



The Invisible Work of Iterative Design in Addressing Design Injustices

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Abstract: The move to describe technical and professional communication (TPC) as a problem-solving, design-based endeavor has allowed a broadening of the work rhetoric can and does do in the world, reframing TPC as an engaged practice that helps us solve complex problems. And yet as scholars invested in social justice, the authors find few connections between the design approaches often outlined by TPC scholars and the problems that emerge because of oppression, injustice, and the attendant rhetorical violences that pair with them. This article situates a methodological praxis of iterative design, examining design and design work as complicit in the creation and destruction of oppressive structures. This piece offers a brief overview of the use of design as a term for addressing injustice at multiple levels. Authors then describe the methodological potentials of iterative design and identify three inherent values of iterative processes (non-linearity, slowness, and multivocal critical imagination) that enhance the methodological praxis of iteration. The piece concludes with suggestions for how iterative design can take shape in our classrooms, institutions, and communities as a tool for change.

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Transformation doesn't happen in a linear way, at least not one we can always track. It happens in cycles, convergences, explosions (p. 105). - adrienne maree brown, *Emergent Strategy*

In 2020, as the news of George Floyd's murder eclipsed the news of the pandemic, we, the authors, found ourselves concerned about the ways our own field of technical and professional communication (TPC) contributes to and remains complicit in systems of oppression and, more specifically, anti-Black violence. In response to two specific calls-to-action from Black and BIPOC (Black, indigenous, people of color) scholars in TPC (Jones & Williams, 2020; Haas, 2020), we gathered with other concerned scholars to take action, the end result of which was an anti-racist reviewing heuristic. In our first meeting, we discussed how we might take action in our institutions and communities, and focused on what specific problem we might address as a means of redressing inequities in our field. After one meeting, we decided to tackle the oppressive and racist practices that inform and emerge from the editing, reviewing and publication cycle in the fields of rhetoric and writing, with a particular, though not exclusive, focus on technical communication. The way these processes were designed, we mused, were unjust.

Thus began a months-long iterative process of collaboratively designing a document that might do impressive amounts of work. In its most ideal form, the document would support authors, editors, and reviewers who have traditionally been preyed upon by the publication process and equip them with a heuristic and tool to push back as they engaged with the publication process. We had lots of ideas: "Guidelines for authors!" and "New processes and procedures for editors!" and "Stories about why this is necessary!" and "a Table," "A graphic!" "A presentation!!!!"

Over time, we iterated these ideas. One member led us in a futures workshop (Jungk & Mullert, 1987; Vidal, 2006). We developed stories from which to demonstrate our point. We wrote a white paper, then scrapped the white paper idea. We made a table with six columns, then we cut three of the columns. We worked as a group of 10; then we worked independently; then we worked in small groups. Then we rested. Then we invited other perspectives. And so on and so forth. As scholars active in social justice work, this experience echoed many others that have engaged iterative design to move beyond typical design and into the realm of design justice.

This experience, the most intensive iterative (not to mention collaborative and coalitional) design process the two of us have engaged with in recent years prompted us to articulate two foundational principles of this article:

- a) Social justice problems—even narrowly scoped problems like ours—are wicked problems we all frequently encounter; and
 - b) Iterative design, with its porous boundaries, its slowness, its nonlinearity and multivocality is a useful tool when trying to address social justice problems.
- In this article, we argue that iterative design can provide a methodological approach for solving wicked problems and to confront injustices. Iterative design is embedded in our collaborative and epistemic practices, yet we rarely name or closely investigate the *process* behind these practices. Iterative design affords cognitive space and creative thinking opportunities to design solutions slowly and messily, and to listen critically and

carefully. Drawing on a long history of integrating design and TPC, this article argues that design injustices ranging from racial injustice to oppressive knowledge practices are within the purview of rhetoric and writing scholars, particularly where and when we take design to be the central activity of the field.

In this piece, we explore iterative design as a methodological praxis (Sullivan & Porter, 1997) that can reframe our processes and procedures within institutions, classrooms, and communities, presenting iterative design as a tool of productive resistance to address injustices and oppressions in these contexts. We offer a brief overview of how design is defined and approached within TPC, adjacent fields, and how these areas inform one another. We then describe the methodological potentials of iterative design and identify three inherent values of iterative processes (non-linearity, slowness, and multivocal critical imagination) that enhance the methodological and socially just potentials of iteration. Finally, we conclude with a series of suggestions for how iterative design as an applied theory might take shape in our classrooms, institutions, and communities as a tool for change. Ultimately, we argue that iterative design's invisible features can help us reimagine it as a resistant methodology, an applied theory for the wicked problems that proliferate our realities as teachers, scholars, and community members.

Wicked Problems and Iterative Design: Confronting Injustice

Within TPC, wicked problems are identified as a broad category of rhetorical situations that require a combination of critical thinking, reflection, and recursive processes that (though unsolvable) ideally result in an actionable deliverable (Blythe, Grabill & Riley 2008; Swarts, 2018). The move to describe rhetorical problems as wicked problems has allowed a broadening of the work rhetoric can and does do in the world, reframing rhetoric not as “mere” rhetoric but as an engaged practice that helps us solve complex, real-world problems. And yet as scholars invested in social justice, we find limited connections being made between the wicked problems often outlined by rhetorical scholars and the problems that emerge because of oppression, injustice, and the attendant rhetorical violences that pair with them, with those in environmental justice being a notable exception (Opel & Sackey, 2019; Sackey, 2019; Williams 2023). When viewed through the lens of injustice and oppression, wicked problems are not only abstractly wicked; wicked problems are harmful, they are felt, they leave scars (Shea, 2012; Resnick, 2016; Costanza-Chock, 2020). If TPCers can and do address wicked problems and if oppression and injustice create and are created by wicked problems, then certainly we have tools, strategies, and approaches in our skillset to address the wicked problems of injustice. Take, for instance, the design of web-based demographic dropdown menus, which often organize the world into two genders. The wicked problem of transphobia lives in that menu and the decision to organize the world/dropdown menus in this way.

Of course, while our students may very well design drop down menus, many of us in the academy are not pushing pixels or designing products or software on a day-to-day basis. Our daily design work includes genres like syllabi, curriculum, and pedagogical practices (soft technologies, if you will). At the administrative level, we have power over procedures and policies, too, for example, hiring practices and teaching assistant policies — which are not only invented, they are designed. When we design using inclusive language in our policies (e.g., using they/them rather than the binary he/she), or when we consider how to develop a procedure for

review of candidates (i.e., what documents to ask for, how to have them delivered, what kinds of heuristics will review them), we have the choice to embrace or reject equity and justice. These seemingly simple design questions are, we argue, part of wicked problems, since they create or destroy oppressive structures, too.

Design and its Stakes

As might be obvious, we see design and design work as complicit in the creation of (and therefore necessary in the dismantling of) oppressive structures. Design injustices like those described above emerge from epistemic approaches that might be characterized as exclusionary, violent, or unjust in part because they speed through the work rather than focus on considering and listening for injustices so as to prevent them. Drop down menus are too frequently designed with default options rather than interrogating those options closely; hiring practices often reflect what the committee chair has experienced and valued and are thus designed without a consideration of the ways these might reinforce or redress inequities. These *de facto* approaches to our daily practices are often opaque, and in our experiences, the processes through which decisions are reached are often taken for granted, without an open discussion of the *why* behind these decisions. This is particularly true in departments outside of writing studies, like engineering (where Kristen is housed¹) where expedience is privileged over the slower work of iterative design and where the violence of processes and procedures is underdiscussed and understudied.

The wicked and complex nature of the problems we encounter as TPCers are political and therefore need rhetorical design methodologies in order to solve them (Alford & Head, 2017, p. 398). Through an iterative methodology, we can bring design justice to bear in our own design pursuits (admin, pedagogy, etc.). We use “design” as a broad term to denote the creative and practical work involved in making: the making of products, the making of texts, the making of materials, decisions, and procedures. That said, we see design as implicitly *and* intricately connected to the work of writing, communication, and rhetorical making—the central concerns of our discipline and many readers of this journal. As design theory scholar Anne-Marie Willis (2006, qtd. in Costanza-Chock, 2020) situates the act of design in this way: “we deliberate, plan, and scheme in ways which prefigure our actions and makings...we design our world, while our world acts back on us and designs us” (p. 13).

We also use “design” because it denotes the interrelatedness of rhetoric’s recursive and resistant characteristics. Each opportunity to design a solution is an opportunity to combat injustice within a communicative space. Just as persuasion is a complex aim for a rhetor to navigate, design is a delicate process to assuring justice and avoidance of harm. We frame our methodology of iterative design as explicitly feminist and intersectional because it draws on interlocking lived realities, seeking not to oversimplify but to account for positionality, privilege, and power as they relate to design injustices. Applying an intersectional feminist perspective to design injustices seems a fitting ideology for addressing injustice because intersectional feminist thought emphasizes the equity of all. We draw this influence from the work of Kimberlé Crenshaw and Patricia Hill Collins, who furthers intersectionality to explore the “matrix of

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domination” that explores systemic oppression and injustices as harmful, exclusionary, and violent (Crenshaw 1989; Collins 1990). Therefore we ask: in our unjust, oppressive, and often violent world, how have design justice problems been under-discussed as wicked problems and what strategies might we deploy to address these problems?

We argue that a methodology of iterative design can help engage wicked problems we frequently face in the academy such as bias, persistent racism, and exclusionary epistemological practices, to name a few. Design is rhetorically layered by nature, as it impacts people, places, and systems. Iterative design affords an avenue for addressing design injustice through its layered, cyclical approach.

What is Iterative Design?

Usability scholar and consultant Janice Redish (2000) describes iterative processes as those that are “not strictly linear” (p. 164), an elegant and simple indication of what we authors find so valuable about iteration. Indeed, none of our design processes are strictly linear. Iteration, particularly as a purposeful act is a beneficial methodological approach to composing and grappling with design problems because it allows for the space and flexibility to re-examine how we analyze a problem, synthesize information about it, and evaluate possible solutions at the outset, middle, and end of a design project. Rose and Reimer (2022) further detail iteration’s nature: “Iteration is a key stage in the design process where new features are added and existing problems are corrected, resulting in a new version. It is a series of incremental improvements in a development lifecycle accomplished through ideating, modeling, testing, revising, and then repeating that process as necessary.” (p. 45).

Iteration feels familiar, perhaps because of its ubiquity. We iterate when we write, moving from brainstorming to research and back again, on to drafting and peer review, and back again, before eventually arriving at a final product. We iterate when we make decisions or work collaboratively to combine ideas and evolve them toward a goal or final product. Yet seldom are these iterative moves made explicit or apparent as part of the process (Lane, 2018; Lane 2021). The often invisible work of iteration, these ubiquitous and recursive moves, is a powerful mechanism of resistance against lockstep or rapid thinking that moves only and always forward toward a goal. Iterative design, by way of its processes and structures, works against patriarchal, heteronormative, and capitalistic models of delivery that frequently privilege the powerful and the lucrative. In the following section, we discuss how iterative design, once considered a concept for Silicon Valley, has benefits for TPC scholars in addressing injustices across the contexts communication specialists often encounter.

Critical Praxis of Iterative Design

Although iterative design and design work has been adopted by many industry designers and firms as a rapid prototyping activity (Brown & Wyatt, 2010), scholars invested in design justice can deploy it differently as a methodology for resistance (Costanza-Chock, 2020; Brown & Wyatt, 2010). In order to do so, however, it must be understood as both a practice and a value-laden framework with clear connections to design thinking and the decision-making processes. To keep these two notions in view, we take iterative design to be a methodology and feminist praxis. In *Opening Spaces*, Patricia Sullivan and James Porter (1997) articulate methodology as a

critical praxis, defining it as a “kind of triangulation... a conceptual one that leads to research that privileges neither the theoretical foundation nor the observed practices” (p. 27). In research contexts, Sullivan and Porter’s suggestion of reflectiveness and flexibility provide a critical approach to conducting research. Because design (like research) is an action or activity, the decisions involved in design require a critical framework for decision-making and a methodological flexibility that “opposes...strict adherence to a preset list of...rules and regulations as the basis for deciding the quality of the research” (Sullivan and Porter, 1997, p. 69). Their methodological praxis provides a foundation for seeing iterative design as what Erin Frost might call an apparent feminist methodology. According to Frost (2016), an apparent feminist methodology, “is always in flux; it can be understood in different ways given different contexts and it encourages practitioners to reflexively understand that apparent feminism is only one possible understanding of any given situation” (p. 10). We see iterative design as a form of *design* in flux, a methodology that prompts designers to react to design situations with flexibility and reflectiveness.

When we place iterative design within wicked problems of injustice, a focus on intersectional feminism is particularly warranted, to stave off the tendency for feminism to become whitewashed and focused on the problems of “whYTE” women. Thus, although Sullivan and Porter (1997) acknowledge critical praxis as a feminist approach, we want to expand this more fully to include Black feminists and other feminists of color, whose theories provide foundational principles for understanding not only that theory and practice are related, but that theory and practice are both seeded in intersectional, lived experiences. Patricia Hill Collins (1990) and Sara Ahmed (2016) both provide meaningful ways to see that when theory excludes lived experiences, it cannot accommodate the ways of knowing prioritized in many communities. When we openly embrace lived experience as an epistemological source, a source of knowledge that allows both theory and practice to come into view, new possibilities for resistance and activism emerge. As Hill Collins (2019) explains, “Valorizing lived experiences requires centering on the needs of a particular group harmed by social injustice and finding a prominent place for analyses advanced by victims within the narratives or stories that are told about or by that group” (p. 166). In taking iterative design as an intersectional feminist methodology, we embrace the relationship between doing and living as an important epistemological shift for TPCers that can and should be made visible as we go about the work of design. Multivocality is a crucial element of iterative design, as Hill Collins (2019) demonstrates that:

“...within Black feminist thought, ideas and actions are neither elevated one above the other, nor conflated into each other. Rather, intellectual production and political action are held as distinctive yet interdependent entities. The construct of intellectual activism captures this creative tension between thinking and doing” (p. 159).

This “tension between thinking and doing” (Hill Collins, 2019) is the crux of iterative design—the core of the applied methodology that, when extracted and openly discussed, opens potentials for addressing wicked problems and design injustices. In connecting iterative design to feminist methodological praxis, we refer to the intersectional feminist endeavors that include Black feminist and womanist frameworks. We seek a design-driven approach to composing that can resist the epistemological frameworks that often dominate the university through a critical practice. Patricia Hill Collins (2019) suggests that those of us “who are aligned with resistant

knowledge projects do not theorize from positions of privilege, but instead work within the often formidable institutional constraints” (p. 129). Iterative design responds to institutional constraints and expectations and can be used to engage and resist the epistemic power structures often recreated by scholars in the university. We join a coalition of scholars across the field of rhetoric and writing, including Jones, Moore, Walton, Rose, Gonzales, Frost, and Kahn, who have seen the potential and need to build resistance and activism into our work as scholars and teachers, but we do so through the very particular activity of iterative design. Specifically, we consider how the practice of iterative design might push back against and reconceive the accepted practices of knowledge-making valued in the classroom, the university, and our communities of practice. In thinking of iterative design as visible and apparent, we move towards *rethinking* design as a term that does institutional and coalitional work. By that, we mean that in institutional spaces, iterative design provides a collaborative opportunity for engaging both faculty and students in a revision of composing and writing practices.

Design and Iteration as Interdisciplinary Concepts

In technical communication and usability, the nature of design work as iterative has appeared at once completely self-evident and entirely understated and under-discussed. In her early work on usability, Dieli (1989) demonstrated the way early integration of users allowed for ongoing iterations across the development of documentation at Microsoft. Her work advocating for the integration of users drew together human factors engineering, technical communication, and document design to suggest that the importance of user integration, and—we can infer—iteration, has roots in many disciplines. For those focused on iteration, the term defies early usability approaches, instead inviting users into the design process as experts. And this theme continued as the work of user centered design, particularly as a sibling of technical communication, emerged alongside the technology boom of the late 20th and early 21st century. Johnson’s (1998) *User Centered Technology* worked to shift the conception of systems to value users and humans, making way for later work that included human-centered design (Rose, Racadio, & Wong et al, 2017; Walton, 2016; Jones, 2016), culturally-embedded design (Sun, 2012) and participatory design (Moore & Elliott, 2016; Spinuzzi, 2005). But by the time we arrive in the 2010s, the value of iteration as an explicit and integral part of our design procedures seems to have been rendered invisible—implied as self-evident rather than highlighted as an exceptionally important part of the process.

In engineering design, which often is adjacent to TPC approaches to design, iteration is understood as “a goal-directed process that utilizes reasoning processes and strategies to gather and filter information about the problem, monitor progress, and inform the revision of possible solutions” (Adams & Atman, 1999). Iteration has a number of practical affordances (it increases efficiency and leads to better quality solutions), and as Adams and Atman (2000) depict it, the work of iteration (an advanced attribute expertise) can be described as transitioning *backward* instead of *forward* to recast previous phases or habits in order to move toward solutions in different ways. As we further advocate and describe below, we carry these interdisciplinary impressions of iterative design to put forth a methodology of iterative design praxis. This methodology is characteristically non-linear, inherently feminist, and coalitionally focused—values that aid in resisting design injustice, as our sections below investigate.

Approaching iteration as a methodology affords educators and researchers the opportunity to view their composing environments, revision strategies, and audience needs within a broader recursive rhetorical context. We are particularly interested in the iterative possibilities in our everyday designs that contribute to oppressive and unjust policies, procedures, and products. Take, for example, the work we describe at the opening: the iterative activities sought to address design injustices that emerge in a number of mundane interactions: the exchange of reviews, the submission of documents, and the editing of a final draft. But these mundane actions are part of a complex ecosystem, and addressing the realities of the editorial process, especially for marginalized scholars, is a wicked problem that iterative design can begin to address.

Iteration is a methodology that learners, researchers, and practitioners need in order to address the complex, wicked problems they face. Let's take again, for example, the design of a web dropdown menu for gender, which can organize the world so as to exclude trans, nonbinary, and gender-nonconforming individuals. Initial menu design may be imported directly from previous code—arguably the most efficient way to build code. How might that design injustice be rejected and replaced? Where in the design process does this repeated design problem get redressed? Iterative design requires a pause, a flexibility, a moment of reflection that introduces opportunities for interrupting the stagnant, default injustice read onto gender identities. The design injustice here is both narrowly defined (default drop down menus reify exclusionary binaries) and broadly defined (the world is designed for those with gender conforming identities). Iterative design can help us redress both of these related design problems.

Making Visible the Social Justice Potentials and Values of Iterative Design

Iterative design and its flexible structure reminds us to focus on the cyclical, continuous revision process when approaching a design problem. Likewise, in valuing the “not strictly linear” process of iteration allows for a feminist subversion of efficiency; slow work invites feminist collaboration and responsive design; and multivocality/participatory nature of iterative design allows for a feminist critical imagination. Slowing down and designing recursively values a dwelling with ideas and voices that is often not afforded in rapid production offering more time and cognitive space to sit with ideas. All of these afford designers the opportunity to more apparently consider and confront issues of injustice and inequity in design problems. This process is also inherently humanistic, as design is a human-centered instinct and product (i.e., designing tools for tasks or improving designs for individual needs). In their work on design justice, Sasha Costanza-Chock (2020) writes that “alternative histories of technology and design help to recuperate and center people, practices, and forms of expertise that have long been erased by mainstream design theory and history...” (p. 13) and that are often taken for granted or reappropriated.

As a process, iteration can afford time and space for a centering of marginalized voices and experiences that are often overlooked in rapid processes. Iteration underscores the importance of injecting empathy into the research, prototyping, and design process, thereby allowing for resistant solutions to potentially oppressive and exclusionary practices. While focusing on what we identify as three values of iterative design (non-linearity, slowness, and multivocality), we assert that iteration is inherently feminist. Iteration hinges upon inclusivity of diverse ideas and pursuit of equity. Because of its slow and resistant characteristics—in addition to its

collaborative nature—iteration is a model for feminist and coalitional pursuits. In this section, we explore iterative design’s potential to assist in reframing our epistemologies as resistant: resistant to staid ways of thinking, delivery, and collaboration. Table 1 below outlines what we see these characteristics resisting and how we see them unfolding:

| Iterative Design Values... | Allow us to Resist: | Iterative Design Practices |
|----------------------------|----------------------|---|
| Nonlinear | Linearity | Designers return to the beginning to address unjust practices and features |
| Slow | Ethic of Expedience | Designers slow down in order to make space for traditionally excluded voices. |
| Multivocal | Monolithic and Staid | Designers engage in coalitional listening and thinking throughout the design process. |

Table 1: Making visible the design values that allow designers to resist staid, oppressive values.

Iterative Design as Non-Linear

Iterative design’s emphasis on deliberative, recursive thinking is inherently non-linear, encouraging designers to revisit previous ideas, experiment with and adjust them toward the pursuit of new iterations. We believe the non-linear affordances of iterative design offer valuable insight into how one’s design process might benefit from a thinking trajectory that is alternative to linear models of production. In his work on the “anthropological study of the line,” Tim Ingold (2016) examines the historical and epistemological underpinnings of the linear structures that guide our thinking, arguing that:

“in modern societies, it seems, straightness has come to epitomize not only rational thought and disputation but also the values of civility and moral rectitude. Although the idea of the straight line as a connection between points that has length but no breadth goes back more than two millennia, to the geometry of Euclid, it was perhaps not until the Renaissance that it began to assume the dominance in our thinking about causes, effects, and their relations that it does today” (p. 4).

Ingold (2016) further elaborates on how our culture came to value orderly, linear thought processes, describing how “...the straight line has emerged as a virtual icon of modernity, an index of triumph of rational, purposeful design over the vicissitudes of the natural world,” later noting that the cultural and hegemonic reliance on the straight line as a production marker is a “phenomenon of modernity, not of culture in general” (p. 156, 159). Linearity is often valued for its utility, its neatness, and its order. Conversely, iteration is messy, wayward, and takes time,

meandering through a path to a final product that does not fit neatly within models of rapid production and quick turn-arounds.

The calendar itself (and its attendant TPC genres like GANTT charts and timelines) dictate a linear and orderly progression to the pursuit of work. We might collaborate with others on a project timeline or represent our progress in a linear spreadsheet, yet the manner in which we design and compose toward a final product often looks very different and reflects each of our unique predilections to thinking and working. Put another way, the recursive design and composing process of iteration is fragmented, echoing Redish's (2000) definition of the information design process as dotted through lines (p. 164). For Ingold (2016), the fragmented line is the postmodern answer to the straight line's modernity. He further claims that for the fragmented line, "this is anything but a reversion of the meandering line of wayfaring. Where the [straight line] goes along, from place to place, the fragmented, postmodern line goes across: not however stage by stage, from one destination to the next, but from one point of rupture to another" (p. 172). With this wayward recursivity in mind, we argue that iterative design is also converse to the rapid, lock-step, linear progressions of capitalist values.

Points of rupture, following Ingold's assertion, are productive bursts that can push past staid ways of thinking, offering resistance to restrictive epistemologies. Thinking and designing non-linearly helps one to reframe problems and quite literally approach them from different angles, taking note of unfamiliar practices and paths taken while thinking through a design problem. Take for example the IDEO Method Cards, a deck of cards with various user needs and scenarios that challenge designers to continually place people at the center of the design and thinking process. The cards are divided into iterative categories of "Learn, Look, Ask, and Try", each meant to interrupt a linear way of thinking by introducing a point of rupture via scenario. A "try" card might challenge a designer to create an experience map for a differently abled user within a particular design scenario, helping to empathize with people impacted by designs, a "learn" card might ask a designer to catalog a day's worth of a user's experiences, activities, and contexts to imagine new outcomes for design use (IDEO Methods Cards). Points of rupture such as these scenarios interrupt the "normed" linear process of thinking from point A to point B; instead one is challenged to consider points A1 or C3 on their way to a solution.

When taken as a feature of a design methodology, nonlinearity provides an alternative to the hierarchies often dictated by the calendar, the heteropatriarchy, and the capitalist frameworks that often dominate our programs. As a nonlinear methodology, designers deploying it can move from an ethic of expediency (Katz, 1992) to a justice frame that engages creativity and what Miriam Williams and Natasha Jones (2020) call a "more just use of imagination"(np). Such a move toward justice is important if we are going to design just systems and communication products because once we commit to a non-linear framework for design, we can slow down, engage multiple voices, and embrace a resistant, feminist epistemological framework for our design work.

Iterative Design as Slow Work

Iteration is a pursuit of slow composing, in that iteration emphasizes deliberative movement through ideas and problems as designers learn more about their (and others') ideas, and

potentials and shortcomings of the design solution. Iteration is self-paced in either individual or collaborative pursuits, offering an alternative to rapid problem solving that combines the benefits of rapid prototyping in a slower, more flexible design approach.

Iterative design emphasizes a gradual process of problem solving, a contrast to the ethic of expediency that proliferates working and production models (Katz, 1992; Marback, 2009). As we argue above, this emphasis on the incremental, the non-linear, is crucial to iterative design theory of making visible the obscured portions of the design process. In her 2012 piece arguing the benefits of slow research within writing studies, Julie Lindquist analyzes the economic contexts of long-term writing, research, and literary sponsorship, describing a dearth of research into the types of writing adult writer's do versus the types of writing that is given priority in an information economy (p. 646). Studying the long term development of literacy habits and knowledge, Lindquist (2012) asserts, is "a long, uneven process", and identifies that "such research thrives only with great difficulty in a marketplace that rewards speedy production" (p. 653). Lindquist implies and appeals for a focus on slow iteration, similar to Jasmine Ulmer's call for a slow ontology (2017). Ulmer's focus on slow ontology as an alternative to the "hurried, mechanical, assembly-line writing" that drives productivity in the academy and industry (p.201). Here, slowness echoes the global slow movements (i.e., slow food, slow cities) to focus on a "slow ontology" (p. 203) that emphasizes an "alternative inquiry practice," urging one to focus on their sense of being, materiality, and place (p. 207). Iterative practices are apparent in the slow ontological movement and slow composing in their respective urges to pay attention to the material and natural rhythms that drive our processes and how we learn. Writing studies and TPC scholars build this slow valuation into our pedagogies, assigning reflective essays or memos that ask students to articulate their processes or log their research along the way. In Brad Mehlenbacher's (2013) words, "when we focus on our problem-solving activities, on how we learn to learn, on how we know and come to know, and on how we understand our work and our profession(s), our actions are influenced by reflection rather than reaction" (p. 200). In our pedagogies, TPC instructors frequently ask that students reflect on their composing and design processes. For example, Liz intentionally builds a design post-mortem reflection into their technical writing assignments, challenging students to articulate the moves they made over the duration of a document design project, either individual or collaborative, taking care to reflect on and articulate what they learned during research and composing, and movements in between, or what they felt was a success or could have been improved about their larger design process.

For students, this slow work can be frustrating—for designers, too. But as an intersectional feminist value, slow work allows us to challenge the expediency that dominates so much of the current capitalist work models. As adrienne maree brown (2017) notes, "Move at the speed of trust" is a principle of her (intersectional feminist) emergent strategy, drawing attention to the way relational work requires time and critical connection (p. 42). Indeed, we need only return to Katz' (1992) articulation of the ethic of expediency to remember that what is at stake with the speed of some design and writing work is our sense of humanity and our commitment to seeing one another's humanity. As Katz (1992) argued, the ethos of work and expediency "gives impulse to most of our actions in technological capitalism," (p. 258). The field of technical and professional communication has widely shared in a critique of expedience, relying upon Katz' articulation of the ethic of expedience through the rhetorical work of a Nazi memo. Although Katz (and, we should note, technical communication) shies away from a critique of capitalism,

the connection between capitalist values (see as an example, Irani) and expedience as a cor’ feature of the Nazi memo are fairly easy to see. We mirror the ethos of the organizations with which we are involved, which often values swift production and delivery of various goods—products, research, ideas. Yet with the growing popularity of design thinking and ideation, a recent movement toward slow, deliberate moves of production have emerged, more directly valuing a socially just and resistant orientation toward wicked problems.

Iterative Design as a Form of Multivocal Critical Imagination

In *Living a Feminist Life*, Ahmed (2016) explores feminism as an experiential, lived way of being in the world. Her exploration winds readers around a number of themes, returning to a sense that feminism is what feminists live. Feminism allows Ahmed to discover “how power works as a mode of directionality, a way of orienting bodies in particular ways, so they are facing a certain way, heading toward a future that is given a face” (p. 43). This is the kind of feminist power we refer to when we think about three feminist affordances of iterative design. Iterative design, as a feminist framework for writing, directs our pedagogy and design in a particular, powerful direction. That direction, we argue, is away from the traditional expediency our students have been trained to value and moves toward a deliberate iterative methodology. As such, where some approaches to design seek to stabilize, perhaps as their key or primary function, iterative design reflects Buzzanell’s (2017) vision of multivocality, which “destabilizes in various ways. In some cases, multivocality offers processes whereby alternative readings, multiple identities and roles, and standpoints of diverse participants are surfaced and rendered visible for analyses and contributions to scholarship and engagement...” (p. 1). Here, she refers to scholarship and engagement—we also apply it to design processes and procedures. Although not all design is multivocal, we suggest that visibly embracing iteration provides an entry for listening to multiple voices, which can, in turn, “contest singular meanings, realities, identities, spaces, and interpretations” (p. 1).

One example of the need for multivocality in design justice comes from the Rose et al. (2017b) study of transit dependent users (TDUs) of a public transportation system, wherein the research team invested in learning from TDUs through a design ethnography. Their study sought to integrate typically excluded voices and perspectives into the design of new transit policies, creating a more equitable approach to transit design because the team’s design recommendations provided strategies for designers to address powerlessness (among other experiences) described by participants. By working with community members who needed to use the guidebook, Rose and the research team were able to engage with traditionally excluded members of the community to include their voices and experiences in the design of the handbook. The import of multivocality lies in its ability to shift the knowledge-making practices involved in design. Through an intersectional feminist, iterative approach, the epistemological frames adopted by designers and teachers of design broaden to include collective and collaborative practices. Iterative design often (though not always) insists upon knowledge-making practices that eschew the certainty of a singular source of expertise and truth.

In their book, *Feminist Rhetorical Practices*, Royster and Kirsch (2012) offer a practice that informs the feminist methodology we make visible in our articulation of iterative design, which more than a corporate buzzword, calls for creativity and connectivity in our design work. Royster

and Kirsch (2012) define “...imagination [as] a term for a commitment to making connections and seeing possibility. So defined, imagination functions as a critical skill in questioning a viewpoint, an experience, an event, and so on” (Royster qtd. From *Traces of a Stream*, Royster & Kirsch, p. 19). We forward this critical skill as central to iterative design because it reminds us that not only is multivocality an important part of ethical and just design, but so is creative inquiry that values yet unknown or unnoticed sites of knowledge and experience.

We suggest, then, that iterative design invites a creative journey rather than dictating a planned execution or, as we write above, a linear process. It also invites designers to consider new values and new voices, particularly those values and voices that are traditionally excluded. Rose *et al.*'s (2017) work with TDUs demonstrates the way iteration with traditionally excluded populations can allow designers to imagine contexts for use and expertise that otherwise would be left latent. When we teach iterative design or engage with it as practitioners, we engage in “critical imagination as an inquiry tool, a mechanism for seeing the noticed and the unnoticed, rethinking what is there and not there, and speculating what could be there instead” (Royster & Kirsch, 2012, p. 20). More traditional depictions of iterative design can bury or render invisible this creative work, the critical imagination necessary to take iterative design to its most expansive, and we would add most just, potential. When critical imagination is used to center the experiences of those traditionally marginalized by our designs and our design procedure, we can challenge the ways our products, procedures, and pedagogies re-invest in the status quo and reify existing oppressive structures.

By aligning iterative design with critical imagination we purposefully align with Royster and Kirsch's pedagogical and methodological excavation of the unknown precisely because it provides an opportunity for resistance, for new voices to be heard or imagined, and to seek out new frameworks for our design practices. In other words, we agree with Royster and Kirsch (2012) that critical imagination “lays a good foundation from which researchers might gain a more robust capacity to reach insights, chart productive pathways for sense making and knowledge making, and identify patterns of action for enhancing, extending, and even reinvigorating knowledge and understanding” (p. 80). When we use critical imagination in our iterative design work, we can create final products that reflect our humanistic calls to action and socially just pursuits.

Implementing Iterative Design Values Across Writing Contexts

As we stated above, the flexibility and collaborative offerings of an iterative model to problem solving are important traits to implement into our institutional spaces, including our pedagogies, local and global communities, and research pursuits. The unique positioning of TPC specifically and writing studies more broadly, offers familiar contexts to reconsider designing as slower and valuing decisions, messy ideas, and prototyping elements as inherent to our day-to-day design processes. Without iterative design, our writing contexts threaten to remain sites of injustice, where hiring practices favor the mythical norm of the straight, white, middle-class male (refer to Audre Lorde's (2012) discussion of the inherent injustice in this norm) and where curricula cater to only a few privileged groups. An iterative approach to curriculum design, for example, might help us listen more earnestly to disciplinary conversations and recursively revise material that will better equip students for the wicked problems they'll encounter in increasingly

interdisciplinary industries. Further, applying an iterative approach to revising departmental outcomes can allow us to carefully listen to experiences and voices left out of traditional models of educational expectations, working toward a more socially just and engaged mission of education. For example, consider the statement from the 2020 Special Committee on Composing a Statement on Anti-Black Racism and Black Linguistic Justice. This field-wide charge, published as part of the Conference on College Composition and Communication (CCCC), challenges teacher/scholars to bring more anti-racist language praxis, political discussion, and decolonial actions into TPC and writing contexts (This Ain't Another Statement!). The list of demands authors put forth focus toward actively embracing and teaching linguistic justice, calling for teachers to center Black linguistic experiences in colonized, oppressive English environments. "This Ain't Another Statement" offers extensive lists of necessary iterations and revisions of pedagogical and institutional spaces, continually emphasizing a loud support of Black linguistic and lived experience. As "This Ain't Another Statement" so wonderfully models, we argue that methodologies for institutional work should be more visible and ardent—approaching and engaging with this work iteratively offers that opportunity.

In the Table 2 below, we offer starting ideas for how the inherent values of iteration (non-linear, slow, and feminist & decolonizing) might work within familiar spaces. We place the values of iteration we explored above in conversation with our pedagogies, institutions, and communities. With this table, we seek to start a conversation for how iterative design as an active methodology might begin to resist staid approaches to teaching, assessing, designing curricula, engaging with communities, and so much more. Iterative design urges our methodological moves to be made visible in order to reorient and reflect the lived realities of our pursuits. If you are designing something and trying to push forward and not willing to slow this down, working from a pre-existing template that does not invite critical imagination and multiple voices, how might iterative design allow you to work within the academy? We think the following three features of iterative design attune us to listening to injustices. We describe how one can use an iterative design to approach institutional work nonlinearly, slowly, and with a feminist and critical imagination to better address design injustices.

In order to illustrate the usefulness of iterative design, we want to turn not to the classroom, though we encourage iterative design in classroom settings, but to programs and communities as sites of work that often reproduce wicked problems of injustice for many of those involved. Here, we give three examples to demonstrate how engaging in iterative design as non-linear, slow, feminist work can help ward off injustices that might otherwise sneak in. Table 2 demonstrates how we might engage ID in other sites of our work as well.

Example One: Hiring Practices

One particularly troubling institutional site of design injustice is the design of interview processes and procedures. These processes inhere tacit expectations and can manifest as gatekeeping that maintains inequitable practices in the academy (Sano-Franchini, 2016). Engaging in an iterative design format can redress the kinds of inequities that are built into heteropatriarchal templates for campus visits and/or ableist foundations for the interview process. When Kristen designed a set of inclusive hiring practices, the values of iterative design served as

the foundation for these now-required practices during hiring:

- **Nonlinear:** in that we return and re-return to candidates' profiles, applications, and personal interactions to develop an inclusive and representative pool of applicants; we also return to the candidate to work with them in developing their campus visit itineraries.
- **Slow Work:** we have to offer deliberation and decisions plenty of time, even if that risks a slower process than working without multiple iterations.
- **Multivocal Critical Imagination:** when we have candidates who do not fit the mythical norm and the designers of the interview *do*, they may need to engage with a critical imagination approach to thinking through what an interview might look like: our practices suggest an opportunity for candidates to communicate in a number of modes during first round interviews; for example, our candidates now *all* receive a map with the lactation rooms and gender neutral bathrooms marked.

Example Two: Program Design

Another example where one can apply iterative processes to design injustices is in departmental or programmatic outcomes. Liz found that collaborating with colleagues iteratively in extended discussions about revising the public-facing outcomes of the undergraduate English degree yielded complex yet productive conversations about how to design for social justice as a theme in programmatic structure. Tasked with reconsidering and revising the outcomes for the English degree, faculty were divided into small subcommittees, breaking down the extant programmatic language to reframe and update its emphasis on forward-thinking humanistic values. Here is how Liz and her colleagues worked iteratively through the process:

- **Nonlinear:** we collectively drafted outcomes statements, referred to peer institutions' statements, and returned to our drafts at each meeting, recursively applying feedback and thinking critically about how potential students would interpret the language.
- **Slow:** We met in person multiple times over the course of the fall semester, taking time to dwell and reflect on our drafting moves. The rhetorical impact of specific word choices were investigated carefully so as to best frame our intention of centering the humanistic values of the department, curriculum, and opportunities available to students.
- **Multivocal critical imagination:** In specific portions of the outcomes statement, some committee members urged for the explicit inclusion of the phrase "social justice" and "engaged community learning." Others resisted these inclusions. As a group, we openly discussed these views, identifying how injustice might be implied by their absence and what was gained by explicitly identifying the department and degree as an opportunity to explore, research, and make contact with social justice issues within the local community. The terms were included.

Example Three: Community-based Public Engagement

In Kristen's research in the community, she studied technical communication practitioners who adopted a Black Feminist approach to designing public engagement experiences (Moore 2016; Moore 2017; Moore 2018). As Kristen argues in those pieces, the firm's design approach was unique in its iterative nature: because the firm purposefully built adaptability into the projects,

the design of any public project was iterative, and therefore nonlinear, slow, and built through multivocal critical imagination. In one project that Kristen studied in her field work, the firm was tasked with designing a new corridor between two cities (Moore, 2018). In order to determine what the corridor’s design should be, they developed an iterative process for involving a range of citizens in the decision-making. Throughout the design process, however, a number of citizens explained that they wanted not only particular design choices to be made but also that they wanted to see another location opportunity—one that did *not* go through farmland. Because the process was iterative, not only were the design decisions shaped by the participants, but the firm returned to a previous stage of research (a location study) and advocated for an additional location option that accommodated the environmental concerns raised by citizens.

In public projects, like the one described above, politics, bureaucracy, and money often supersede citizen concerns. Because the consultants were dedicated to iterative design, (as a form of equity and justice) they began with one set of concerns and circled back not only to previous design ideas that had been taken off the table but to a completely different phase of the planning process. Where some public engagement processes in engineering projects are one-and-done public meetings (refer to Simmons & Grabill, 2007), this iterative approach challenges the traditional values of engineering design and decision-making.

- **Nonlinear:** the consultants met with a range of citizens and stakeholders, and upon discovering additional concerns and questions, worked with the engineers to return to previous phases of the project and reassess both the design and location options.
- **Slow:** developing an additional location scenario *as well as* additional design options took time and money; it took time not only to do the engineering design work but also to do the engagement work that allowed for citizens to impact the project.
- **Multivocal critical imagination:** typically, public projects are dictated by bureaucratic terms; this project, however, invited many stakeholders and citizens to “tack in and out” of the immediate project at hand--to think about the design off of the page and outside of what is presented.

| | ID in Pedagogy | ID in Academy | ID in Community |
|-------------------|--|---|---|
| Non-Linear | Iterative assignments, composing with maps or recursive design thinking models | Iterative and formative, adaptive assessment models | Participatory design, returning to communities repeatedly |
| Slow Work | Emphasis on slow invention, iterative writing processes and heuristics, analyzing what type of composing/work is valued vs. what students do in their design process | Question disciplinary routines and timelines of production/delivery | Focus on place, being, and the material, the affected, the responsive |
| Multivocal | Engaging with critical | Collaboration and | Listen apparently and |

| | | | |
|-----------------------------|--|---|---|
| Critical Imagination | imagination and multiple groups in order to encourage design to reflect new potentials and positionalities | coalition building across disciplines to promote equity and justice | deeply to communities and to issues that are important to their daily lives |
|-----------------------------|--|---|---|

Table 2: A Heuristic for Applying Iterative Design's (ID) Values

Looking Ahead: Reframing Iterative Design in Daily Praxis

Iterative design is a lived way of making our work more visible, reframing our sometimes opaque processes as apparent. As we described above, the slow, feminist, and coalitional values intrinsic to iteration offer potential to our daily interactions as scholars, practitioners, and social agents. In approaching iterative design as a methodology, we believe its values can contribute to actionable change when previously invisible decisions are made transparent. Where we try to forward this work collectively is in encouraging other TPC educators to weave iterative design values into their praxis more apparently, to consider the impact of reframing wicked problems through iterative design. As Wible asserts, “design thinking methods do not supplant but rather complement students’ education in the standards and theories of the disciplines in which they learn and work, and we should frame our writing projects in ways that encourage students to draw on that disciplinary knowledge and skills as they design, iterate, and communicate solution ideas to users and stakeholders (Wible 422).

TPC and writing studies learning models emphasize well-founded understanding and appreciation of dynamic stances and introspective understandings of one’s own means of expression. Iterative design applied as an intersectional feminist methodological tool combines and embraces these values into a cohesive yet flexible model that can help us better address the wicked problems associated with design injustice. If we approach the day-to-day pedagogical, institutional, and communal work we do as iterative, we can more fully consider how we would open our design processes up to new paths, experiences, and understandings of impact. Iterative approaches to thinking urge us to recast our values toward inclusive futures. Reframing our actions—both implicit and explicit—as essential, iterative practices reflects what so many of our closely held theories preach.

Many of our commonly held practices—not just iterative design—should be interrogated and revised, not simply for what they can or cannot do in the classroom but for what they can or cannot do in the larger scope of our goals for social justice. When we seek to make visible the underlying potential for a practice/theory to do justice work, we may encounter hidden agendas that cannot and will not do the work of social justice. Nefarious actors may use our tactics to reify injustice. But, perhaps through a more just use of imagination, we will find that our theories and practices can be deployed for the work of creating more just worlds, programs, and classroom experiences. This is our hope for this article: that by focusing on design injustice as a wicked problem, we provide a path forward in using iterative design not merely because it works to make technically effective design, but also because it inheres the potential for a just design practice.

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