore seemingly “autonomous,” researchers need to dig deeper to examine if the “autonomous” designation is also true in the practice and fact of the present political and social climate.

**Principle 2. Beneficence**
Persons are treated in an ethical manner not only by respecting their decisions and protecting them from harm, but also by making efforts to secure their well-being. (p. 5)
One could perhaps convincingly argue that the role of “Beneficence” could be the saving grace of a usability study of the “Next Steps for Families” flyer. The line of thinking would suggest that perhaps the document will exist anyway—with or without user testing. That user testing offers the audience the only real way to have its needs assessed and responded to. Moreover, the objective of the document is, seemingly at its face, to reunite families. To this end, a more responsive document design could perform the sort of work that will make this task easier. Perhaps more families could be reunited—or reunited more quickly—if the design of the document were better. To this end, the true ethical conundrum of the test is a moot point. The fact that the process of user testing has any beneficence at all would seemingly wash away the sins of the larger context in which the document exists. The document, after all, helps secure the well-being of its users by rejoining families with each other.

But the beneficence in this context resembles a wolf in sheep’s clothing. The ethical issue is posed from a position of nihilism: the ethical choice a research project has only starts once the potential evil of the apparatus it represents is accepted as a matter of fact. It is here that researcher begin usability testing for oppression. That is to say, the usability test becomes a tool of the oppressor to give disenfranchised users an illusion of control and responsiveness.

The Belmont Report makes clear that “the obligations of beneficence affect both individual investigators and society at large, because they extend both to particular research projects and to the entire enterprise of research” (p. 5). This call to examine the entire enterprise of the research is a key note in better understanding the ways in which a usability test of the “Next Steps for Families” document might pass or fail an IRB review process. The idea of “entire enterprise” is ambiguous in its description in the Belmont report. For people drawing from TPC research, Agboka’s (2013) discussion of “cultural sites” may be helpful. To assess the “entire enterprise” of a research project to understand its beneficence would require the similar move exhibited in the “Respect for Persons” principle. The research and its methods must be immersed in the cultural and political exigency of the research subjects. That exigency must also be the center of the ways in which we organize our research.

**Principle 3: Justice**

Who ought to receive the benefits of research and bear its burdens? This is a question of justice, in the sense of ‘fairness in distribution’ or ‘what is deserved.’ An injustice occurs when some benefit to which a person is entitled is denied without good reason or when some burden is imposed unduly. (p. 5)

In writing in response to the first two principles, I focused primarily on the ways in which the research design would issue potential challenges for an IRB committee to allow such a study. It is here, in Principle 3, where the speculative nature of the research design must cease. The “Next Steps for Families” document is an injustice. The separation of children from their families, may be argued to be a necessity as a matter of practicality in a carceral system, but this argument only demonstrates a desire to implement unjust policies at a low cost. The denial of liberty while in process of legally seeking asylum seems unjust on its own, never mind the legal implications of such a move. The fact that the administration did not take care to properly document separated families (Dickerson, A Look at What’s Behind Young Migrants’ Transfers To a Tent Camp in Texas, 2018) in the first place raises reasonable questions about whether or not families were ever intended to be reunited in the first place.

In terms of justice as it relates to the usability testing I described, it would seem difficult to separate the testing from the larger context of the “zero tolerance policy.” Designers and testers recruited to test documents such as a “Next Steps for Families” flyer are in double bind wherein they may feel they are doing a service to the user, but the service likewise works to blunt the impact of and otherwise unjust policy. Even with the best intentions, designers and user testers end up helping perfect part of an unjust, but increasingly sophisticated, system. So long as users are treated in an unjust system, it is difficult to imagine how the small justices of user-testing and human-centered document design impacts a mechanism meant to deny individuals of their humanity.

**The Belmont Report in Reflection**

The work of imagining a drawing up a research protocol that would be used for usability testing a document such as the “Next Steps for Families” and then analyzing it through an IRB review informed by the Belmont Report is admittedly a work of fiction. However, its fiction is speculative in its scope, and speculative fiction, as Margaret Atwood and Ursula LeGuin suggest, deals with “things that really could happen” (2011, p. 6). Far from deliberately trying to prevent such a usability study from ever occurring, this exercise demands that scholars assess the political and cultural implications of such research, and what that research means for its subjects, in the early stages of research design. Research method design is speculative work. It imagines the impact of the research on the subjects and the reasonable ways the testing protocol may go wrong. However, as opposed to focusing merely on methodological protocols, the speculative researcher likewise assesses the socio-political protocols that undergird the entire enterprise of the research. Likewise, IRB reviewers would be wise to take a similar holistic and speculative position.

**Pedagogies of Ethics in Usability Research**

This study puts forth a methodology in which the Belmont Report acts as a sort of heuristic to assess the ethical concerns embodied in user-centered research. The Belmont Report offers itself as a useful heuristic because it concerns three components that can be debated and discussed by researchers as they begin to design their research methodology. The exercise this article performs offers an example of what classrooms may want to undertake as well in two ways.

First, instructors can find document like the “Next Steps for Families” text and perform a similar analysis on whether the document could be usability tested ethically. There will probably be few documents with the same sort of exigency as the documents described in much of this article, but the exercise with any document would be instructive toward better understanding the nature of the document, and how researchers would fit into the larger context of how that the document operates as part of a system. Instructors may find documents similar to what Katz (1992) and Ward (2014) examine and perform the same sort of analysis I perform here and come up with substantially different conclusions. This would help to demonstrate to students the complexities of ethics in usability research.

Second, instructors can facilitate discussions about the role of ethics in user-centered research in general as a component of research design. Students and instructors together can parse through their
understandings of the three principles that frame the Belmont Report, and can connect their discussion to the research they want to design. Moreover, the principles can act to spend more time on the rhetorical work of the research by asking students (and all researchers) to frame their responses in the context of the rhetorical situation in which they perform their research. Certainly, “justice” and “respect for persons” will look different from project design to project design. In making considerations about the interaction between research design and ethics, students will better understand the ways in which research methods have their own rhetorical exigencies that must be tended to and thoughtfully considered before the work of data collection can begin.

I should make clear that while I use the Belmont Report as a point of departure for discussion, I can see an opportunity for instructors to use other ethical frameworks to guide this sort of exercise. Whatever ethical framework we may find useful, it is important to attach a thoughtful discussion about how that ethic could operate in the design, data collection, reporting, and post-reporting of research. This article focuses on research methods design and argues that it is important to make clear ethically-driven decisions at this stage. What is most important in the pedagogy of ethics as it relates to usability research is that investigators are trained to make clear what sort of ethical decisions drive their work.

CONCLUSION: USABILITY RESEARCH AND ETHICS

There is a position of privilege I readily recognize as a United States-born, white privileged male in making an argument that ultimately user researchers should avoid performing research on individuals in some of the most dire conditions in their lives, in which their own children have been ripped from their arms. And while I would like to imagine that if all designers and usability testers resisted adding any legitimacy to an unjust and oppressive system, I recognize that an organization can still find some people—qualified or not—who will perform the design work it needs. It is not my place here to moralize to the individual, but to argue that the field must take a stand about what it will and will not accept as a standard practice to when dealing with oppressive systems. Document designs that enable oppressive administrations and unjust policies should be hotly debated amongst professionals and researchers, and students should be cognizant that the growing social justice mission of the field is taken seriously.

While this article focuses on the ways in which usability testing and user-centered design may be used as a tool of oppression, there is space (which I plan to explore in a subsequent article) for examining how usability testing can also be a tool of resistance. In particular, non-governmental organizations (NGOs) working as representatives and allies to immigrants on the southern United States border face similar challenges in designing tools for the same audience as the “Next Steps for Families” flyer, such organizations are not bound to the same history of oppression and exercises of power as the United States government. These NGOs navigate their own complex relationships between the Law, the immigrants they serve, and their advocacy mission. In this context usability testing and user-centered design operates as tools of resistance against injustice.

I return now to the two research questions that guided my initial study:

1. Can the separation of families document be tested for usability in accordance with human subject testing standards?

2. If the document can be tested for usability, what can TPC and document design professionals learn about the ethics of usability testing in a broader sense?

I would argue that the scenario I put forth would suggest that the document could not be tested in accordance with general IRB approval. The beneficence to the participants, and more importantly, the justice of the research, makes it difficult to argue that the prospective user benefits as much from the clarification of the document as an oppressive policy would gain from the seeming legitimation of its document. While academics have obligations to IRB approval based on the Belmont report, many in the private sector do not. To that end, this text may be seen as a guideline to shape both individual and corporate ethical standards where none may presently exist or are otherwise unclear.

While the answer to the first research question is “no,” an answer to the second research question is still salient. While references to discussions about codified codes of conduct held by an industry’s professional association is helpful when it appears, the task of better understanding the ethical practices of a field becomes one for the neophyte to engage and figure out. Placing the onus of learning how to operate as a professional by understanding research methodologies and ethical codes of conduct is a tall order. Moreover, when the emphasis of our training regimens is on the research methods with only ancillary connection to the ethical challenges that researchers and composers could encounter, ethics becomes a moot point. As a community of practice, teachers, research, and trainer already acculturated to the field must work to help promote a system of practices that the group has codified as “ethical.” Whether the field conceptualizes that ethic as drawn from deontology, an ethics of care, something else (or a variety of ethics) is not as important as staking a claim some ethical clarity that underpins the way we envision the work we want to perform.

The role of a professional organization is not just to connect professionals to each other, but it must also help establish and promote best practices, argued about and agreed to by the members of the organization. This must include a robust discussion about the role of ethics in professional practice. Members of the group should have a clear sense of what is and is not endorsed by the larger organization. Those who choose to ignore or act in open defiance of the code of conduct established by the larger group must know that their choices are ostracized. This goes both for industry and academic communities (and indeed, there should be some overlap between the two). The ethics of usability testing may offer a fertile ground for discussions across the academy-industry divide and could enhance how each side better understand the ethical challenges that are posed in their research.

Ethical codes of conduct are an act of institution. What the institution endorses and forbids should not only be clear but should also be easy to recall among its members. Institutions should also set up opportunities for members to complicate or questions these codes, and perhaps propose modifications that better meet the needs of changing social, cultural, and political dynamics. This call to see ethical codes as an act of institution is not so much meant to elevate the status of the institution as much as it is a call for clarity and transparency for what the institution believed. Individual members are bound to their own conscience when they research, design, compose, write, edit, or code a new project. Members should be able to take ownership of that conscience when
they speak against the sorts of codes they find operating contrary to their own understanding of ethics. While some members may argue for codes of ethics that are in line with liberatory practices and social justice, some, of course may not. The role of the code of conduct should provide a clear ethical standard that members can judge themselves against when they make decisions in their professional practices.

While I am not arguing that anyone developing research methods or documents that perpetuate systems of oppression, a clearly written and widely circulated code of professional conduct at least makes clear that using the tools of the organization runs counter to their designed purpose, and thus the researcher must know that his decisions are aberrant in the larger context of the profession. It is worth remembering that the ethic described here primarily deals with the role of planning research methodologies. Other ethics can and should be called into account as researchers engage in the more complex challenge of practicing their work at other stages in the research process.

There should still be an overarching principle that should be easy to remember and can act as an alarm of sorts for ethical introspection as a researcher is faced with a dilemma of design, particularly in user-centered research. I offer this quick standard for reference:

*If the act of performing research on a task could put the user in harm’s way, we must rethink the entire enterprise of the product design, from its context to its intended result.*

This statement goes a bit further than the traditional “Do no harm and if possible, provide benefits.” The research standard here operates in a twofold manner.

1. It calls for researchers to examine the nature of harm that is built into the design of the task. And,
2. It calls for researchers to become immersed in the context (including the social, cultural, and political implications) of their work. To this end, no text or task can be viewed in isolation from its context.

If we look at the standard of “Do no harm,” the verbiage dictates that “Usability practitioners shall not expose participants to any unreasonable physical, mental or emotional stress.” Yet what if the participant is already under physical, mental, and emotional stress, such as being a parent who has just had their children taken away from them? A document designer may be convinced then that the “Next Steps for Families” document will help give users a sense of control in a situation and may perhaps alleviate the stress that has surely compounded in the situation. Such a designer may return to the “Next Steps for Families” flyer and argue that, if such a document needs to be designed, it should at least be designed well and from a user-centered perspective. While this is a fair argument, it also isolates the harm of the the document from its context. If we are only looking at the document, it appears to be a life preserver that can provide hope and recourse for individuals within a stressful situation. However, if we view the document as a part of a larger ecology of documents and policies designed to discourage undocumented migration using the separation of children from their parents to achieve these means, the document becomes another tool of power meant to perpetuate an oppressive modus operandi. The second part of the research standard forces practitioners to understand the context in which their work exists.

It is rhetorical to examine a document outside of its larger context. This much should be clear: if we are to compose for users, we must consider the full measure of the user experience as components that could impact how the user interacts with that which we create and test.

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**ENDNOTES**

1. Some agencies that are not signatories to the authority vested in HHS human subject testing standards include the Office of the Director of National Intelligence, the Central Intelligence Agency, both of which are exempted under an Executive Order.

**REFERENCES**


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APPENDIX A

Next Steps for FAMILIES

2. You have been charged with the crime of illegal entry into the United States.
3. Within the next 48 hours, you will be transferred to the custody of the U.S. Department of Justice (DOJ) and will be presented before a judge for having violated this law.
4. While this process is occurring, your child or children will be transferred to the U.S. Department of Health and Human Services (HHS), Office of Refugee Resettlement (ORR), where your child will be held in a temporary child shelter or hosted by a foster family.
5. DHS and HHS can take steps to facilitate reunification with your child(ren).

How do I locate my child(ren)?

**Action 1** - Call U.S. Immigration and Customs Enforcement (ICE) Call Center.
- If calling from outside of an ICE detention facility, call 1-888-351-4024.
- If calling from an ICE detention facility, call using speed dial 9116# on the free call platform.
- Available Monday – Friday, 8am to 8pm EST. Language assistance is available.

**Action 2** - Call the ORR Parent Hotline.
- If calling from outside of an ICE detention facility, call 1-800-203-7001.
- If calling from an ICE detention facility, call using speed dial 669# on the free call platform.
- Please provide the child’s full name, date of birth, and country of origin. It is helpful to give the child’s A number, or alien registration number, to the operator if you have it.
- Available 24 hours a day, 7 days a week, in Spanish or English.

**Action 3** - Friends, family, ORR staff, and legal representatives can assist you by emailing:
- ICE at Parental.Interest@ice.dhs.gov
- ORR at information@ORRNC.gov

After your court hearing, you will be transferred to ICE custody.

While you are in ICE custody:
- ICE will work with ORR to schedule regular communication (via telephone and/or video teleconferencing) with your child(ren).
- ICE will provide access to legal self-help materials.

Usted está actualmente en la custodia del Departamento de Seguridad Nacional de los Estados Unidos (DHS) Oficina de Aduanas y Protección Fronteriza (CBP).

Usted está acusado del delito de entrar a los Estados Unidos ilegalmente.

Dentro de las próximas 48 horas, usted va a ser transferido a la custodia del Departamento de Justicia de EE. UU. (DOJ) y va a aparecer antes de un juez por haber violado la ley.

Mientras que ocurre este proceso, su hijo o hijos serán transferidos al Departamento de Salud y Servicios Humanos de EE. UU. (HHS) Oficina de Reubicación de Refugiados (ORR), donde su hijo será puesto en un refugio para niños o será cuidado por una familia sustituta.

DHS y HHS pueden tomar los pasos necesarios para facilitar la reunificación son sus hijos.

¿Cómo ubicó mis hijos?

**Acción 1** - Llame el Centro de Llamadas del Servicio de Inmigración y Control de Aduanas de EE. UU. (ICE)
- Si usted llama fuera de un centro de detención de ICE, llame 1-888-351-4024.
- Si usted llama desde un centro de detención de ICE, llame usando la marcación rápida 9116# en la plataforma de llamadas gratuitas.
- Accesible lunes-viernes, 8am a 8pm EST. Asistencia para hablar en su idioma está disponible.

**Acción 2** - Llame la Línea para Padres del ORR.
- Si usted llama fuera de un centro de detención de ICE, llame, llame 1-800-203-7001.
- Si usted llama desde un centro de detención de ICE, llame usando la marcación rápida 669# en la plataforma de llamadas gratuitas.
- Por favor proporcione el nombre completo de su hijo, la fecha de nacimiento, y su país de origen. También informe al operador el “A number”, o número de extranjero de su hijo si lo tiene.
- Disponible 24 horas al día, 7 días a la semana, en inglés o español.

**Acción 3** - Amigos, familia, empleados de ORR, y su representación legal pueden asistirlo a través de mandando u enviar a:
- ICE en Parental.Interests@ice.dhs.gov
- ORR en information@ORRNC.gov

Usted va a ser transferido a la custodia del ICE después de su audiencia en la corte.

Mientras en el cuidado y custodia de ICE:
- ICE va a trabajar con ORR para designar comunicación fija (vía teléfono y/o video teleconferencia) con sus hijos.
- ICE dará acceso a materiales de autoayuda legal.
Book Review

Algorithms of Oppression: How Search Engines Reinforce Racism

Umoja Noble


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Read and considered thoughtfully, Safiya Umoja Noble’s Algorithms of Oppression: How Search Engines Reinforce Racism is devastating. It reduces to rubble the notion that technology is neutral and ideology-free. Noble’s crushing the neutrality myth does several things. First, this act lays foundations for her argument: only if you recognize and understand that technology is built with, and integrates, bias, can you then be open to her primary thesis: search engines advance discriminatory and often racist content. Second, it banishes a convenient response for many self-identified meritocratic Silicon Valley “winners” and their supporters. Post-reading, some individuals may retain their beliefs in a neutral and ideology-free technology in spite of the overwhelming evidence and citations Noble brings to bear. Effective countering of Noble’s claims is unlikely to occur. For professionals working in technology, information, argumentation, and/or rhetorical studies, Algorithms of Oppression is refreshing. Agonistic towards structural racism and its defenses, single-minded in its evidentiary presentation, collaborative in its acknowledgement of others’ scholarship and research, Noble models many academic, critical, and social moves. Technology scholars and writers will find in Algorithms of Oppression a masterful mentor text on how to be an activist researcher scholar. Noble also makes this enjoyable reading. It is uncommon to find academic books that can simultaneously be read, used, and applied by academics and non-academics alike.

Noble’s binning the neutral technology myth may seem obvious to many academic readers. Sadly, this technocratic myth remains strong, if not dominant, in popular discourse and perception. Noble offers multiple examples and approaches readers can employ to persuade others about technology’s inherent, structural bias generally and search engines specifically. Noble’s book is an excellent example to point to as a mentor text, one worthy of imitation, and a way for new scholars and practitioners to learn from. Similarly, when teaching undergraduates, Algorithms of Oppression offers a powerful presentation of technology’s bias that is more difficult to dismiss than a short classroom lecture.

Noble’s crushing the neutrality myth is also essential to successfully advance her argument that not only are search engines, most explicitly the ubiquitous Google, not neutral, they actually foster and promote discrimination and racism. Noble then develops and presents evidence of the racist and negative impacts through two chapters with her primary research emphasis on black girls and black women. Her findings about the hypersexualization of women of color generally, and black girls specifically, are revealed in both Google search results as well as in the paid Google AdWords results (pp. 68–78). Given Google’s ever-changing algorithms and occasional responses to public pressure regarding search results, Noble includes multiple screen shots to document her findings. Demonstrating additional differences in how algorithms treat race, Noble draws on the 2016 Kabir Ali tweets about how searches for “three black teenagers” shows mugshots while “three white teenagers” shows “wholesome teens” (pp.80–81). By introducing both the Ali tweets as well as Twitter threads about professional and unprofessional women’s hair styles—unprofessional featuring all Black women in 2016—Noble makes connections that are powerful, disruptive, and effective in proving her points. First, Google’s search is a racialized weapon. Second, the work to challenge and engage with replication of structurally racist values can and has been undertaken by a number of people. Third, calling out structural racism in technology is something that literally anyone can do.

Racist technology’s impacts are not benign or illusory. Instead, Noble argues, racist search helps facilitate or fuel murderous racist attacks like Dylan Roof’s 2015 massacre in Charleston, South
Noble’s third chapter is part meditation, part argument, and part assertion that makes her point clear: search engines and their algorithms are not neutral and they must be changed.

Having made a solid case that search engines like Google foster racism and discrimination, Noble moves on to consider what protections individuals may find. Short answer: none, unless you are wealthy. Then comes her provocative and developed discussions about the “Future of Knowledge in the Public” (Chapter 5) and the “Future of Information Culture” (Chapter 6). Both chapters are directly relevant to technical communicators and information designers, whether working in public or private sectors. Each chapter could easily be a book, thus each chapter reads more like a thoughtful series of prompts or provocations with some valuable details and examples; her anti-monopolistic and partially anti-capitalist solutions are refreshing—their political viability, however, is unknown. While these later chapters could be excerpted for discussion, their impact and ethos rely upon the arguments developed earlier in the book. Noble’s “Conclusion: Algorithms of Oppression” could be excerpted, and used effectively for professional development discussions or as an opening proposition or text with a reading group.

Two critical connections Noble makes to our work: documenting problems and solving them. Knowledge and documentation of systemic racist and classist problems is important, especially because evidence makes the harm that is done clear (p. 28). Documentation, though, does not change the system or solve the problems. Solving these problems requires professionals who have a deep understanding of search and retrieval’s technical aspects in order to impact the system (p. 26). Work like Noble’s helps form a foundation to grow, coordinate, and document structurally racist search algorithms’ negative impacts, like the hypersexualization of Black women and deprofessionalization of Black professionals. To address and make changes to search and retrieval, scholars, practitioners, and academics will need to increasingly train newer technologists and scholars not just about technology’s negative impacts, but also how to advocate for, and then enact, technical changes. This is an agenda that will likely take years if not decades: fostering a critically conscious coding community with enough impact to redirect Silicon Valley’s value system.

Giving the current cultural milieu where cryptofascists are showing their iron heels and barbed-wire camps, where white supremacists hold influential seats in executive and representative government branches, and where there is very limited understanding of social media’s impacts on elections, community, mass shootings, and identities, it is important to be free of one myth: Google’s supposed neutrality. Rather than trust that a for-profit company is fairly managing what is perceived as a public good, the public needs to challenge and question Google, and all search engines, about their proclaimed neutrality. It is dangerous to assume neutrality when there are—as Noble proves—both bias and harm. For those who understand the structurally racist nature of search and ads, several clear takeaways emerge. First, pedagogically, are we teaching our students the ability to recognize structurally racist technologies—and have we taught them how to hack or change them? Second, theoretically as well as practical conversations about how to create or facilitate non-commercial search—such as Noble explores—could make for robust community as well as classroom discussion (pp. 179–181). Third, more research and documentation around structurally racist technologies—as well as antidotes—needs to be published. *Algorithms of Oppression* is a vital work, and one where Noble clearly identifies her work within a larger liberatory network and tradition.

Fortunately, there is an increasing number of books similar to Noble’s in topic and theme. Two books that connect well with Noble’s are Gillespie’s *Custodians of the Internet* (2018), which explores the problems and complexities of platforms and moderation, and Bucher’s *If…Then…* (2018), which ranges from individual to Internet-wide information control, algorithms, and media choice. Additional related books like O’Neil’s *Weapons of Math Destruction* (2016) and Benkler’s *Network Propaganda* (2018) can help readers grasp how structural racism and inequality operate in parallel fields, how these technologies can be weaponized, and—most importantly—understand directly some of the material and carceral impacts these “neutral” technologies have on our culture.

Hopefully, this trend will continue to gain momentum and political power. One powerful aspect of Noble’s work for academics and practitioners working in communication design and technical communication is that she shows us one way our work can be structured, presented, shared, and published with and for the public good. Additionally, this work can be presented in a public intellectual’s voice that is accessible and persuasive to multiple audiences. Noble’s *Algorithms of Oppression* is the kind of scholarship we need. It models, it persuades, and it offers proactive solutions. Perhaps Noble’s greatest contribution is that she shows how scholarship, activism, and social media savvy can be presented in a form that’s accessible and credible to scholars, activists, and citizens.

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### ABOUT THE AUTHOR

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Book Review

*Network Sense: Methods for Visualizing a Discipline*

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Derek N. Mueller’s *Network Sense: Methods for Visualizing a Discipline* (2017) presents a compelling argument for adding distant reading and thin description to the Rhetoric, Composition, and Writing Studies (RCWS) research methods portfolio. Not only can these methods help professionals address information overload, but the methods also support disciplinary wayfinding and network awareness for veteran and initiate practitioners and scholars alike. *Network Sense’s* explicit goal is to help current and new members in RCWS avoid information overload and better understand their discipline and where it is going. Mueller’s presentation and evidence builds upon lived academic experience of ever-expanding growth in research, conferences, publications, and professional activities in RCWS. Similarly, his detailing the dearth of non-local, reliable, and consistently gathered data articulates the experience and lived frustration of many scholars. Finally, his presentation and analysis regarding the increasing number of scholars cited at the end of the long tail as opposed to having more repeatedly cited authors explains the felt experience of sharing or disciplinary niching or potential diffusion. Winning the 2018 *Computers and Composition* Distinguished Book Award, as well as the 2019 Research Impact Award by the Conference on College Composition and Communication, underscores this book’s value to its fields.

It is easy to become disoriented in the field of RWCS, much less for initiates to understand how and where to enter and engage in the field. This desire to do more than float, rather to swim in a meaningful direction in the shifting sea of information and practices can be applied meaningfully in multiple areas. For communication designers and technical communicators, these openings also represent potential cracks or gaps where our fields’ skills, abilities, and practices—particularly graphical and visual representations as well as innovative data presentation made possible by software and technology developments—may now be seen as having greater value, or potentially acceptance, than they have had in the past.

While RCWS considers itself a relatively young field, the same could be said about communication design (CD) and technical communication (TC). *Network Sense* offers young disciplines, like CD and TC, as well as emergent ones like Caption Studies, multiple tools, and frameworks to evaluate and reflect on their discipline’s evolution, history, and ongoing development. Such efforts could help revise or establish publication goals and outcomes, explicitly identify common places or readings for new practitioners, or help the field retain its own interdisciplinary roots and origins. For example, rather than waiting 30 or 40 years, it would be wise to start collecting more longitudinal data about professional programs, faculty, scholars, and practitioners; to identify current citation practices and trends—and help identify, now, what has been trending or taking place within the field. Additionally, younger fields could start seeking out ways to fund or support a centralized information or data collection and analysis office for the field, a suggestion Mueller makes for RCWS.

Mueller’s solution is additive and respectful: adding thin description and distant reading to RCWS’s research methods repertoire. He proposes RCWS continuing to practice and engage in research methods the field already knows and has mastered, such as ethnographic studies and research of individual classrooms or programs, while adding perspectives that thin description and distant reading enable. As Mueller frames it with his smart cartographic and graphical references and discussions, this will allow initiates, researchers, and others to have the ability to zoom in and out of the field—to have multiple, sophisticated, and complex visual representations—and at scales that are most effective for different situations.
Representations resulting from thin description and distant reading are not meant to be descriptive or enable prescription; rather they are meant to provoke questions and discussions—like Network Sense book itself—while being globally accessible as interactive, engaging infographics and/or maps (but not limited to those genres) located online. Mueller’s own interventions model this approach, such as asking what it means that the CCC’s long-tail gets longer each year; now that we can map out when different turns emerge or dissipate, how does that ability, and the resulting artifacts, help us understand publications from that era or the current turns we are experiencing?

Mueller’s proposals appear to connect with Raymond Williams’ concept of structures of feeling (1977). When Williams was writing, it was simply not possible to accumulate or analyze large bodies of work as that work was being authored and published. Even if with a huge budget, the publication of hard copy journals and books, much less the time to read them, would result in a delayed sense of the field, different trends that might be developing, and the emergence of specific themes. All this assumes that a scholar would have the time to read all the materials and process it meaningfully. With the simultaneously global digital publication of books and articles, multiple data analysis and mining software that can harvest, gather, and be guided to analyze these works, and thoughtful research methodologies and theories can bridge this gap. Thin description gives room to bring in and search for different kinds of trends; Mueller’s Google Motion Charts demonstrate just one possible approach with this. Instead of being limited to a smaller body or collection of works—limited by an individual or research cohort’s time to read and review material—these same digital tools allow researchers to expand the scope of materials pulled in for analysis, and this falls under distant reading. Both thin description and distant reading, when fueled by technological solutions, can help researchers identify trends or developments now—as they are taking place—instead of needing the years or decades of distance that were necessary, in part, to allow scholars to look back and see structures of feeling in a different age. In brief, structures of feeling are the struggles of different ways of thinking competing to emerge during a specific historical time or period. A structure is not explicit; rather “It appears in the gap between the official discourse of policy and regulations, the popular response to official discourse and its appropriation in literary and other cultural texts,” (Oxford Reference). Mueller’s proposed methods take advantage of both easy data access as well as incredible computational and software power, thereby potentially enabling the ability to identify possible structures of feeling during the time when they may or may not emerge. Mueller’s examination of different turns in RCWS helps make this a clear possibility. Whether or not structures of feeling are an appropriate term for labeling this, Mueller’s proposed methods can enable a discipline to be self-aware and alert to its own internal trends, perspectives, and ways of thinking while they are happening and, potentially, adjust course based on that self-awareness.

Mueller’s citation and evidentiary practices are masterful; every claim or discussion encountered has support. For academics and scholars in the field, this is a pleasurable and an excellent model; for practitioners, initiates to the field, or experts in other fields, this might become tedious or frustrating. An example: while thin description and distant reading are likely knowns for many experienced RCWS scholars, delaying clear explanations of these practices for 25–30 pages makes the text less friendly for non-experts or practitioners. Similarly, the introduction is friendly and familiar for field members; however, the conclusion serves as a better introduction and overview to the book than the Introduction itself.

The book’s multiple strengths are bold: excellent argumentation and presentation; clear addressing of polarizing historical conflicts around research methods by offering a third way: additive thinking and respect for all research approaches; thorough documentation; demonstrable applicability by doing exactly what he describes and proposes—arguing, explaining, and then doing; establishing clear connections to potential classroom teaching without getting lost in the details and examples.

Network Sense’s dichotomy is that much of the book is about helping create, open, or identify multiple doorways for initiates into the field, this book itself is not one of those doorways—instead, Network Sense is more about training the trainers or helping field veterans make their discipline, departments, and fields more understandable, and therefore more accessible and usable, to initiates. While this may prevent or slow down initial engagement with the book, Mueller’s value on offer for individual researchers, as well as for RCWS and related fields, makes any apparent hurdle worth working through and past. Mueller’s vision on how to employ technology and methods to enhance disciplinary self-awareness is impressive and well worth reading.

REFERENCES


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