Available online at www.sciencedirect.com

ScienceDirect

Computers and Composition 49 (2018) 71–81

Computers and Composition

www.elsevier.com/locate/compcom

Beyond Student as User: Rhetoric, Multimodality, and User-Centered Design

Dawn S. Opel *, Jacqueline Rhodes

Michigan State University

Available online 9 June 2018

Abstract

User-centered design (UCD) as a concept has begun to enter composition studies, particularly through scholar-teachers of technical communication. We question further incorporation—specifically, the collision course of industry-driven language such as "efficiency" and "expediency" and the potential positioning of students as "users" in the composition classroom. We argue that this positioning places us in unproductive opposition to multimodal composition. Rather than a wholesale incorporation of UCD into the composition classroom, we outline a "theory + play" approach that combines scholarship in rhetoric, speculative design, and multimodal composition. This approach, we argue, better aligns with the political and social investments of Johnson's (1998) theory of user-centered technology, in which our students are critical makers and engaged citizens in the public sphere.

Keywords: User-centered design; User Experience; Rhetoric; Multimodality; Pedagogy

1. Introduction

The end of an art is not a product, but the use made of an artistic construct. The end of the art of housebuilding, for example, is neither the builder's use of the art nor the house itself, but rather the use made of the home by those for whom it was constructed. Similarly, the end of rhetoric is an active response in the auditor not the speech itself (Lauer & Atwill, 1995, p. 29).

Understanding the current relationship between user-centered design (UCD) and composition studies means understanding the histories of usability, UCD, and user experience (UX) in industry, as well as understanding which aspects of these have made their way into composition—and which ones have not. These histories, then, inform and complicate a UCD-informed pedagogy. We explore this later in the essay through our offering of a multimodality-meets-UCD pedagogical framework.

Usability and technical communication have a "long, intertwined history" since the 1970s, or the emergence of usability as a field in industry (Redish, 2010). There is a large body of scholarship in technical communication focused on usability and user-centered design (e.g., Johnson, 1998; Salvo, 2001; Scott, 2008). This scholarship emphasizes the design and testing of digital technologies, although the contexts have expanded to other services, products, and

* Corresponding author at: Michigan State University, 434 Farm Lane, Ernst Bessey Hall Room 240, East Lansing, MI 48824.
E-mail address: opeldawn@msu.edu (D.S. Opel).

https://doi.org/10.1016/j.compcom.2018.05.008
8755-4615/

Fig. 1. Quesenbery's origins of user experience (Redish, 2010).

processes (e.g., Moore, 2016). Technical communication and rhetoric and composition often cross-pollinate because of their proximity in English departments and because of the teacher-scholars who often work in both areas. As a result, usability has made its way into rhetoric and composition interpolated through technical communication.

UX is a recently emergent field in industry, drawing on the history of usability but adding in scope, combining usability, information architecture, content strategy, and other areas. UX brings together industry professionals with backgrounds in many disciplines (see Fig. 1). As shown in Fig. 1, technical communication claims an affiliation with UX through both intersections in approaches (moving from purely usability to user-centered design, content strategy, and UX) and in the skillsets of technical communicators now working as UX professionals (Lauer & Brumberger, 2016; Redish & Barnum, 2011). To the extent that technical communication affiliates itself with the UX industry, it often adopts its vocabulary. One example is the term user-centered design (UCD), defined by UX consultant Jesse James Garrett (2010) as "the practice of creating engaging, efficient user experiences" (p. 17).

Garrett's (2010) definition of UCD extends the definition offered by technical communication scholar Michael Salvo (2001), who wrote that "User-centered design is a process of collecting data from users, creating feedback in the form of information, and then delivering that information to designers" (p. 286). Salvo works to situate UCD as a process incorporating usability throughout the design process, and also to position UCD as more iterative and robust than usability at the end of a design process, but less so than participatory design methods. Salvo's piece was written before the rapid growth of the field of UX in industry, and Garrett's definition of UCD reflects this understanding of UCD as a part of a larger UX industry. As Ginny Redish (2010) argued, "Much current narrative about UX and usability in the web world comes from information architects and interaction designers who were not a part of the early days of the human factors [origin] story, the software development story, or the technical communication story" (p. 191). Scholarship in technical communication on UCD has tended to focus more on process (researchers and designers consulting with users throughout the design process, and creating space for this consultation) than defining for what they should be consulted. John D. Gould and Clayton Lewis (1985) suggest that users' "characteristics, needs, and wishes" should be taken into account throughout the design process, as a part of their widely-cited definition of UCD in technical communication scholarship (see, e.g., Van Velsen, van de Geest, & Steehouder, 2010). Garrett's use of "engaging" and "efficient," then, is a UCD that includes both concepts of usability and UX.

The wholesale transfer of UCD as adopted by technical communication and/or the UX industry creates cognitive dissonance for scholar/teachers attempting to make a place in rhetoric and composition for UCD. Indeed, Salvo described this tension in a UCD project in which he moved from a technical communicator to rhetorician: "Prior to the Purdue OWL usability project, I believed I was acting as a user-centered rhetorician in my role as professional technical writer by completing tasks and presenting information based in user-centered theory. But my lack of experience in

collaborative knowledge-building, critical theory, and empirical research methodologies left me with a static idea of user-centered design" (Salvo et al., 2009, p. 114).

Salvo's shifting understanding of UCD here causes us to ask, what warrants undergird "efficiency" and "engagement" in a "user-centered" model? These warrants differ fundamentally from those inherent in much contemporary rhetoric and composition pedagogy, rooted in the commonplaces of postmodernism, social constructivism, and de-centering of the individual (Carter, 2003; Vitanza, 1991). When juxtaposing these commonplaces with the disciplines represented in Fig. 1—many of which are rooted in positivism—it is difficult to resolve the tension between a process of determining one tested, empirically correct path for optimized use by a universal, centralized user, versus the impossibility of such a determination or systemization of meaning-making. Kevin Garrison (2014) theorized this tension as the three dimensions of technical communication and technology, characterized by "three conjoined, yet competing mentalities": the scientist, philosopher, and rhetorician (p. 359). As Garrison noted, bringing competing positivist and constructivist views of design and use of technology into a singular approach poses challenges, and this dissonance is amplified when considering how UCD as an industry concept was brought into the fold of composition studies without other non-market-driven design concepts.

Incorporating UCD into another field of study and its curricular offerings and pedagogy is not a seamless endeavor, however. Engineering programs have grappled with how to teach UCD to their students and with what a pedagogy of UCD might look like. As Burcak Altay (2014) argued, "while the necessity of integrating user-centered principles to design education is well established, how this can be achieved successfully needs further investigation of instruction methods" (p. 140). Engineering educators have borrowed from the field of education, and its concept of learner-centered design (LCD), to develop frameworks for the incorporation of UCD (Zoltowski, Oakes, & Cardella, 2012). Four principles enacted in engineering programs, borrowed from LCD, to teach user-centered design learning include: role-playing, case-based learning, project-based learning, and reflection (Altay, 2014).

These LCD frameworks look remarkably like the active learning principles of composition studies; from process pedagogies to liberatory pedagogies to the social turn and beyond, that field has taken as fundamental the engagement of students in metacognitive activities beyond listening to lectures, taking notes, or watching demonstrations. As Faith Kurtyka (2013) wrote, active learning positions students as stakeholders in their own education, co-constructing learning experiences and taking responsibility for their own learning. This sort of approach is evident in how we talk about de-centering authority in face-to-face and online classrooms as well as co-constructing and co-learning with our students. William Hart-Davidson (2014) noted, quoting Joseph Harris, that composition studies has a long history of student-centered/active classrooms: "we in composition studies have long since 'flipped' or 'activated' that [traditional] model in ways that attempt to decenter it. In fact, in the preface to a new edition of his book on the contemporary history of rhetoric of composition titled A Teaching Subject, Joe Harris (2012) suggested that this may be our signature contribution to the academy: the disruption of the lecture model in favor of more engaged, peer-learning models in the undergraduate curriculum" (p. 216).

This disciplinary commonplace of active learning explains why composition studies scholar-teachers are tempted to incorporate UCD into the classroom, especially if UCD makes use of LCD as it does in engineering. UCD, after all, seems to decenter authority by placing "users" at the heart of the design endeavor; applied to teaching, this goal appears consistent with student-centered, active learning. UCD is attractive in its seeming values, its optimism, and its ubiquity. It is attractive and it seems to be in the air these days. As Robert Johnson (2010) pointed out, UCD "as a concept and as a practice has been celebratory from its outset" (p. 336.) Likewise, in their study of engineering pedagogy, Carla B. Zoltowski, William C. Oakes, and Monica E. Cardella (2012) wrote that "Human-centered approaches to design contribute to innovations in engineering design and have been shown to increase productivity, improve quality, reduce errors, improve acceptance of new products, and reduce development costs" (p. 28). Particularly when paired with critical pedagogical notions such as accessibility and disability in the classroom, UCD gains traction as a means by which to include more students in effective ways in the teaching of and with technology.

With any temptation comes risk, however. The idea of humans being "centered" in discussions of discursive systems is also ubiquitous, and as Robert Johnson (2010) argued,

> When a concept becomes ubiquitous, it falls into danger of being used with little historical reflection and concomitant foresight...Here, the outcome can be most troubling, as concepts like user centeredness can fall victim to abuse and neglect, and in turn, can become a purported quick answer to technological problems. In

> reality, however, they become merely attractive labels for marketing and promoting products and processes that are often far from user centered. (p. 337)

In fact, in the time between the publication of Johnson's *User-Centered Technology* in 2008 to his critique of UCD in 2010, this is what happened (as a quick Google search of industry resources on the UX industry and UCD shows). In discussing the benefits of UCD, the U.S. Department of Health and Human Services site *usability.gov* stated that "When talking about the benefit of UCD, you can discuss success measures in terms of measuring user performance and satisfaction as well as calculating some of your return on investment" (Benefits of user-centered design, 2017). The trillion dollars spent on IT worldwide per year, coupled with the 15% rate of abandonment for IT projects, leads to the result that "following UCD best practices helps to identify challenges upfront so a solution can be found early" ("Benefits of UCD"). Under such a mindset, Edward Tufte's joke resonates—that the only individuals that regularly employ the word "user" to talk about their customers are web designers and drug dealers (as cited in Bisbort, 1999). In conceiving of students as "users" we risk bringing teachers into this fold.

Equally concerning, however, is that the current uptake of UCD in technical communication and in composition studies seems to leave behind the pedagogical insights of *learner*- rather than *user*-centered design. Unlike UCD, with its problematic ethic of expediency, LCD is a pedagogical model that aligns with work in rhetoric and the digital humanities that explores discursive systems critically. Our argument in this essay is that, in the bringing of UCD into the fold of rhetoric and composition, certain industry discourses have become so ubiquitous that design and use of technology is tied inextricably to accumulation of capital. We offer an approach to UCD that incorporates rhetorical theory, multimodal composition pedagogy, and LCD for the shaping of *ethical action with*, rather than *efficient consumption of*, emerging technologies.

2. UCD, Rhetoric, and Ethics

Susan Miller-Cochran and Rochelle Rodrigo (2009) suggested that "Both usability studies and rhetoric and composition have spent much time and energy studying and theorizing how to adapt a specific rhetorical object to a specific interpretation and use. As the growing specializations of technical communication and computers and writing emerge, many objects of study—namely, computer hardware, software, and web based applications—begin to overlap with usability studies" (p. 3). As their collection, *Rhetorically Rethinking Usability* (2009), suggested by its organization, rhetorical applications of usability fall into roughly three categories: accessibility and disability, designing online writing instruction or teaching with educational technology, and the application of usability research methods to rhetorical study. These methods include heuristic evaluation for usability study in online writing instruction (e.g., Rodrigo & Cahill, 2009), usability testing for accessibility and students with disabilities (e.g., Brizee, Sousa, & Driscoll, 2012; Dolmage, 2009), and qualitative and participatory research methods (e.g., Eyman, 2009; Brady, 2009). While there has been some work with UCD in face-to-face classrooms (e.g., Reilly, 2009), UCD in composition studies has mostly involved the use of digital technologies in some fashion, in either classroom or research contexts.

More recently, the concept of UX has emerged in disciplinary conversations, bridging rhetoric, the digital humanities, and UCD. As Liza Potts (2015) argued:

> I refer to these practices, rooted firmly in technical communication and evolving from user-centered design (UCD), as experience architecture. Experience architecture is an emerging practice, one that draws together issues of information design, information architecture, interaction design, and usability studies to assess and build products, services, and processes. The outcomes of a well-architected system include systems, interfaces, and policies that support participation, growth, and sustainability—in other words, building experiences that are focused on human experience, the kind of experiences we are espousing when we discuss the application of rhetoric and digital humanities. (p. 256)

Of course, the theory and application of rhetoric and the digital humanities is more capacious than developing a "a well-architected system." In fact, Robert R. Johnson (1998) warned of precisely such a narrow use of rhetoric as a "strategic application of language" that is "based upon the perceived ends" (p. 22). Both rhetoric and the digital humanities involve an ethical interrogation, if not intervention, into any system in which humans find themselves, questioning what "well-architected" might even mean to different people. As Jesse Stommel (2013) wrote in "The Digital Humanities is About Breaking Stuff:"

> The digital brings different playgrounds and new kinds of interaction, and we must incessantly ask questions of it, disturbing the edge upon which we find ourselves so precariously perched. And what the digital asks of us is that every assumption we have be turned on its head. The digital humanities asks us to pervert our reading practices— to read backwards, as well as forwards, to stubbornly not read, and to rethink how we approach learning in the digital age.

To engage in this approach, Stommel argued, we must "break stuff. . .we must look back even as we look forward, considering what media has become while we simultaneously examine the hows and whys of its becoming." This purposeful breaking, not the creation of an effective system, is the praxis of the digital humanities. Rhetorical action is no different.

In trying to define rhetoric capaciously, we might agree, tentatively, with Arabella Lyon (2004), who wrote that all definitions of rhetoric tend to involve a "metalinguistic awareness of language" in a system/complex to be "manipulated in the service of identity, communication, persuasion, or artifice" (p. 132). Aristotle's oft-cited definition ("the art of discovering in all situations the available means of persuasion") has given way in composition studies, to some extent, to the "new" rhetoricians (namely Burke) in the twentieth century, if our widespread adoption of the "Burkean parlor" metaphor is any indication. Additionally, renewed and critical attention to culture and context—along with a deep questioning of the Western tradition as one of colonizing and conquering—has led to the observation that rhetorics are always already cultural. As Angela M. Haas (2012) put it, rhetoric can be understood "as the negotiation of cultural information—and its historical, social, economic, and political influences—to affect social action (persuade). I also believe that every culture has its own rhetorical roots, traditions, and practices. Although sometimes forgotten, rhetoric seeks engagement with and participation in effective and responsible civic discourse. Rhetoric is a techné, or art of knowing—a revealing, an opening up" (p. 287).

At its best, rhetoric is about *relations* within Lyons' "systems/complexes" (rather than the architecture of the system itself) and particularly about *ethical* relations therein, if we are to take Haas' claim to heart. It is here that a rhetorical intervention into UCD and UX becomes necessary: for good or ill, designers, writers, users, and readers are all implicated agentially in the relations, the movements, the co-constructed architecture of the rhetorical system/complex itself. Further, we will argue here that Burkean approaches can be useful, in that his theory of language as symbolic action presumes intentional participation in rhetorical systems ("action implies the ethical, the human personality," he wrote in *Language as Symbolic Action*). In *A Rhetoric of Motives* (1950), Burke (1950) wrote that "Rhetoric is rooted in an essential function of language itself, a function that is wholly realistic and continually born anew: *the use of language as a symbolic means of inducing cooperation in beings that by nature respond to symbols*" (p. 43). As Kevin McClure and Julia Skwar (2015) argue, Burke's view of symbolic action presupposes an agent, the presence of which pushes back (somewhat) against poststructural notions of the decentered self collapsed into endless ethical relativity. For Burke, that is,

> Action and choice are inextricably tied to judgments of good and bad, or right and wrong— for 'when one talks of the will, one is necessarily in the field of the moral' (PC 136). . . . For Burke it does not follow that we are only language or that we are wholly controlled by it. We are symbol-using *animals* grounded in a realm of non-symbolic motion. As animals we are a part of that non-symbolic realm; as symbol-users, we separate ourselves from it. Utterances are spoken by and through a non-symbolic body, and it is this interplay of our linguistic abilities in the context of our bodies, or 'central nervous systems' that makes us individual agents. (McClure & Skwar)

Designers, writers, users, and readers, then, can act, particularly when equipped with the knowledge of how a system acts, for ethical or unethical purposes. Transparency in the discursive practices that shape systems must also be "well-architected" by teachers.

The idea that rhetoric serves as an embodied, relational, and ethical negotiation of symbolic systems finds its purchase already (to some small extent) in discussions of technology. As Elizabeth Losh (2009) argued, an applied rhetoric for user-centered design of digital (and non-digital) technologies necessitates an understanding of the discursive practices that shape use. She described this relationship thusly:

> At some level, of course, it is all just code running on machines, but it is important to recognize that some genres become strongly associated with the presence of particular moral values (or their absence) or specific postures about practical worth of society (or cost). What makes the general public think that making a first-person shooter

> is intrinsically more morally suspect than word processing a document? What makes the population think that video file sharing in intrinsically worse than exchanging electronic mail? The answers have to do with ideas about language and knowledge that shape the nation's legislative agenda as well. Rhetoric, as Aristotle points out, entails precisely those discursive practices that assign positive and negative characteristics. (p. 56)

Such discussions are too rare, and even here some of the values/ethics are obscured in the assertion that only "some" genres have attendant moral judgments, or that "it is all just code," as if no human mind participated in making decisions about the data's organization. Even the choice of organizing principle presupposes a judgment and a meaning, as seen in detail in Foucault's *The Order of Things*, for example. Indeed, as Burke wrote in a sort of backhanded syllogism, "Wherever there is persuasion, there is rhetoric. And wherever there is 'meaning,' there is persuasion" (*Rhetoric*, p. 172). We would add that wherever there is "rhetoric," there is an ethic.

In the case of UCD and its incorporation into composition studies, we would argue that an ethic of *expediency* and *efficiency* undergird the move. Inadvertently, most likely, composition studies has taken from UCD industry-friendly commonplaces such as expediency and efficiency, and in doing so, left notions of designing, making and breaking, and interrogation of our technologies outside of these industry commonplaces. As Steven Katz (1992) argued, an ethic of expediency emphasizes the logical, the systematic, and the quantifiable, leading to "a rationality grounded in no other ethic but its own, and is symptomatic of a highly scientific, technological age" (p. 266). Further, Katz wrote, the danger "is that technological expediency in the guise of free enterprise can become de facto both a means and an end. That is, in our culture, the danger is that technological expediency . . . can become the only basis of happiness, can become a virtue itself, and so subsume all ethics under it, making all ethics expedient and thus replacing them" (p. 270).

What happens when teachers-as-designers take up UCD and UX under this "dangerous" ethic of expediency? This model assumes not only that teachers are the sole designers of curricula and classroom, but also that students are not designers but *consumers* of an educational product. This positioning of UCD in the composition classroom places us in unproductive opposition to co-constructive, active pedagogies at the heart of composition studies. Further, this positioning places us in opposition to what we know of rhetoric as an embodied, relational, and ethical negotiation of symbolic systems. We, as rhetorical agents and/or teachers and/or designers are implicated in this unproductive opposition; and as Jonathan Alexander and Jacqueline Rhodes (2014) argued, our participation in the opposition places students in an untenable position. They wrote:

> We must also become aware of how our own discipline. . .serves monitoring, disciplining, and normalizing functions within the academy. We often take pride, especially since the 'social turn' in offering our students 'critical pedagogies' that attune them to the manipulations of a consumerist society, that apprise them of the ideological structures that undergird capitalist economies, and that advise them to think critically about language, discourse, and power. At the same time, our courses ostensibly prepare students for participation in the very structures we ask them to critique. (p. 196)

By not questioning our own complicity or intervening rhetorically, we find ourselves in similar circumstances to contemporary UX professionals, who conduct research on consumers/users, rather than design in concert with users as in participatory design frameworks such as Scandinavian design (Iivari, 2004). While current industry practice often integrates user feedback earlier in the product development cycle, it empties UX of ideology found in these earlier participatory frameworks, in which users co-created products for their own workplaces in joint labor activism. Compositionists have an opportunity through UCD to either support or confront existing design practices through the shaping of UCD-related curricula and pedagogy. To assist, we offer an approach for such engagement.

3. Theory + Play: Multimodality meets UCD

Rather than further incorporating the emptied ideological version of UCD into the composition classroom, we argue here for a "theory + play" approach to user experience that brings in a robust sense of *rhetoric* in order to open up discussions of industry discourse, and *multimodal composition*, which gives us tactics to engage with such discourse meaningfully. Our approach takes as foundational the deep analysis of rhetorical affordances of different media, exploration of genre as it enacts particular relations of composer/viewer/reader, and playful and productive use of strategies such as remix and mashup. This approach, we argue, better aligns with prior uptakes of UCD, such as the emphasis on learner-centered design (LCD) in engineering; as Altay (2014) wrote, "The emphasis on

student experience in [engineering education] studies suggests the application of learner-centered approaches for universal design instruction" (p. 140). Such an emphasis is sorely missing from the current uncritical mix of UCD and composition studies. Further, our framework re-emphasizes the political and social investments of Robert R. Johnson's (1998) theory of user-centered technology, in which the user is an "active participant in the social order that designs, develops, and implements technologies" as producers, practitioners, and citizens (p. 64).

A key part of our approach foregrounds rhetoric as an embodied, relational, and ethical negotiation of semiotic systems, a negotiation that forms the very bones of any textual interaction. Even more, in this section we will advocate the use of *play*—serious play—that encourages teachers and students to participate ethically, effectively, and *affectively* in the construction of their discursive worlds. Rhetoric for UCD in composition studies, then, must be embodied, relational, ethical, and *playful*. We get our primary sense of play from Jody Shipka (2011), who, drawing from work by Wysocki (2004) and Csikszentmihalyi (1981), defined play as activity that involves "purposeful choosing, adaptation, and material flexibility. These activities are crucial in that they afford players and composers alike opportunities to consider how material, social, geographical, technological, economic, institutional, and historical 'realities' (or differences) impact what one is able to accomplish as well as the potentials one is able to imagine" (p. 84).

We also draw from speculative design, a conceptual design movement (versus designing for a predetermined concept) that provides an alternative context to design driven entirely by market forces. Speculative design calls for the exploration of alternative, fictional scenarios, asking what-if questions, positioning design as a medium rather than a solution (Dunne & Raby, 2013, p. 6). These methods are a form of play, in that they invite makers to make-believe, to suspend reality, and to experiment with what might be possible to build and for what kind of world we may be able to build it. The goal is not the product but the discussion that surrounds the design process.

Finally, we set our sense of play within the context of Burke's "comic frame," detailed in his 1937 *Attitudes toward History*. Burke's frames (acceptance, comedy, and tragedy) are part of his early work on dramatistic criticism, and are, essentially, frames of reference to help understand motives. While a full discussion of Burke's book is well beyond the scope of this paper, it is useful to look at the generosity of interpretation allowed by the comic frame; Burke wrote that "The progress of humane enlightenment can go no further than in picturing people not as *vicious* but as *mistaken*. When you add that people are *necessarily* mistaken, that *all* people are exposed to situations in which they must act as fools. . .you complete the comic circle, returning again to the lesson of humility that underlies great tragedy. The audience. . .is admonished to remember that when intelligence means *wisdom*. . .it requires fear, resignation, the sense of limits, as an important ingredient" (p. 41-42, emphasis in original). As M. Elizabeth Weiser (2017) wrote, Burke's deeply rhetorical comic frame insists on the continued responsiveness/responsibility of interactants: "The comic attitude toward social interaction, in contrast, is neither overly sentimental—a nostalgic remembrance of better times—nor overly shocked when faced with the betrayal of those good times. It is instead a "shrewd but charitable" view toward one's opponents, one that acknowledges the possibility of betrayal even while continuing to engage . . ." (Weiser). In short, as Burke himself wrote, comedy is on the tip of danger: the comic frame is "the methodic view of human antics as a comedy, albeit as a comedy ever on the verge of the most disastrous tragedy" (Burke, 1937, p. iii).

But why multimodality? Looking broadly, multimodality research in rhetoric and composition might be seen as the study of "the roles other texts, talk, people, perceptions, semiotic resources, technologies, motives, activities, and institutions play in the production, reception, circulation, and valuation of seemingly stable finished texts" (Shipka 2011, p. 13). Multimodal production, then, is the deliberate composition of such role-play. Proponents would point out that multimodality tends to position its makers/composers agentially within rhetorical situations, and the specific making activities themselves necessitate a sort of play. Further, multimodality, as Shipka and others have pointed out, is more than new media writing; in fact it is a blurring of generic and semiotic boundaries that may take the form of anything from a digital text to a creative nonfiction piece to, as Shipka noted, a pair of ballet shoes.

Digital multimodality offers students (and teachers) capacious ways to respond dynamically and flexibly to changing rhetorical situations through the use of video, audio, and text, what Kathleen B. Yancey (2004) referred to as "composition in a new key." However, to more fully reflect and encourage individual composing/making processes, scholars such as Shipka suggest that we engage in a blend of digital/hands-on making in order to "explore how rapidly changing communicative landscapes provide opportunities to rethink, reexamine, and reexperience the highly distributed, multimodal, and embodied aspects of all communicative practice" (2011, p. 148). Whether digital, "real," or some combination thereof, multimodality forms a key part of rhetoric and composition pedagogy, emphasizing agency rather than reception on the part of students. Such agency has a critical and even civic function; as Jonathan Alexander and Jacqueline Rhodes (2014) wrote, "One of the key rhetorical affordances of new media in general is the capacity

for active writerly participation in complex public spheres" (p. 105). Drawing from Daniel Anderson's (2003) discussion of prosumerism and Selber's (2004) elucidation of multiliteracies, Alexander and Rhodes argued that "critically informed production. . .forms a key component of new media literacies, whether those literacies take the networked form of a website or a blog, or the nonnetworked form of a manipulated photo" (p. 107). Similarly, Shipka (2011) wrote that working multimodally places responsibility on students themselves to "determine the purposes of their work and how best to achieve them...A mediated activity-based multimodal framework for composing provides an alternative to pedagogical approaches that facilitates flexibility and metacommunicative awareness *without* predetermining for students the specific genres, media, and audiences with which they will work" (p. 87). Instead of simply "users," then, students are co-creators/designers of discourse operating in complex public spheres.

The "shrewd but charitable," playful, critical, ethical, and, most important *rhetorical* strands here serve as a basis for a multimodal pedagogical approach that might work in tandem with a more robust sense of UCD if we are to further incorporate it into composition studies. Such a sense must include inroads made in engineering by LCD such as role-playing, case-based learning, project-based learning, and reflection (Altay, 2014); these strategies are not strangers to compositionists, who, as mentioned before, base much of their current teaching practice on active learning principles. However, a multimodal inflection here looks much like Shipka's framework, which foregrounds what she calls *rhetorical sensitivity*, a way of being/knowing that incorporates role-playing, de-routinized behavior, adaptive movement in response to situational changes, determining appropriate technologies for a given situation, and using multiform approaches (89). Within Shipka's framework, students determine (1) the product they will compose in response to task and purpose; (2) the operations, processes, or methodologies they will employ; (3) the resources, materials, and technologies they will use to generate the product; and (4) the conditions under which the product will be experienced, both by them and their audiences (p. 88-89).

Jason Palmeri (2012) offers three goals to enrich composition pedagogy through attention to the always already multimodal work of writing: (1) developing flexible and multimodal strategies for invention and revision; (2) applying and adapting rhetorical and process-based theories in the service of multimodal texts (including alphabetic, auditory, and visual); and (3) developing critical literacies within multimodality to re-see, re-hear, and ultimately transform the world (p. 149-58). He wrote that "making a multimodal turn should not simply be a matter of teaching students to compose 'effective' and 'appropriate' digital products that serve the interests of dominant power structures. Rather, a truly critical multimodal pedagogy must entail a process of teaching students to analyze and *contest* the ideological implications of corporate media" (p. 159). Important for our discussion here is the rhetorical interplay of elements that leads both composer and audience to re-think contexts and ideologies in ethical ways.

Taken together, what might Shipka, Palmeri, Johnson, Burke, and others offer us in the way of an ethical and multimodal UCD pedagogy? Here, we suggest a heuristic for such a UCD in writing classrooms; users—students and teachers alike—should, ideally:

1. *Learn a variety of rhetorical theories that will assist in the critical making of and intervention in complex public spheres*. Look beyond simple notions of "public" and "private" in Habermasian theory to considerations of gender, race, and other identity markers as well as considerations of self/other (cf. Benhabib, 1992; Fraser, 1992; Warner, 2002). What does it mean to be an ethical maker? How does the radical situatedness of composer and audience affect what is to be made, what is "appropriate?";
2. *Examine how and why industry rhetoric (expediency, efficiency, engagement) around "users" shapes the possibilities and limitations of participation in civic life*. Think beyond accessibility and usability and consider why an easy-to-use tool might shape worlds not meant for civic engagement and participation. To what end is the ease of a social media newsfeed? Is it the algorithmic customization of advertising? And/or has it, given the phenomenon of "fake news" on Facebook during the 2016 presidential election, delimited our sense of civic life? The point is that these technologies are never neutral—how can we facilitate critical engagement with the laudable goal of accessibility?
3. *Interrogate the co-constructive, co-implicated points of the rhetorical triangle (writer, audience, text) or quadrangle (add medium)*. Take a fairly standard assignment in UCD-inflected writing classes: students are presented with a problem to solve; they research user needs, design task descriptions, explore and prioritize system requirements, make and then test prototypes. Audience research involves brainstorming about expected users and their usual tasks within a system. Ideally, prototypes point to solutions that maximize the efficiency of likely users doing their likely tasks. Who decides who is "likely" and "usual?" (And how might this have implications in much the same way as universality of usability and universal design for learning (UDL)?) What cultural systems of normativity establish

that limited sense of audience? Further, who decided that products solve problems? That audiences are consumers? Finally, at the base of such assignments lies a questionable exigence: the idea that an industry actor creates problems is part of the implicatedness of students as writers.

4. *Consider how industry rhetoric shapes technological "choices."* Question whether a digital technology is necessary or even desirable when considering its shaping of cultural or societal conditions. Often, the industry assumption that improving a digital technology to a new iteration (a better website or web-based application) is inevitable. Drawing from speculative design, ask students how the original technology replaced other forms of communication or community, and what other frameworks may exist to do the same work in the world.
5. *Investigate tactics of resistance to systems of power*. Role play serves as a powerful way to question the parameters of an assignment in terms of its tools and methods.
6. *Engage in intellectual and ethical action in regard to industry rhetoric*. For example, investigate open source tools when proprietary options are suggested in classroom assignments.
7. *Make believe. Play*. Cultivating a mindset of ethical action requires space to question and to grow without fear of failure.

Please note that while we do not include "instrumental skill" or "portfolio pieces" as part of this heuristic, we do assume that both will be engaged critically and well in the service of these larger rhetorical and ethical goals. As Jonathan Alexander and Jacqueline Rhodes (2014) wrote, "If our field is to more fully engage new and multimedia, that engagement must necessarily take a contextualizing turn, not just a technologizing one. And that contextualizing must concern itself not only with the rhetorical affordances of the technologies we encounter in and out of the classroom—a large task in itself—but also with the discursive regimes of subjectivity and affect that delimit such affordances" (p. 201-02). Similarly, Carolyn Miller (1989) wrote that "Understanding practical rhetoric as a matter of conduct rather than as production, as a matter of arguing in a prudent way toward the good of the community rather than of constructing texts, should provide some new perspectives for teachers of technical writing and developers of courses and programs in technical communication" (p. 23). In both cases—instrumental skill and final "products"—we encourage teachers and students to see them as the *record* of a process in context rather than the point of the project itself.

4. Again, with a Twist

When people think of design, most believe it is about problem solving. Even the more expressive forms of design are about solving aesthetic problems. Faced with huge challenges such as overpopulation, water shortages, and climate change, designers feel an overpowering urge to work together to fix them, as though they can be broken down, quantified, and solved. Design's inherent optimism leaves no alternative but it is becoming clear that many of the challenges we face today are unfixable and that the only way to overcome them is by changing our values, beliefs, attitudes, and behavior (Dunne & Raby, 2013).

As Johnson wrote, "the end of user-centered theory is only complete when coupled with the end of social action"; joining the two pedagogically is "no easy task, but the effort is well worth the attempt" (p. 156). A key part of that attempt must be a re-examination of the histories of UCD and UX in industry as they might intersect composition studies. What has emerged so far is a valorization of efficiency and expedience, a positioning of students as users, and a strong sense of technology as always already attached to capital. In composition studies' seeming rush to make use of UCD and to align programs in technical/professional writing with industry, we have adopted, rather uncritically, rhetorics at odds with some of our most cherished commonplaces. What we have tried to show in this essay is that *it does not have to be so*. We have tried to couple UCD with a strong sense of rhetoric and ethics, offering a multimodal pedagogical approach to UCD that emphasizes play, flexibility, and critical reflection in the service of answering Dunne and Raby's seemingly intractable questions. And indeed, those questions, and ones like them, are what is at stake in our discussions of UCD, UX, and composition studies. As Yancey concluded her essay on "composition in a new key," she noted that multimodality's emphasis on circulation, canons of rhetoric, and technological deixis have led to its creation of a new writing public. As she put it, "In helping create writing publics, we also foster the development of citizens who vote, of citizens whose civic literacy is global in its sensibility and its communicative potential, and whose commitment to humanity is characterized by consistency and generosity as well as the ability to write for purposes that are unconstrained and audiences that are nearly unlimited" (p. 321). Industry-produced discourses, no matter how

good our intentions when we adopt them, will not shape critical maker-citizens, because market forces shape those discourses. As UCD and composition studies come together, we must position our students (and ourselves) to be able to confront these discourses of "positive" and "pleasurable" experiences (e.g., Garrett, 2010) to contribute to the kind of ethical worldmaking in which we all play a part.

Dawn S. Opel is Assistant Professor of Digital Media and User Experience in the Department of Writing, Rhetoric, and American Cultures at Michigan State University. A lawyer and community-engaged action researcher, she works to improve clinical and nonprofit communication, with emphasis on workplace writing and the user experience of information and communication technologies. In her current study, funded by the MSU/Sparrow Health Center for Innovation and Research, she works with health care clinics and social services organizations in mid-Michigan to improve patient care coordination. Recent published work may be found in *Technical Communication and Communication Design Quarterly*.

Jacqueline Rhodes is Professor of Writing, Rhetoric, and American Cultures at Michigan State University. Her work has appeared in a variety of venues including *CCC*, *JAC*, *Rhetoric Review*, *Enculturation*, and *College English*. She is the author, co-author, or co-editor of five books, including *On Multimodality* (NCTE, 2014), the born-digital *Techne* (CCDP, 2015), and the forthcoming *Routledge Handbook of Digital Writing and Rhetoric*.

References

Alexander, Jonathan, & Rhodes, Jacqueline. (2014). *On multimodality: New media in composition studies*. Urbana, IL: NCTE.

Altay, Burcak. (2014). User-centered design through learner-centered instruction. *Teaching in Higher Education*, *19*(2), 138–155. http://dx.doi.org/10.1080/13562517.2013.827646

Anderson, Daniel. (2003). Prosumer approaches to new media composition: Consumption and production in continuum. *Kairos*, *8*(1). Retrieved from. http://kairos.technorhetoric.net/8.1/coverweb/anderson/

Benefits of user-centered design. (2017). *Usability.gov: Improving the user experience*. Retrieved from https://www.usability.gov/what-and-why/benefits-of-ucd.html.

Benhabib, Sayla. (1992). Models of public space. In C. Calhoun (Ed.), *Habermas and the public sphere* (pp. 73–98). Cambridge, MA: MIT Press.

Bisbort, Alan. (1999, Sept. 30). Escaping Flatland. Retrieved from http://nl.newsbank.com/nl-search/we/Archives?p_action=doc&p_docid=1169FD6E0F0F31B0.

Brady, Ann. (2009). Rhetorical research: Toward a user-centered approach. *Rhetoric Review*, *23*(1), 57–74.

Brizee, Allen, Sousa, Morgan, & Driscoll, Dana Lynn. (2012). Writing centers and students with disabilities: The user-centered approach, participatory design, and empirical research as collaborative methodologies. *Computers and Composition*, *29*(4), 341–366.

Burke, Kenneth. (1950). *A rhetoric of motives*. Berkeley, CA: University of California Press.

Burke, Kenneth. (1937). *Attitudes toward history. Rpt. 1984*. Berkeley, CA: University of California Press.

Carter, Michael. (2003). *Where writing begins: A postmodern reconstruction*. Carbondale, IL: SIU Press.

Dolmage, J. (2009). Disability, usability, universal design. In S. Miller-Cochran, & R. Rodrigo (Eds.), *Rhetorically rethinking usability: Theories, practices, and methodologies*. Cresskill, NJ: Hampton Press.

Dunne, Anthony, & Raby, Fiona. (2013). *Speculative everything: Design, fiction, and social dreaming*. Cambridge, MA: MIT Press.

Eyman, D. (2009). Usability: Methodology and design practice for writing processes and pedagogies. In S. Miller-Cochran, & R. Rodrigo (Eds.), *Rhetorically rethinking usability: Theories, practices, and methodologies*. Cresskill, NJ: Hampton Press.

Fraser, Nancy. (1992). Rethinking the public sphere: A contribution to the critique of actually existing democracy. In C. Calhoun (Ed.), *Habermas and the public sphere* (pp. 109–142). Cambridge MA: MIT Press.

Garrett, Jesse James. (2010). *The elements of user experience: User-centered design for the web and beyond* (2nd ed.). Berkeley: New Riders.

Garrison, Kevin. (2014). The scientist, philosopher, and rhetorician: The three dimensions of technical communication and technology. *Journal of Technical Writing and Communication*, *44*(4), 359–380.

Gould, John D., & Lewis, Clayton. (1985). Designing for usability: Key principles and what designers think. *Communications of the ACM*, *34*(1), 74–85.

Haas, Angela M. (2012). Race, rhetoric, and technology: A case study of decolonial technical communication theory, methodology, and pedagogy. *Journal of Business and Technical Communication*, *26*(3), 277–310.

Hart-Davidson, William. (2014). Learning many-to-many: The best case for writing in digital environments. In *Invasion of the MOOCs: The promise and perils of massive open online courses*. pp. 212–222. Anderson, SC: Parlor Press.

Iivari, Netta. (2004). Enculturation of user involvement in software development organizations: An interpretive case study in the product development context. In *Proceedings of the third Nordic conference on Human-computer interaction* (pp. 287–296).

Johnson, Robert R. (1998). *User-centered technology: A rhetorical theory for computers and other mundane artifacts*. Albany: SUNY Press.

Joseph, H. (2012). *A teaching subject: Composition since 1966* (New Edition). Logan, UT: Utah State University Press.

Katz, Steven B. (1992). The ethic of expediency: Classical rhetoric, technology, and the Holocaust. *College English*, *54*(3), 255–275.

Kurtyka, Faith. (2013). Active learning as alternative to consumerism. *Composition Forum*, *27*. Retrieved from. http://compositionforum.com/issue/27/active-learning.php

Lauer, Claire, & Brumberger, Eva. (2016). Technical communication as user experience in a broadening industry landscape. *Technical Communication*, *63*(6), 248–264.

Lauer, Janice, & Atwill, Janet. (1995). Refiguring rhetoric: Aristotle's concept of techne. In R. Gabin (Ed.), *Discourse studies in honor of James Kinneavy* (pp. 25–40). Maryland: Scripta Humanistica.

Losh, Elizabeth. (2009). *Virtualpolitik: An electronic history of government media-making in a time of war, scandal, disaster, miscommunication, and mistakes*. Cambridge, MA: MIT Press.

Lyon, Arabella. (2004). Confucian silence and remonstration: A basis for deliberation? In C. Lipson, & R. A. Binkley (Eds.), *Rhetoric before and beyond the Greeks* (pp. 131–145). Albany: State University of New York University Press.

McClure, Kevin, & Skwar, Julia. (2015). Toward a dramatistic ethics. *KB Journal: The Journal of the Kenneth Burke Society*, *11*(1) http://kbjournal.org/mcclure_skwar_dramatistic_ethics

Miller-Cochran, Susan, & Rodrigo, Rochelle (Eds.). (2009). *Rhetorically rethinking usability: Theories, practices, and methodologies*. Cresskill, NJ: Hampton Press.

Miller, Carolyn. (1989). What's practical about technical writing? In B. E. Fearing, & W. Keats Sparrow (Eds.), *Technical writing: Theory and practice* (pp. 14–24). New York: MLA.

Moore, Kristen. (2016). Public engagement in environmental impact studies: A case study of professional communication in transportation planning. *IEEE Transactions on Professional Communication*, *59*(3), 245–260.

Palmeri, Jason. (2012). *Remixing composition: A history of multimodal writing pedagogy*. Carbondale: Southern Illinois University Press.

Potts, Liza. (2015). Archive experiences: A vision for user-centered design in the digital humanities. In J. Rodolfo, & W. Hart-Davidson (Eds.), *Rhetoric and the digital humanities* (pp. 255–263). Chicago: University of Chicago Press.

Reilly, C. A. (2009). Bibliographic entries and usability: Teaching citation of electronic sources. In S. Miller-Cochran, & R. Rodrigo (Eds.), *Rhetorically rethinking usability: Theories, practices, and methodologies*. Cresskill, NJ: Hampton Press.

Redish, Janice. (2010). Technical communication and usability: Intertwined strands and mutual influences. *IEEE Transactions on Professional Communication*, *53*(3), 191–201.

Redish, Janice, & Barnum, Carol. (2011). Overlap, influence, intertwining: The interplay of UX and technical communication. *Journal of Usability Studies*, *6*(1), 90–101.

Rodrigo, R., & Cahill, L. (2009). Educational usability in online writing courses. In S. Miller-Cochran, & R. Rodrigo (Eds.), *Rhetorically rethinking usability: Theories, practices, and methodologies* (pp. 105–133). Cresskill, NJ: Hampton Press.

Salvo, Michael J. (2001). Ethics of engagement: User-centered design and rhetorical methodology. *Technical Communication Quarterly*, *10*(3), 273–290.

Salvo, Michael J., Ren, Jingfan, Brizee, Allen, & Conard-Salvo, Tammy S. (2009). Usability research in the writing lab: Sustaining discourse and pedagogy. *Computers and Composition*, *26*, 107–121.

Scott, J. Blake. (2008). The practice of usability: Teaching user engagement through service-learning. *Technical Communication Quarterly*, *17*(4), 382–412.

Selber, S. (2004). *Multiliteracies for a digital age*. Carbondale, IL: Southern Illinois University Press.

Shipka, Jody. (2011). *Toward a composition made whole*. Pittsburgh: University of Pittsburgh Press.

Stommel, Jesse. (2013). *The digital humanities is about breaking stuff*. Digital Pedagogy Lab. Hybrid Pedagogy. Retrieved from. http://www.digitalpedagogylab.com/hybridped/the-digital-humanities-is-about-breaking-stuff/

Warner, Michael. (2002). *Publics and counterpublics*. New York: Zone Books.

Weiser, M. Elizabeth. (2017). Technological devolution, social innovation: Attitudes toward industry. *KB Journal: The Journal of the Kenneth Burke Society*, *12*(2). Retrieved from. http://kbjournal.org/weiser-devolution

Van Velsen, Lex Stefan, van der Geest, Thea, & Steehouder, M. F. (2010). The contribution of technical communicators to the user-centered design process of personalized systems. *Technical Communication*, *57*(2), 182–196.

Yancey, Kathleen B. (2004). Made not only in words: Composition in a new key. *College Composition and Communication*, *56*(2), 297–328.

Vitanza, Victor. (1991). Three countertheses: Or, a critical in(ter)vention into composition theories and pedagogies. In P. Harkin, & J. Schilb (Eds.), *Contending with words: Composition and rhetoric in a postmodern age* (pp. 139–172). New York: MLA.

Zoltowski, Carla B., Oakes, William C., & Cardella, Monica E. (2012). Students' ways of experiencing human-centered design. *Journal of Engineering Education*, *101*(1), 2859. http://dx.doi.org/10.1002/j.2168-9830.2012.tb00040.x