Arguing about design: A taxonomy of rhetorical strategies deployed by user experience practitioners

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ABSTRACT

The design of technology occurs in a rich, nuanced and complex rhetorical space. Technical teams engage in negotiations, and at times argue, about design. We claim that user experience (UX) practice, at its heart, is a rhetorical endeavor, and this aspect of UX practice has been underexplored. To bridge the gap between UX theory and practice, we pose the research question: What strategies and tactics do UX practitioners use to convince or persuade others about design? To answer this question, we interviewed experienced UX practitioners and present the results of these interviews as a taxonomy of rhetorical strategies situated by an awareness of rhetorical complexity and the impact of context. The results of the study demonstrate that normative UX methods and practices discussed in the literature are chosen, adapted or dismissed as savvy rhetors flex their *metis*.

CCS Concepts

Social and professional topics → **Professional topics**→ **Management of computer and information systems** →**Project and people management**

Keywords

User experience; user-centered design; rhetorical strategies; discursive strategies

1. INTRODUCTION

What do user experience (UX) practitioners argue about when they argue about design? Technical teams engage in complex negotiations about design decisions and while not all of these discussions result in arguments, they do highlight team and power dynamics. UX practitioners represent the newcomers and sometimes outsiders on teams given the continuing paradigm shift in software development from a system-centered to a human-centered approach [1]. While other research has examined how "face-work" saturates technical teams [2] and conflicts between developers and project managers [3], we focus on the particulars of UX practitioners. We assert that the practice of user experience is inherently a rhetorical endeavor, one that includes a variety of actors, often with completing priorities, differentiated positions of power, and opposing worldviews [4]. It is in this complex rhetorical space where we pose a research question: What

strategies and tactics do UX practitioners use to convince or persuade others about design?

We use the term user experience (UX) practitioners to refer to the people and the processes engaged in creating the design of interactive tools and systems. We choose to use the term UX because this the term that practitioners use to refer to themselves. The process that UX practitioners follow is referred to as user-centered design. Technical communication and user-centered design have a long and intertwined history [5][6]. Much of the work about user-centered design has focused on the practical work of engaging end-users in the design process [7][8][9]. Beyond methods, others in technical communication have called for broader considerations of usability [10], participation [11] and ethics [12]. Others have focused on the success and challenges of teaching UCD [13] and examined how academic programs have incorporated user-centered design and usability into the technical communication curriculum [14][15][16][17].

However, the practice of UX is more than a collection of methods for designing software and systems. Scott characterizes the process of user-centered design as a "situated, dynamic, messy, and difficult process and set of practices" [13], p. 384]. We are sensitized to this messiness through our observation and experience of UX practice at work. It is this contested space of design decisions and negotiation, the space where UX practitioners spend a great deal of effort and energy, where the work of design gets done. The sheer ubiquity of the push and pull of design may in fact, make it unremarkable. Attend a UX meetup or conference or visit the site UXreactions.com and you begin to sense the pervasiveness of debate about design on technical teams. It is this ubiquity, the fact that it is taken for granted, that catches our attention for further exploration. We argue that UX practice, at its heart, is a rhetorical endeavor, one that has been underexplored in technical communication.

In order to explore and unpack this rhetorical complexity, we examined the ways UX practitioners represent and account for their rhetorical strategies through a series of semi-structured interviews with experienced professionals. We first summarize our argument, by highlighting UX's focus on process and methods and contrast that with work that suggests the rhetorical nature of UX. Next, we detail the study methods, including recruiting, conducting the study, and analyzing the data. We present the findings as a taxonomy of rhetorical strategies and situate these findings by exploring two related issues: awareness of rhetorical complexity and the impact of context. We conclude by highlighting some of the incongruities between best practices, contrasting those professed in the literature with actual practice, that occurs in the messy and nuanced space of people working in organizations.

2. UX AS A PHILOSOPHY AND SET OF PRACTICES

From its inception, UX has had two primary components. First, a philosophical stance that the inclusion of people in the design process yields better results for both technology and user [18][19]. Second, UX is a collection of methods and practices culled from a variety of disciplines that includes three key characteristics: an early focus on users, collecting empirical data, and iterative design [20] .

As UX has developed over the past three decades, the primary focus of the practitioner literature has been on the development of methods, practices and tools for the people doing the work of UX. Many of these early works continue to resonate through the profession, for example, the use of heuristics in design evaluation [21], conducting usability studies with 5-7 users [9] creating personas to embody end users [22], using low fidelity design concepts and increasing fidelity through iterative testing [23], and so on.

Much of this literature tames the complexity of design, by providing clear and directive advice about what methods to use when and how to present results to teams. However, the ways that these methods and processes fit into teams and organizations is rarely straightforward. The contentiousness of design disagreements was a rationale for the development of personas [22] and several volumes in the UX practitioner literature are devoted to improving communication about design [24][25].

So while the methods and processes of UX are necessary to do the work, treating these practices as scientific or neutral also ignores the applied and contingent nature of UX work. Johnson, et al. characterizes the ways that applied research (that is, usability) can sit at the nexus of scientific and rhetorical epistemologies [26] and act as a partnership in order to mediate "observation, representation, and statistical analysis—so that we can ultimately offer our best advice applicable to the situation at hand rather than, as science is want to do, definitively settle questions." [26], p. 325]. In UX design, we are rarely definitively settling questions but rather exploring possibilities and taking stances, using the rich variety of tools and techniques at our disposal.

3. UX AS A COMPLEX RHETORICAL SPACE

If we acknowledge that UX and its methods function at the nexus of rhetoric and science, we can turn our attention to the communicative acts and how they function in relation to design decisions. While some design decisions are seamlessly incorporated during the design process, others are critiqued, contested and negotiated by various stakeholders, engineers, designers and managers.

Examples that gesture towards the rhetorical nature of UX work, include Mirel's case study of usability adoption at an organization, she observed, "usability can easily become a pawn in political games, dispensed with as readily as it is embraced" [27]. She details how usability research was used strategically to bring about a desired end and concludes that "usability experts must deliberately strive as much for political innovations as technological ones." [27].

Another study interviewing UX practitioners working at Microsoft, concluded that the important skills for students to learn could be categorized into usability methods, critical assessment and analysis, and communication skills [28]. This third category of communication skills, including writing and presenting, is treated unremarkably by the authors, stating "This is, of course, old news to technical communicators, who have been taught early and often about the importance of meeting their readers' needs through reader-centered approaches to writing reports and documentation." [28, p. 304]. But what is embedded in the evidence that they use to create this category of "communication skills" is more that just writing reports and making presentations and instead highlights how working on a technical team is nuanced and requires negotiation and compromise. Cooke and Mings suggest to future practitioners, the need to be empathetic with the product team and to balance negative and positive comments. This too seems to hint at, but not directly address, to what extent working within a product team is a rhetorically complex act.

Several empirical studies by Friess directly examine UX practitioners and their discursive strategies. She found that novice designers invoke a variety of claims about design but draw more frequently and more successfully on appeals based on storytelling and designer impressions over appeals based on user data or authority [29][30]. In another study with an experienced design team using personas, she found that the team infrequently invoked personas during design meetings [31]. Other researchers have also found that while design teams rely on empirical data from user research to make design decisions, they also use personal, implicit knowledge [32].

Friess identifies a mismatch between "UCD in theory (which suggests that design decisions should be driven by user data) and UCD in practice (which, based on the results of this group, suggest that many types of appeals—not just user data—drive design decisions)." [30, p. 431]. It is this mismatch between UCD in theory and UCD in practice we believe is underexplored and warrants investigation in more depth. Working in technology design is a rich, nuanced and complex rhetorical space. In order to better understand the nuances surrounding this practice, we developed a research study to explore the gaps by asking practitioners to speak of the experience of their work lives, with a specific focus on the strategies and tactics they use to convince and persuade others about design.

4. METHODS

To investigate the rhetorical strategies of UX practitioners we conducted an IRB approved study consisting of semi-structured interviews with nine UX practitioners. The following section provides details about recruiting and sampling, conducting the interviews, and analyzing the data.

4.1 Recruiting and sampling

In order to gather diverse perspectives from practitioners working in the field of UX, we purposefully sampled practitioners from across a variety of categories. Participants were recruited by convenience and snowball sampling through a variety of personal and informal networks, including alumni networks of local UX related degree programs and word of mouth. Anticipating that experienced participants may be more sensitized or attuned to design disagreements we choose to recruit senior level or experienced UX professionals. Table 1 provides an overview of participants and their characteristics across several dimensions. Out of the 9 participants, almost all had extensive experience in the field, 6 had 13+ years working in the field, 2 had between 3-8 years. The exception was our first participant, a professional just entering the field, her interview provided some particularly insightful observations because she was only starting to become attuned to the field and therefore made visible certain practices because they were foreign or new, points that we detail in the

findings section. In addition to individual experience, we sampled broadly across UX job roles, including designers and researchers, managers and non-managers. We aimed for representation across different types or organizations, both in terms of domain (high tech vs. government) and also function (consulting vs. product or service). All participants were selected from our local geographic area, a densely populated urban region with a large number of UX professionals.

Table 1. Overview of participants

#	Role/Job Title	Years in field	Type of organization
P1	Design Intern	1-2	E-commerce
P2	UX Manager	6-8	Consulting Services
P3	Lead UX Designer	13+	Business to Business
P4	UX design Manager	13+	E-commerce
P5	UX Director	13+	Consulting Services
P6	Senior Product Manager	13+	E-commerce
P7	UX Researcher	13+	High tech
P8	Web Manager	13+	Government
P9	UX Manager	3-5	Government

4.2 Conducting the interviews

The interview protocol was developed to gain a deeper understanding of a variety of aspects of life as a UX practitioner as well as a specific focus on persuasion and negotiation in design decisions. The interview protocol had three main components. The first was to orient and explore aspects of the individual's job, which included questions about their day-to-day work and responsibilities including how they were positioned within their particular organization. The second component was an exploration of a work artifact. Participants were asked to bring an artifact that they felt represented the types of things they did in their job. The third was a deeper discussion on how design decisions are negotiated and discussed at their particular organization, which often resulted in circling back and discussing the artifact in more detail.

The interviews were conducted in the Fall of 2015. Each interview was approximately 60 minutes in length and was held at a location of the participants' choosing, either their workplace or a public space like a coffee shop. The interview started with an IRB approved consent procedure that outlined the study and procedures and assured anonymity and confidentiality. Participants were given the option of having the interview recorded either via video or audio. After the interviews, the two authors transcribed the recordings.

4.3 Analyzing the data

To analyze the data, the two authors independently coded and wrote analytic memos about the data [33]. During the analysis, the authors held ongoing analysis meetings periodically to share emerging themes and examples. In order to identify rhetorical strategies, the authors identified any reference to design discussions as a strategy. The codes were clustered into categories which taken together are the structure of the taxonomy presented in this paper. Because the goal of the research was to identify the

diversity of strategies rather than, for example, identify which strategies were most popular or most successful, any mention of any strategy was identified and categorized. The authors engaged in ongoing peer review sessions to identify additional strategies and iteratively refine the codes and categories that made up the taxonomy. In addition, the first author presented an early iteration of the taxonomy at a professional UX conference as part of a research showcase similar to a poster session. At this time, she shared and discusses the taxonomy with over 50 UX professionals to gather their feedback and get a sense if the taxonomy resonated more broadly with members of the occupational community. Overall, the feedback from these practitioners confirmed a variety of the strategies, provided additional context and lead to a refinement or elaboration of some of the categories. Presenting an early iteration of the taxonomy functioned as a member check within the UX community.

5. Taxonomy of strategies

This section is organized to reflect the taxonomy itself. In each subsection, we present one of the five main categories (shown in

Figure 1), define the category and present its relevant subcategories with evidence in the form of summary data and emblematic quotes from the participants in the study. Some quotes have been lightly edited to improve clarity and additional words have been added in brackets to improve readability.

Figure 1. Taxonomy of rhetorical strategies

5.1 Research & Data

One of the foundational principles of practicing user-centered design is the need for empirical measurement, that is collecting and evaluating data from users [20]. Therefore, it is not surprising that one of the most varied and robust set of strategies UX practitioners mention is deploying data and user research strategically to make a particular case or argument for a design decision.

Figure 2. Level 1: Research & Data

One designer sums up importance of data for any discussion about design and it is expected at her organization. She states that it is data, rather than another method, such as individual credibility, design expertise or intuition that is necessary to convince others about a particular design decision. Without data, people in the organization would assume the decisions are based on opinions.

"People are always trying to leverage research to bolster [decisions] because … data is like king at my company. It's very hard to go into a meeting and say 'Well I just think this is going to work better' - no one says that." (P4)

To further expand on the use of data within design discussions, we present four subcategories that illustrate how UX practitioners use data thoughtfully and strategically.

5.1.1 Guerilla methods

Informal, low cost, or on the fly research methods have a long tradition in UX research [34]. Within the subcategory of guerilla methods, participants talked about ways to conduct lightweight style research to gather input from users about a particular design. One designer referred to his practice as "rocket surgery style" (P3) referencing the popular practitioner book by Steve Krug [35]. A designer told a story of conducting informal research early in design process saying "[it] was like my own sanity check" (P6). He worked at a high tech company and engaged coworkers who were not directly involved in technology design, such as the receptionist or people working in a legal department. He talked about how informal research with these groups could provide evidence to change a particular design.

"[Someone might say] 'makes sense to me', but if you say "Hey! Here is a lay person... it doesn't make any sense to them' and… then 'I did [an informal study] with 5 people'…[it would be more convincing]." (P6)

These informal research strategies tended to be invoked by designers working on teams or in organizations where more formal research was either not available or not prioritized on a particular project.

5.1.2 Models that synthesize

A strategy that emerged, particularly from participants whose primary role was in UX research, was the use of models or frameworks that synthesized large amounts of user research data. This strategy is in direct contrast with the more informal methods described in the previous subcategory. Models and frameworks typically synthesize a great deal of UX research that has been done by a team and often over an extensive period of time. Examples of these models include complex user segmentation representations, like user profiles, or representations of user flows or journey maps [36][37]. These models are sophisticated artifacts that are deployed to explain users, tasks and contexts to others within the organization.

One researcher talked about how the impetus for creating these models was in response to the expectations for user research to deliver meaningful insights for product teams. He made the case

that while storytelling is an important aspect of working as a UX researcher, having compelling visual artifacts and representation of research support and supplement narrative alone.

"When we are going out in the field especially … there's more of an expectation … to develop these behavioral models or represent visually what's going on or develop frameworks. It's really not enough to just tell the story even in text-based form. You can tell a story great but … I think people are much more interested in how we're synthesizing that information and constructing things." (P5)

5.1.3 Usability studies

Conducting usability studies to gather feedback from users is a common practice for most organizations with teams focused on UX. Therefore, it was not a surprise that many participants referenced the specific ways usability studies and data from studies functioned within debates and decisions about design. Among those practices, several participants talked about the logistical aspect of study results, that they needed to be analyzed quickly and the reports and results should be disseminated quickly and widely throughout an organization. In addition, there were other nuanced strategies that participants mentioned specifically in relation to the results of usability studies. Being able to share the results of the study first hand was a key strategy for several participants. Some participants also stress how they, as the UX person, needed to be in the room while delivering results to help manage expectations about the data and that the data needed to be delivered thoughtfully and carefully.

Several participants stated that they felt the most effective strategy when sharing results is having people observing the studies live. Watching usability studies provided a common experience and reference point for the larger technical team. This strategy was even more crucial if there was a sense that the study would result in "bad news," meaning if the team had expectations that a design might not perform well. Others talked about the use of video clips or highlights to support design decisions or recommendations was an effective strategy and that these clips would be shared after the fact to support a change. One UX designer in our study talked about how disseminating video clips could increase credibility in the study and the design team, similar to how Yeats discusses the rhetorical concept of logos in relation to usability study video clips [37].

As one research stated, when team members watch usability studies they can have a profound impact, especially when the practice of UX is new.

"Sometimes the new folks are just so astounded by what they learn even by observing one or two people that there's just you know great value in that that's really the first time they've really seen somebody interact [with their product]." (P5)

These moments of watching studies, whether in person or by viewing video clips, at times have further impact because they turn into stories that are invoked later to support a claim. These organizational stories come from people who may have watched a study or seen a video clip and invoked that experience in a future situation.

"There are a lot a lot of times in meetings… people are saying 'well remember that one study that we did? We saw blah blah blah.' Then they say…' I don't think that's a good idea, I think we should do it this way'." (P4)

This example shows that even previous examples of research that may be tangentially related to the design question at hand are

invoked and taken as evidence for making a particular decision about design. There seem to be ripple effects of video clips or observing studies and how they function beyond the initial study or team.

Finally, in addition to invoking data from studies to advocate for particular design changes, other participants talked about the value of conducting summative studies to gather benchmark data on existing systems and to help make strategic choices on what systems to evaluate in more detail. This method was invoked by both P8 and P9 who worked for large government organizations that tended to have more hierarchical decision-making structures. We discuss organizational context in more detail later.

5.1.4 Embodied knowledge of users

Another strategy that emerged from the interviews was the practice of leveraging the embodied knowledge of users that some team members possessed. We saw evidence of this practice primarily in organizations where UX was an existing practice and where roles were specialized employing both UX designers and researchers. UX designers would strategically deploy the expertise of the UX researcher on a team. The UX researcher functioned as both a proxy for users and an arbiter of their needs. In this role, a UX researcher could speak for the user based on their knowledge and expertise. The UX researcher was seen as a resource to leverage to parse conversations about specific designs or to settle disagreements. For example, a UX designer recounting a situation where there was disagreement about a particular design said:

> "[My company] loves user research and they have PhD level people... so that's exactly the kind of person you would lean on for that kind of fire power for making decisions." (P6)

Another UX researcher mentioned that designers would seek her out for answers and that they would "ask me or other resident experts for a gut check… I'm trying to decide if my feature should have a drop down box or a picker …or something like that" (P7).

These conversations where the UX researcher is invoked as a proxy for actual users occurred both informally and formally. During our interviews, participants rarely mentioned the technique of personas [39]. Instead, we saw user researchers using various techniques to tame the complexity associated with designing for a large group of users. They would bring that differentiation to their teams. For example, one researcher created a segmentation of target users, a printed deliverable that shows tasks and goals based on job roles. The participant referred to them as user profiles and specifically articulated that they were not personas.

> "They are not personas. Just to be clear……I'm not kind of being uptight about it. It's like oh yeah, Steve... likes to hike and drives his mini-van on the weekend... and when he's at work he's using our tool. So that too me is like personas. That's not helpful here…for the most part, that feels like seductive detail to me." (P7)

When talking about how user profiles are used in design, one researcher mentions that she is called on to "kind of speak for them" (P7). This act of speaking for users is what brings them to life and brings them into the picture for other people within the organization.

5.2 Design

Although design is the site of decision-making, we identified a variety of strategies where practitioners are using designs or design language strategically to convince others.
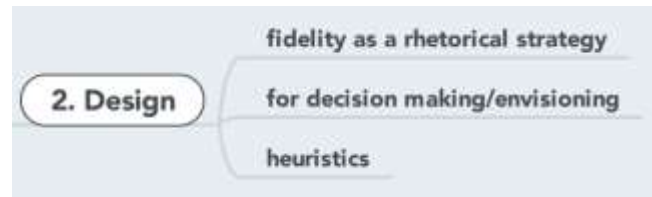

Figure 3. Level 2: Design

5.2.1 Fidelity as a rhetorical strategy

Most UX processes recommend starting with low fidelity designs such as a sketch or paper prototype [40][41]. The belief is that low fidelity design allows for more collaboration with multi-disciplinary teams and stakeholders while allowing for feedback from users early in the process [20]. As a team collects data and becomes more assured of the direction of the design, then they increase design fidelity to include mock ups, prototypes and wireframes, before moving into a fully functioning system [23][41] . This low to high fidelity trajectory happens at different levels depending on the software development process, a designer could be sketching or prototyping the entire architecture or a single feature in the case of agile development.

However, the experienced UX practitioners in our study used design fidelity in strategic ways. One participant who was relatively new to his organization told us how he repositioned the role of wireframes to be used more of an elicitation tool with stakeholders rather than a document prescribing specifications for system design. He described this difference in the following quote:

> "I don't know if it's a new practice so much as new in the way that I'm doing it. They've always have had wireframes they're mostly about ... describing the product to the developers who are building it. I tend to use it as a stakeholder discussion... the difference for me [is that] wireframes are about defining requirements… it's an iterative design process for defining what the requirements are … comps [high fidelity designs] are for defining the specifications." (P3)

Other participants mentioned that higher fidelity design can be a persuasive act because a higher level of detail in the design can make it appear more real, more actualized or in some cases, more done, to those who might be providing support or funding for the project to continue.

Other participants talked about how lower fidelity prototypes would not be acceptable to their teams. One participant at a government organization said that her stakeholders or subject matter experts would not accept low fidelity designs. As she shared a particular design example with us, she said, "these were just Photoshop documents … but the client is very... um... very visual… and they don't really understand a wireframe." (P8). While she knew that using low fidelity prototypes is a standard way of designing in UX practice, doing so would not be accepted at her organization to that particular team. She intimates that her experience leads her to believe that they would not understand or accept this type of deliverable.

A related example came from another UX designer who wanted to see more low fidelity prototypes in design but found herself struggling to convince others to do so. This participant managed a team of other UX designers but also had to present ideas and concepts to management above her. From her comments, it seemed as if she stood between two groups, advocating for lower fidelity to both sides. She wanted the designers she managed to

start in low fidelity in sketches and whiteboard drawings, however she struggled to convince her team to do so. Instead they created prototypes in Axure or as fully functioning HTML prototypes early in the process. She even recounted a story where her designers had used a particular font in the code that made the text look like dummy text, but it was actually just masking the real text. As she said, "they'd done it at a higher fidelity and they tried to fake it so it looks like a lower fidelity" (P4).

Regardless of the practices of any one team or organization, what is striking about these examples is how choosing and positioning the fidelity of design is in itself a rhetorical act that requires the UX practitioner to think thorough issues of audience and make choices based on a variety of organizational and resources constraints.

5.2.2 Envisioning
Related to the fidelity of the design, is the strategic way some of our participants used the design itself to chart a way forward for a product or project. We use the term envisioning to describe how practitioners use designs or prototypes to steer more strategic conversations with stakeholders about the product's purpose.

> "You have to present the vision first use [the wireframe] as a strawman and then have the conversation around what works what doesn't work so that kind of guides the conversation… " (P3).

This participant was presenting a new wireframe that was a new vision of a system to a meeting of stakeholders

> "…I just clicked him through …this is what we said the experience could be like and so he was actually able to see and see me get through this in about five minutes and it's a process that [currently] takes, you know, two to three weeks" (P3).

5.2.3 Heuristics
At other times, UX practitioners use design heuristics to provide rationale or to make suggestions for changes to a design. One participant who was recounting a story of working with developers on design changes, invoked one of Nielsen's heuristics (it italics below) [43].

> "I'll sit down and be like ..devs.. you have to give them *system status visibility* the user needs to know …and you know why because if they don't know …think about what's going to happen next …now they're going to think it's broken." (P2).

Another participant talked about how she reported her research results not just as findings that applied to a particular product, but instead as a design heuristic. This was a way to help build designer's expertise because it was not possible to conduct research all of the time.

> "What I really want to do is give them a rule that they can use in a different situation as well. … we can't just test everything we want whenever we want." (P7)

5.3 Credibility and expertise
In this section, we provide examples of how individuals use their credibility and expertise in rhetorical situations to convince others. In rhetorical terms, these examples highlight the ethos of the UX practitioner and the ways ethos is established and maintained.

Figure 4. Level 3: Credibility & Expertise

Some of our participants talked about having developed the ability to read others and how this reading informs how they engage in design negotiations.

> "I've been working with people for so long that I can get a pretty good gauge of how they're reacting… I know when I can push and I know when to back off just by watching body language and facial expressions and hearing tone of voice." (P2)

In addition to the ability to read people, our participants shared the ways in which they tried to establish trust in the relationship, trust in the data (in the case of UX researchers), or trust in their ability to predict outcomes.

In terms of developing trust and buy in for research results, one participant said:

> "I didn't come in doing this as my first project. I've built a reputation. [My team has] seen the research along the way… it's still not a surprise or strange." (P7)

A UX designer mentioned that she believed that UX researchers build trust because they have internalized design expertise through their experience of watching users. She said, "[Researchers] have in their minds like this years long catalog of watching people use things..." (P4)

In another case, the participant in our study who was an intern, retold stories of watching other UX practitioners in action. As an intern, much of her role was to observe and support other members on the team. Because of this, she had very specific insights into watching others on the team negotiate disagreements in design. She described a designer that she felt expertly engaged in design negotiations by listening.

> "She kind of had like a Pollyanna thing about her, her demeanor, she would like listen completely, she didn't interrupt people, she was … even with her facial gestures and features …. She would take a breath and be like…OK, and this is why I'm going to counteract that. But not like, wait…no no no, I'm going to stop you. She didn't interrupt, she was really good at that, and I thought that's something to make note of" (P1).

Another UX researcher showed how she maintained and strengthened her relationships with the rest of the team by listening and looking for ways to add value.

> "I don't mean raising awareness of myself for no purpose, but just trying to provide some sort of value, just being nice and listening to people. ..like... oh, I heard you were interested in accessibility, I just learned that there's something going on, a talk that you would find interesting. [It's] like a little gift…" (P7).

Finally, one participant shared a story of how his team had learned to trust him over time. He has developed a track record of knowing if things will or will not work for users, that has lead to a sense of trust and respect from the rest of the team. "The amount of evidence required has diminished over time as trust has been built. I mean because they know …I'm also not an unreasonable person" (P2).

5.4 Organizational memory

In this section, we turn to examples where participants talked about the role that storytelling and organizational memory plays when advocating for design changes, both in terms of failures and successes. The challenge of UX design work is often its invisibility. One participant reflecting on a successful project was still frustrated that the UX work devoted to the project was sometime taken for granted.
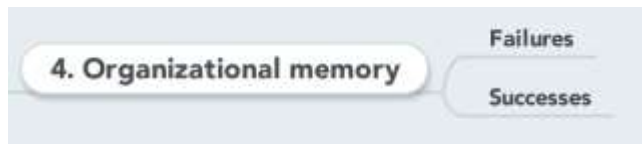

Figure 5. Level 4: Organizational memory

"What makes me crazy and it's probably what makes everyone crazy is that... the comment is... 'That's so easy, that's just the way I'd expect it to behave", as if it was nothing. As if the work [is nothing], you take it out of the box and you put it there and it just the way you'd expect it to behave. They didn't see what it was that they were trying to build us. It was a nightmare. It was 9 months of pushback and struggling with the vendor and saying, no you can't do that." (P8)

In contrast to this example, where a product had been successful, but the effort of the UX team or process was not acknowledged, others had counter examples.

In other examples, participants invoked public failures of products, which had created the space and urgency to focus on UX. In one telling case, P3 states, the project was "very political because this ... project to redefine the product and to rebuild the platform has failed three times already." He had specifically been hired to help solve this problem and therefore was given both organizational and decision making support to make it happen. He stated:

"My boss backs me down the line on that because it gives us it gives me a lot more flexibility in solving problems and it gives development flexibility in defining what the MVP (most valuable product) … because I came in from the outside and was put in a higher level position I immediately have a lot more credibility." (P3)

In an example of a story of a memorable failure that led to a positive outcome, P2 told a story of a project failing because of UX and how that impacted his reputation.

"There's a project I went through and I did a heuristic evaluation and [I was] like this is going to fail, this is going to fail, this is going to fail, and this is going to fail .. so we need to fix this and do this and it just kind of .. sailed by .. and then all those things failed .. and I was like ... it's terrible to be batting a thousand for something like that." (P2)

He went on to tell us that after this project, he earned a nickname from his team. The participant's name was Jeff (a pseudonym) and his team gave him the nickname "Jeff-stradamus" modeled on the prophesier Nostradamus because of his ability to be able to predict UX failures.

5.5 Compromise and communication

The final main category of the taxonomy is Compromise & Communication and occupies the most diverse and robust set of strategies that highlights the nuanced back and forth that goes on between technical teams when discussing design feedback. Each of the subcategories represent instances where there is a back and for communication and push and pull about a particular decision.

5.5.1 Usable enough

When using wireframes, one participant talked about how they were not static documents but rather a site for compromise, especially when working with developers. As he said, "it's never an absolute in terms of usability, right? It's like we do it this way it will be super usable [and if] we do it this way it will be usable enough." (P2)

Figure 6. Level 5: Compromise & Communication

Another designer talked about improving relations between his team and the developer team by not focusing on being "pixel perfect" and instead focusing on bigger issues. As he said, "it's off by a few pixels we just don't care … we don't care enough about aesthetics in this space." (P3)

Both of these practitioners were working to either build or improve relationships between the UX team and the developers. They both also mentioned that being able to sit with developers and work through a problem together to come up with a compromise solution benefited both the product and the relationship.

5.5.2 Distract and pacify

Another tactic employed by one of the designers, was to give stakeholders decision making authority over a decision what was less crucial for users. For example, he talked about giving control over the "hero spot", which is the design term for a large photo that appears on a home page, because it would have little impact on users.

"…a hero thing …that's like my junk drawer… it has no real purpose outside of satisfying stakeholders…. and so there's things like that, that you use … tactical things to divert [their attention]". – P2

5.5.3 Acquiesce

In other occasions, several UX practitioners, mentioned that at times you will not be able to convince others or reach a compromise. As one designer said,

"You've got to know when to fight and when to acquiesce and just back away." (P2). Another said, "Sometimes we just give up and say OK.. it'll just go up the way you say." (P8).

5.5.4 Negotiation and cooperation

Participants remarked about and retold stories of the intersecting strategies they engage in for negotiation and cooperation. Some of the items in this category included a combination of other strategies outlined in the taxonomy.

A key part of cooperation required different negotiation techniques for different audiences. One designer talked specifically about the need to tailor your strategy for developers and that any rationale had to be logical for this group in particular.

"Devs (developers) are kind of the best to work with within UX, at least you know for us, because devs really don't like arbitrary bulls*t… If you can give them a clear compelling

reason the thing should change and why it should be this way, they'll go OK… clear …like it's not you making this up because it makes you feel better …but you've got to give a clear compelling case." (P2)

Another talked about how important it was for designers to be pragmatic and compromise.

"... I would say, a good designer should be pragmatic, if they are constantly perturbed and pissed off at everyone for cutting their features they are probably not going to be around very long..." (P6)

One other persuasive technique that emerged from the study was determining what a particular person cared about. Another technique with developers from one designer, was to emphasize how UX process, which were new to his company, would improve efficiencies and possible rework. As he stated:

"I realized I was trying to make their lives easier so I was coming to them and saying I don't want you to make so many changes at the end so we're going to try to get it right we're going to get it better … so, you don't have to get a phone call from the client saying we need this functionality and you're going to have to re-engineer some section to do so… [it was] kind of an epiphany moment I think for some devs." (P2)

5.5.5 Being the user
When UX practitioners are making rhetorical appeals to other, they may directly invoke the experience of a user. The concept of empathy or empathic design has been discussed in scholarly and practitioner literature [44][45]. In our interviews, several practitioners made appeals to empathy by encouraging others to get a feel for the challenges that users might face, specifically in a hard to use system. Empathy could be engaged through storytelling, providing stories of where users are struggling or showing videos to emphasize the challenges when using a system. In addition to watching studies or videos, an additional technique to invoke empathy was a kind of role playing. The UX practitioner would cast the team member in the role of the user and would ask them to attempt a particular task. Giving another team member a first person experience of something that was particularly difficult was often a successful persuasive technique to convince someone that a change to a design is necessary.

In a related move, a UX researcher used a similar technique when trying to convince others in her organization about the benefits of a particular user research method. She had conducted a card sort with representative users and had found that the product owner was not receptive to the results. As the UX researcher told us, "[the product owner] was just not buying the card sort idea. She just struggled with it. She could not articulate why." (P9). In order to overcome this skepticism about the method, the researcher re-ran the study and this time included not just representative users but also developers and subject matter experts as participants in the card sorting study.

"I want to be able to show them is that... as a group, [you] think differently from your [users], and developers think a little differently than your [users]." – P9

She mentioned that this was a successful strategy to show her product owner that the way they see the world and the way that users see the world was quite difficult. This technique helped to gain buy in both for the methods and the results of the card sorting study.

6. Situating the taxonomy
While the categories in the taxonomy cut across all the participants in our study, there were two salient factors that emerged within the data analysis. The first was our participants' awareness of their rhetorical strategies. The second was the impact of organizational context and culture. Each factor is detailed in this section.

6.1 Awareness of rhetorical complexity
In addition to identifying the discrete strategies that are represented in the taxonomy, our study participants articulated a keen awareness of the complexity of the rhetorical space that they operate within. As evidenced by the strategies and their reflections on those strategies, the senior UX practitioners in our study were highly sensitized to the rhetorical work that is part of their day-to-day lives. One participant used the phrase, "diplomacy" (P2) to refer to this aspect of the work. Another called it the "PR" work, meaning public relations (P7). One participant mentioned that getting buy-in for UX made up 50% of her work efforts (P8). Participants acknowledge that this aspect of the job is crucial to their personal and professional success and also to the success of their projects.

"I see myself as a researcher... you know in the classic sense. I just want to go talk to people and learn cool stuff … [what] I realized is that its part of my job, the PR stuff is part of my job. A good researcher does that, a bad one doesn't." (P7)

However, the nature of the persuasion work can be all consuming and, at times, frustrating, as reflected by this quote.

"It's just clawing through the ... the dirt to get to that opening that you know is there …and [then] you can actually start to do the work." (P8)

Some of these experienced practitioners also referenced that entry level UX professionals in the field, often did not have this awareness and it was something that was learned over time.

6.2 Impact of context
Looking closer at the particular experiences and strategies of the individuals in our study, we noted that the rhetorical work that practitioners engaged in was not experienced in the same way or under the same circumstances for all practitioners. While we acknowledge that our sample was limited to the nine participants we interviewed, we were able to identify patterns about the impact of organizational context.

Organizations that were more traditional high tech or e-commerce companies (P1, P4, P6, P7), shared examples that included fine-grained negotiations of specific designs decisions rather than big picture discussions about whether or not to do UX. However, participants working for government organizations (P8, P9) often encountered more direct push back on designs or introducing UX methods and therefore their strategies often entailed efforts to change policies and procedures in order to do the UX work. In addition, organizations where UX was relatively new (P2, P3) required more initial or upfront negotiation as processes and procedures changed. Additionally, UX practitioners working in organizations that function in a consulting capacity experienced unique challenges. The audiences they are negotiating with are clients, who are often new to UX and change over time (P2, P5).

7. Discussion
Returning to the foundational claim that we made at the start of this paper, we assert that the work of UX, at its core, is fundamentally rhetorical and persuasive. The findings of this

study provide detail and texture by demonstrating the depth, subtly and skill of the rhetorical work that takes place in UX. As previous work noted that practitioners do not draw on user research and data alone to make decisions and recommendations about design [29][30][31]. Friess concludes that when practitioners advocate for design without relying on "fact-based evidence," they are "doing something akin to but not quite UCD" [29, p. 2016]. We assert that using of a variety of strategies not only is UCD, or as we have been referring to it, UX practice, this multiplicity of approaches and strategic rhetorical activities are *at the very heart* of UX practice.

Experienced UX practitioners are skilled, self-reflexive rhetors that draw from multiple persuasive strategies when engaging with others about design decisions. Our study demonstrates how practitioners adjust and maneuver in order to respond to the situation, unique to their particular setting and take into account organizational and interpersonal constraints. Often, doing so in ways that explicitly go against what are thought of as best practices within the UX literature. To demonstrate this claim, we further explore two salient examples from the taxonomy. The first is prototyping, and the second, personas. In both examples, we hear participants recount their rationale for diverging from how UX is discussed in theory.

In the case of prototyping, the experienced practitioners in our study did not simply follow a typically progressive model of moving from low to high fidelity in the manner suggested by practitioner literature [23]. Instead, they diverged and used fidelity as an apparatus that is deployed rhetorically depending on the goals of the designer or the constraints of the organization. The choice in fidelity is dependent of a multitude of factors such as time, resources, or tools. However, the choice in fidelity is contingent based on the perception of the audience's needs and therefore articulated as a rhetorical act. The choice of fidelity sets the stage for a particular type of conversation about design, whether it is to use prototypes as an elicitation tool with stakeholders, or to read the audience and conclude that only a high level of fidelity will do based on their needs and design literacies.

In the case of personas, their use as an artifact was nearly invisible in our study. While the literature recommends personas as a valuable tool to capture and communicate data about users [22][39][47], we rarely saw them in practice. At times during our interviews when we did see stylized or fictionalized versions of users and summaries of user research, our participants were quick to clarify that these representations, in fact, were not to be confused or mistaken with personas and their "seductive detail". Clearly these participants were fully aware of the practice of personas, but they were distinctly and intentionally distancing themselves from their use. In both the cases of prototyping and personas, practitioners are doing their work in recognition of standard practices embraced by the field at large, but specifically acting in contrast to these standard practices.

Methods and practices in UX are not simply done and because they are good for users and therefore yield the right designs. The results from user studies are not simply taken by others as truth and adhered to or implemented without question. Our findings echo Scott's characterization of his students' as they grappled with working in the messy space of UX projects, they developed "a dynamic set of practices requiring a flexible, context-attentive intelligence—or *metis*. [13]p.400]. Making the *metis* of experienced UX practitioners visible broadens our understanding of UX as a collection of methods and practices that are not neutral, but socially situated and, more often than not, contested.

However, much of the UX practitioner literature makes normative claims about how specific methods and practices should be done, and that they should be done at all. However, as our research shows, UX practices are highly contextualized. Practitioners chose, adapt or dismiss these standard ways of doing things based on the particulars of their organizational context and the relations between the individual actors engaging in the collaborative act of design and technology development. It is these divergent practices that help provide insight into the rhetorical nature of UX work.

8. Acknowledgments

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