Design Research has historically focused upon collocated design practices where the production of artefacts, collaboration between designers, and designers’ learning practices are geographically bounded. Information and communication technologies are rapidly transforming this territorial context of designing and making by supporting designers to share experiential knowledge with peers online. But it is unclear how experiential design knowledge should be characterized, and how it may be different from academic design knowledge. In this study, we present a mixed-methods analysis to compare experiential design knowledge communicated in two online practitioner-oriented venues and two leading design research journals. We found that the articulation of experiential academic knowledge unsurprisingly differs in multiple linguistic measurements such as patterns of word usage and language formality. However, we also found that these distinctions are not absolute; in certain instances of online argumentation, practicing designers are able to effectively discipline their language use with the purpose of articulation and accuracy. We argue for increased attention to the ways in which online discussions regarding design practices contribute to the construction of design knowledge.

experiential knowledge; academic knowledge; online design practice; linguistic analysis

1 Introduction

Rapid developments of information and communication technologies (ICTs) have enabled the transformation of design conversations into online forms, allowing designers to enact numerous core activities such as critique (Xu & Bailey, 2012), learning (Arvola & Artman, 2008; Gray & Howard, 2014), and collaboration (Luther, 2009). Online design practices differ from collocated design practices in that the former materializes through online texts or visualizations of design work, containing a representation of experiential knowledge that remains accessible and searchable by a wide range of designers for an extended period of time.
In this paper, we align ourselves with Stolterman’s call to describe design complexity from the practitioner’s perspective (Stolterman, 2008) and Kuuti and Bannon’s call for turn to practice in human-computer interaction (HCI) research (Kuutti & Bannon, 2014). We highlight online designerly communication as an essential contemporary competency-building and sustainment practice for designers, enabling them to keep up with emerging design news, products, tools, and other relevant designerly knowledge. In this paper, we examine practitioners’ experiential knowledge that is articulated through online designerly communication in user experience (UX), a growing interdisciplinary area of design practice.

To capture the distinctive characteristics of UX practitioners’ communication of experiential knowledge online, we performed a linguistic analysis of online designerly communication in comparison to what is considered by the design research community to be rigorous, empirically-driven communication of design knowledge. To accomplish this goal, we selected two online venues for designerly communication, the “/r/userexperience” community hosted by Reddit, the top social news aggregation website in the world, and the UX-focused question and answer (Q&A) community supported by Stack Exchange, one of the largest Q&A sites in the world. We also selected two well-known design research journals, Design Issues and Design Studies, and sampled ten journal articles from each. In total, we will analyze four settings for the communication of design knowledge, two experientially-focused and two academically-focused.

Using a mixed-methods approach, we analysed and compared these four knowledge scenarios to document how and in what ways the communication of experiential and academic knowledge converges and diverges. Using discourse analysis, we studied the distinctive characteristics of social languages in the four scenarios. Using computational linguistics, we found that the communication of experiential knowledge and academic knowledge differs significantly in terms of word choices in semantic categories such as analytic words and emotional words, and language formality in terms of using simple or compound words. In addition, the academic texts are more focused upon theoretical issues, while the experiential texts stress practical problem solving and concrete design scenarios. Online designerly communication also differs in the two scenarios, with UX practitioners in the Q&A site showing a greater tendency towards articulating experiential knowledge in precise, objective terms. Our conclusions suggest that more attention should be paid to understanding the unique characteristics of online design practices, and what kinds of experiential knowledge it conveys. Studying experiential knowledge in online designerly communication is crucial to a more systematic understanding of the actual or potential role of experiential knowledge in design practice and research.

2 Related Work

2.1 Interdisciplinarity of User Experience Design

User experience (UX) design has emerged as an important field of design practice, representing a disciplinary shift away from purely visual or product-oriented conceptions of design, towards the design of interactions and services. Buchanan considered such type of shift as a natural growth of design profession, containing an increasingly humanist, complex, and socially-intertwined understanding of design (Buchanan, 1995). UX is inherently interdisciplinary, bringing in knowledge, theories, concepts, and methodologies from numerous disciplines such as engineering, psychology, computer science, and sociology (Forlizzi & Battarbee, 2004). Blevis et al. noted that UX as an interdisciplinary field has created a new fusion of human interests in relation to interaction and service (Blevis, Chow, Koskinen, Poggenpohl, & Tsin, 2014).

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1 https://www.reddit.com/r/userexperience/
2 https://ux.stackexchange.com/
2.2 “Bubbling up” Design Knowledge from Practice to Research

The academic community has long identified the research-practice gap between design researchers and design practitioners (Rogers, 2004). Recognizing the existence of such a gap that prevents the consolidation, communication, and dissemination of design knowledge, Stolterman (2008) called for more endeavour into understanding design complexity from the practitioners’ perspective. In line with this call, an emergent body of research has called attention to online social spaces where designers socialize and learn from each other as a core aspect of their practice (Gray & Howard, 2014; Marlow & Dabbish, 2014; Xu & Bailey, 2012). Research with a focus on designers’ professional practices allows insight into how design practitioners refine and concretize abstract knowledge, which eventually has the potential to be “bubbled up” and validated through refined theories, concepts, and methods (Gray, Stolterman, & Siegel, 2014). In line with this practice-led trajectory, we consider the experiential knowledge generated by practitioners in social media spaces to be traces of actual design practices, which are currently understudied by design researchers.

2.3 Rigor in the Communication of Design Knowledge

In discussing practice-based research, Biggs and Büchler (2007) argued that rigor does not indicate “a certain stiffness of intellectual attitude or worldview that is in compatible with change and the new.” If rigor was synonymous with inflexibility, they argued, then design communities would be opposed to rigor in practice because creativity would be inhibited. They proposed to consider rigor in the context of argumentation, that rigor represents an “unyielding severity of process that leads to valid conclusions” (Biggs & Büchler, 2007). In this regard, the rigorousness of communication of design knowledge is worth close investigation as we seek to understand how experiential and academic knowledge is discursively constructed.

3 Methods

We collected UX practitioners’ discourses from UX Stack Exchange, and the ‘/r/userexperience’ subreddit. Additionally, we selected articles from Design Studies and Design Issues for the purpose of comparison with traditional distillations of academic knowledge. Below we detail our approach.

3.1 Participant Observation

While our approach relies primarily upon linguistic analysis, deep understanding of designerly interactions in the two online venues is crucial for our interpretation of linguistic patterns that emerge from computational methods. Therefore, we first used participant observation (Boellstorff, Nardi, Pearce, & Taylor, 2012; Hine, 2000; Star, 1999) to build a shared understanding of each platform, contextualizing basic characteristics and features as they relate to UX practitioners’ interactions. We developed an understanding of the platform features of Stack Exchange and Reddit. We read content in situ that had been created by practitioners, using these threaded conversations to obtain a sense of the communication atmosphere and norms in the two online UX spaces. Insights gained through participation observation in the two online sites informed our later linguistic analysis.

3.2 Data Collection

Stack Exchange (SE) is one of the largest Q&A sites in the world, supporting 170 topics at the time of writing this paper. We used Stack Exchange’s official API to retrieve threads between January 2017 and June 2017, resulting in 1465 questions and their associated 2956 answers.

Reddit is one of the largest socially-driven aggregators of news and other content in the world, supporting one than one million subreddits by the time of writing this paper. Its “/r/userexperience” subreddit supports a vibrant online UX community where junior and senior UX practitioners communicate and socialize. We used Reddit’s official API to retrieve threads between January 2017 and June 2017, resulting in a dataset of 825 threads with their associated 5433 comments.
We selected journal articles from two renowned design-focused journals, *Design Studies*[^3] and *Design Issues*[^4]. Each journal’s website provided two criteria: most cited and most viewed/downloaded. On October 28, 2017, we selected and combined the top 5 articles from each of two criteria for each journal for further analysis, resulting in 10 articles from Design Studies and 10 articles from Design Issues. Appendix A lists the selected journal articles present in our collection. Table 1 shows the total number of words for each scenario.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Design Issues</th>
<th>Design Studies</th>
<th>UX Stack Exchange(SE)</th>
<th>/r/userexperience(Reddit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word count</td>
<td>55,168</td>
<td>81,544</td>
<td>610,375</td>
<td>408,284</td>
</tr>
</tbody>
</table>

The nature of these four sites are quite different, thus our data collection strategies were refined by venue in reasonable ways. For journal articles, we considered the top cited and downloaded articles as a representative sample, because these articles are highly visible on the website of the journals, as compared to other published articles. However, these criteria had to be modified in order to map to online discussions on Stack Exchange and Reddit. In online designerly communication, the criteria of top cited and downloaded materials were not included, because the publication timeline of a journal article is substantively different from that of an online post.

### 3.3 Data Analysis

We first used discourse analysis (Gee, 2014) to investigate the distinctive styles or varieties of languages used in the four sites. Specifically, we employed the “social languages tool:”

> For any communication, ask how it uses words and grammatical structures (types of phrases, clauses, and sentences) to signal and enact a given social language. The communication may mix two or more social languages or switch between two or more. In turn, a social language may be composed of words or phrases from more than one language (e.g., it may mix English and Spanish). (Gee, 2014)

For Gee, social languages are “styles or varieties of a language (or a mixture of languages) that enact and are associated with a particular social identity” (Gee, 2014). Drawing from this tool, we focused on word choices, lexical and grammatical structures, and “collocational patterns” where certain words or phrases tend to appear together in a sentence. Due to the limited space of this paper, we did not employ the big “D” discourse tool that goes beyond language-in-use and interrogates a distinctive set of interconnected ways of speaking, acting, interacting, valuing, and using artifacts to enact the social and cultural fabric.

We used two computational linguistics techniques for the purpose of data analysis. We used the n-gram technique to explore frequent word choices by academics and practitioners. The N-gram technique refers to the presence of a continuous sequence of n words in computational linguistics (Li, Wang, & Acero, 2008), allowing analysis of word groupings as well as individual word frequencies. We also used the Linguistic Inquiry and Word Count (LIWC) software program (Pennebaker, Booth, Boyd, & Francis, 2015) to calculate word frequencies in meaningful semantic categories across these four categories and analyse their differences.

### 4 Findings

Through initial observation and close reading of texts from the four scenarios, we were able to form initial impressions of the goal and agenda of communication in each venue. In the following subsections, we will first provide a description of the sociotechnical context or relevance of each source, and then proceed to a detailed linguistic analysis.

[^3]: https://www.journals.elsevier.com/design-studies
[^4]: http://www.mitpressjournals.org/loi/desi
4.1 Contextualization of the Four Scenarios

Design Issues is owned by MIT Press. The journal brands itself as “the first American academic journal to examine design history, theory, and criticism,” and seeks to “provoke inquiry into the cultural and intellectual issues surrounding design.”

Design Studies is a “leading international academic journal focused on developing understanding of design processes.” It covers studies that concern “design activity across all domains of application, including engineering and product design, architectural and urban design, computer artefacts and systems design.”

UX Stack Exchange (SE) is visually centered around the Q&A activity, with its central part of interface dedicated to a list of UX questions. Figure 1 shows an example of a question. The visual design of a question contains rich meta-information such as its tags, number of votes, number of answers, number of views, and questioner’s reputation and badges in the site. SE also supports a profile page for each user.

![Figure 1: A question in the UX section of Stack Exchange.](image-url)

SE’s moderators do not consider this section of the site as a general UX community. Rather, they emphasize the discursive communication of UX knowledge, claiming in their site description that “we’re working together to build a library of detailed answers to every question about user experience.” They set clear boundaries regarding the proper formats of question and answer, noting that users should “avoid questions that are primarily opinion-based, or that are likely to generate discussion rather than answers.”

A series of reward mechanisms are in play to encourage quality questions, answers, and improvements of existing questions and answers. For example, a user gains more reputation as others vote up their questions or answers. A higher reputation allows the user to unlock new privileges such as the ability to comment and the ability to vote down.

SE also tries to regulate community members’ honesty and originality in designerly communication, in ways similar to academic research. For example, its policies explicitly prohibit plagiarism and promote honesty, evident in lines such as “posting the work of others with no indication that it is not your own—is frowned on by our community, and may result in your answer being down-voted or deleted” and requests that users should “always give proper credit to the author and site where you found the text, including a direct link to it.”

Holding high standards in articulating experiential knowledge relating to design, SE claims that “we’re a little bit different from other sites [supported by Stack Exchange].”

The “/r/userexperience” subreddit (Reddit) is a general-purpose online community with a focus on UX. Therefore, a wider range of social interactions are present between UX practitioners, in sharp contrast to SE’s focus on Q&A. The visual design of its interface is also focused on discussions among UX practitioners (see Figure 2). In contrast to SE, which uses mechanisms for personal reputation and identity, Reddit places little emphasis on users, with no support for social networks or user profile.
The community has generic behavioural rules in alignment with other online communities, although with more specific guidance relevant to a design audience. On the right side of the platform interface, six rules are provided:

1. Off-topic posts will be removed;
2. No blog spam or marketing materials for agencies/services that masquerade to be articles;
3. follow reddiquette [articulated norms by Reddit users];
4. no self-promotion or surveys;
5. No promotion of agencies, vendors, services, or software;
6. No memes, image macros, screen caps of UIs you don't like (try /r/crappydesign) and other low effort image posts. Informative images, images necessary to illustrate questions, or imagery accompanied with useful analysis are generally allowed.”

Below the six rules, the site also recommends UX Stack Exchange as one of three useful sites.

4.2 Discourse Analysis of Four Scenarios
We selected one representative sentence from each site to further analyse through a discourse analysis approach.

**#1: Design Issues**: “I would like to begin this paper with a brief review of some of the historical concerns that have emerged with respect to the relationship between design and science.”

**#2: Design Studies**: “Creativity in the design process is often characterised by the occurrence of a significant event—the so-called ‘creative leap’.”

**#3: Stack Exchange**: “When brainstorming features with stakeholders i commonly come across 2 kinds of reasoning 1 being this is feature is so obvious that the user will get it, maybe because they use other apps.”

**#4: Reddit**: “I’d like to hear some thoughts from you all about the ways in which you think your companies are doing UX well, and where they can improve.”

These four sentences were built upon distinctive lexical and grammatical resources to enact distinctive social identities. The Design Issues example enacted a thoughtful and critical thinker who reflected upon the history of design research in order to engage abstract concepts such as design and science. The Design Studies example enacted an empirical researcher who sought to ground a claim in relation to a well-known concept (i.e., the “creative leap”). The Stack Exchange example enacted an experienced practitioner who rationalized their design judgments in relation to their own lived experience. Finally, the Reddit example enacted a friendly and approachable UX designer who wished to chat about others’ experiences in relation to design practice.

Most notably, the first two sentences are in an academic social language, while the latter two adopt a vernacular style of language. While both languages use correct grammatical structures, combining them in particular ways in an academic social language is “called for by certain social practices of certain academic (and school-based) domains” (Gee, 2014). In academic writing, each utterance tends to be grammatically correct, succinct, and meaningful, where removal of any word or phrase can change or alter the meaning of the sentence. In the first sentence, “some of” and “that have
emerged with respect to the relationship between design science” are co-constitutive qualifiers that work together to describe the noun phrase “historical concerns.” If the first qualifier “some of” is removed, the focus of this paper would be broadened extensively upon all the historical concerns that have emerged with respect to the relationship between design science. If the second qualifier is removed, the focus of this paper would become unclear, lacking critical details. In the second sentence, the grammatical devices including “in the design process,” “the occurrence of a significant event,” and “creative leap” co-locate in one sentence so that readers speaking this social language can easily understand the meaning of this sentence. In addition, the syntactic device of “right dislocation” (i.e., letting the phrase “the so-called ‘creative leap’” hang out at the end of the sentence) appears repetitive in terms of not introducing new ideas to the sentence, but performs several social functions including: attaching importance to the phenomenon under study since there is even a term describing it, stressing the commonness of this phenomenon by using the phrase “so-called,” and narrating readers’ familiarity with this phenomenon.

However, in vernacular language, such is not the case. The third example does not either capitalize “I” or use punctuation correctly. It also employs vague phrases such as “so obvious” and “the user will get it.” These languages convey only vague meanings and are not used in academic writing. In the last sentence, colloquial phrases like “I’d like to,” “some thoughts,” and “you all” are prevalent. These languages are consistent with the social settings being either academic or informal. However, an apparent distinction also exists between the third and fourth sentences. The third engages with a series of concrete practices or artifacts such as “brainstorming,” “feature,” “user,” and “apps” that are central to the idea embedded in this sentence. In the fourth sentence, however, a long parenthetical device (i.e., “I’d like to hear some thoughts from you all about the ways in which you think”) is in use that does not have any specific meaning. The sentence can be greatly shortened without meaning reduction to “how your companies are doing UX well, and where they can improve.”

The ways in which the four sentences engage with the speaker’s subjectivity in the subjects of sentences are remarkably different. The first one starts with the rather personal stance that “I would like to,” signalling the “thinker” awareness of and emphasis upon the intricate and inevitable relationship between the speaker himself and the text he wrote. The second, quite contrarily, adopted an objective tone to describe a quality of creativity. The third and the fourth sentences adopted “I” as the subjects, which, however, should not be confused with the “I” in the first sentence. The use of “I” in the last two sentences was used to give rise to the telling of authentic personal experiences or opinions in a sociable and informal atmosphere.

4.3 Difference in Word Choice across Academic Knowledge and Experiential Knowledge

We calculated the top 15 popular unigrams, bigrams, and trigrams across the four scenarios (Figure 3). In calculating these n-grams, we removed those that contained only function words such as pronouns and prepositions, which are considered to have little lexical meaning. As shown in Figure 3, academic knowledge and experiential knowledge adopted strikingly different language systems, with the former using formal language, and the latter using casual, everyday language. In fact, the only overlapping top unigram across the four scenarios is ‘design.’ There are no overlapping top bigrams or trigrams among the four scenarios.

Design Issues and Design Studies share similarities in using formal language. However, even these two have differences due to their focuses. On the one hand, Design Issues is more concerned with criticality and depth of discussion, evident in the high frequency of unigrams such as ‘research,’ ‘problem,’ ‘science,’ and ‘Simon.’ ‘Simon’-related unigram and trigrams (i.e., ‘Simon’s science of’ and ‘Herbert A Simon’) are popular, as Design Issues manuscripts frequently engage with the work of Herbert A. Simon. On the other hand, Design Studies clearly has more pragmatic orientation, manifest in frequent unigram choices such as ‘product,’ ‘process,’ ‘use,’ ‘practice,’ and ‘prototype.’ Its frequent trigrams such as ‘psychological experience of,’ “the development of,” ‘of the product,’
'low-fidelity prototyping practice,' 'consumer response to,' 'of visual accessibility,' 'design for sustainability,' and 'of low-fidelity prototyping' further confirm its focus on actual design encounters and practical implications.

While formal language is a vehicle for the communication of academic knowledge, it is not necessarily so in online contexts. In SE and Reddit, casual language is a common feature. One can argue that formal language contains substantially more and accurate information. However, it is also difficult to comprehend this language or apply it to specific situations, and is sometimes unnecessary for solving an actual design problem. Casual, situated, and pragmatically-focused language is used to communicate experiential knowledge that generally has direct and immediate use, and is open to a much larger community of designers, senior or junior.

Notably, SE is clearly results in more detailed communication when compared to Reddit; this difference is manifest in frequent unigrams that are directly related to elements of user experience, such as 'button,' 'page,' and 'example.' Its trigrams are also concrete, such as 'download bmm source' and 'with Balsamiq Mockups.' This demonstrates key differences between the function of SE and Reddit: while the former is specialized in Q&A about specific design situations, the latter is open to a much wider range of issues related to UX. Interestingly, the abbreviation for user experience, 'UX,' is the most popular unigram in Reddit. This suggests that in the specific subreddit, a sense of community is forming as people have built shared understanding of the use of special language.

<table>
<thead>
<tr>
<th>Design Issues</th>
<th>Design Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unigram</strong></td>
<td><strong>Trigram</strong></td>
</tr>
<tr>
<td>design</td>
<td>1546</td>
</tr>
<tr>
<td>research</td>
<td>320</td>
</tr>
<tr>
<td>problem</td>
<td>233</td>
</tr>
<tr>
<td>science</td>
<td>220</td>
</tr>
<tr>
<td>human</td>
<td>159</td>
</tr>
<tr>
<td>new</td>
<td>171</td>
</tr>
<tr>
<td>innovation</td>
<td>163</td>
</tr>
<tr>
<td>designer</td>
<td>154</td>
</tr>
<tr>
<td>product</td>
<td>143</td>
</tr>
<tr>
<td>social</td>
<td>130</td>
</tr>
<tr>
<td>process</td>
<td>116</td>
</tr>
<tr>
<td>more</td>
<td>89</td>
</tr>
<tr>
<td>methods</td>
<td>86</td>
</tr>
<tr>
<td>develop</td>
<td>83</td>
</tr>
<tr>
<td>planning</td>
<td>81</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stack Exchange</th>
<th>Reddit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unigram</strong></td>
<td><strong>Trigram</strong></td>
</tr>
<tr>
<td>user</td>
<td>6769</td>
</tr>
<tr>
<td>more</td>
<td>2097</td>
</tr>
<tr>
<td>else</td>
<td>2079</td>
</tr>
<tr>
<td>make</td>
<td>2002</td>
</tr>
<tr>
<td>use</td>
<td>1972</td>
</tr>
<tr>
<td>button</td>
<td>1911</td>
</tr>
<tr>
<td>need</td>
<td>1694</td>
</tr>
<tr>
<td>design</td>
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</tr>
<tr>
<td>say</td>
<td>1334</td>
</tr>
<tr>
<td>went</td>
<td>1273</td>
</tr>
<tr>
<td>page</td>
<td>1271</td>
</tr>
<tr>
<td>think</td>
<td>1289</td>
</tr>
<tr>
<td>see</td>
<td>1133</td>
</tr>
<tr>
<td>time</td>
<td>1036</td>
</tr>
</tbody>
</table>

Figure 3 N-grams and their frequencies across four scenarios.

### 4.4 Semantic Differences between Academic Knowledge and Experiential Knowledge

We first examine the six summary language variables in these occasions. Below are four LIWC semantic categories:

**Analytical thinking (analytic):** a high number reflects formal, logical, and hierarchical thinking; lower numbers reflect more informal, personal, here-and-now, and narrative thinking.

**Clout:** a high number suggests that the author is speaking from the perspective of high expertise and is confident; low Clout numbers suggest a more tentative, humble, even
anxious style.

**Authentic:** higher numbers are associated with a more honest, personal, and disclosing text; lower numbers suggest a more guarded, distanced form of discourse.

**Emotional tone (tone):** a high number is associated with a more positive, upbeat style; a low number reveals greater anxiety, sadness, or hostility; a number around 50 suggests either a lack of emotionality or different levels of ambivalence.

(Pennebaker et al., 2015)

The other two general descriptor categories are word count per sentence (WPS) and the number of words longer than six letters (Sixltr). In Figure 4, we show the rescaled percentages of each semantic category. To understand whether UX practitioners’ language differs from general social media use, we also include the measurements of writing blog posts (raw data is not provided), one of the baselines provided by LIWC developers. We deem that compared to other baselines such as novels, natural speech, and Twitter, blogging is optimal for understanding how the focus on the specific domain of UX knowledge may intersect with the writing of social media posts.

![Figure 4](image-url)

**Figure 4** Frequency of summary language variables by Scenario.

Figure 4 indicates meaningful similarities and differences across the four scenarios and one general social media scenario (blogs). Categorically speaking, language use of design research, UX practitioners’ conversations, and general social media differ significantly in terms of analytic, authentic, WPS, and Sixltr. Unsurprisingly, design research scored significantly different from the other two categories, as academic writing emphasizes on objectivity, clarify, rigor, and formal language (i.e., longer sentences and more complex words). There is no significant difference in the category of clout.

Interestingly, in the tone category, the language of articles from Design Issues seems to keep a very low degree of emotionality, but that of the articles from Design Studies tends to be upbeat, almost similar to the degree of designerly conversations on Stack Exchange. We suggest that the difference between Design Issues and Design Studies lies in the focus of two journals as described in the contextualization subsection.
Importantly, the linguistics characteristics of communicative practice in Stack Exchange and Stack in relation to academic writing reveals the two online venues' different functions for UX practitioners. In many categories, the patterns of SE are distinctive between academic writing and the subreddit. If the subreddit serves as a casual place where practitioners can engage in a variety of design topics, then SE represents a practitioner’s approach to articulating their experiential knowledge.

In alignment with previous literature on the research-practice gap (Rogers, 2004), we add that such gap also exists in terms of linguistics of knowledge sharing and articulation. Also, notably, linguistic patterns of online UX communities also differ greatly from those of blogs. This observation points to the specific body of knowledge owned by professional communities which demands more careful, objective language use, compared to general-purpose social media such as blogs.

After looking at the overall language patterns, now we look into linguistic details of the five language scenarios (Figure 5). This time we only select major semantic categories. For example, we only use one category “function” for all function words, rather than break it down to more detailed categories such as pronoun and article.

As Figure 5 shows, two academic writing scenarios are similar to each other, but differ from the three online scenarios. Patterns of SE are ambivalent, sometimes similar to the subreddit and blogs (e.g., function and verb), sometimes in the middle (e.g., social), and other times similar to academic writing (e.g., AllPunc).
5 Discussion
Our findings showed that experiential knowledge expressed by UX practitioners through online
designerly communication and academic knowledge articulated by academics in journal articles have
varying content and linguistic forms. These differences lie in practitioners and academics’ modes of
thinking and purposes of communication as discussed in findings. However, the differences are not
absolute. Expressions of knowledge on SE show a clear tendency towards rigorous argumentation in
knowledge building. In the semantic category of tone, SE is already close to Design Studies.
Therefore, we do not come to the conclusion that design practice and design research has two
opposing ends with differing goals, but rather see these related communities and knowledge
building practices as being connected, with the potential for generative conversation and
collaboration. In alignment with Gray et al.’s (2014) suggestion that practitioners have the potential
to “bubble-up” relevant knowledge back to the academic community, UX practitioners at SE are
clearly seeking to move in this direction. This leaves questions to design researchers as to how
design research should respond to designers’ knowledge practices.
Both experiential knowledge and academic knowledge are valuable for design practice, and exist
within the huge spectrum of design knowledge which is composed of ultimate particulars, theory,
and intermediate-level knowledge, which refers to “more abstracted than particular instances, yet
does not aspire to the generality of a theory” (Höök & Löwgren, 2012). While academic knowledge,
especially those discussed in Design Issues, is primarily about theory, experiential knowledge is
highly pragmatic and detail-oriented, rarely engaging in a direct way with theories or theory
building.
The means of communication of experiential knowledge can be different too, as demonstrated in SE
and Reddit. SE’s mission represents a conscious move towards knowledge building as an archival act,
where the questioners carefully craft their questions and the answerers rigorously collect evidence
in support of a sound answer. However, if we broaden the scope of experiential knowledge to
include not only core knowledge regarding how to design artefacts, but also ideas and thoughts at
the margin, such as how designers interact with their corporate environments, then shared
experiential knowledge on Reddit has a broader range of potential pragmatic utility. In addition,
sharing experiential knowledge might not be the sole purpose, but rather exists as a byproduct of
everyday online social interactions such as exchanging salary information and telling a joke; in this
way, social or phatic communication on Reddit has the potential to open up a communicative space
where experiential knowledge can more easily be shared. In contrast, interactions on SE follow a
rigid question and answer format that constrains the ability of users to engage in phatic
communication; however, users are rewarded in other ways (e.g., reputation gained via upvoting)
that allow them to express their social bonds and trustworthiness in the community.

5.1 Turn to Online Design Practice
Numerous scholars—particularly within the HCI discourse—have discussed issues relating to the
research-practice gap, noting spaces where practitioners frequently lack recognition for the
complexity of their practice and practical knowledge gained through their design activity (Goodman,
Stolterman, & Wakkary, 2011; Rogers, 2004). These efforts are often situated in a shift from solely
academic notions of knowledge production and use, and towards a “turn to design practice.” In
contrast, practitioners are often judged or evaluated using the standards of academic research, even
while practitioners perceive that research knowledge—when viewed in isolation—is not addressing
their everyday problems (Stolterman & Pierce, 2012). While this gap has not yet been properly and
fully addressed, there has been increasing interest in the potential role of information
communication technologies (ICTs) in influencing or bridging this gap. Empirical studies have shown
that ICTs have already become an indispensable part of design practice, but if academic design
researchers do not consider the role of ICTs and only focus on the collocated component of design
practice, the gap will be enlarged in at least two directions. First, empirical design research will fail to
capture the full picture of design practice, and the design complexity that is present in competency development, sustainment, and activation of tacit knowledge. Second, a reductionist understanding of design complexity in theoretical design research will generate and inform limited conceptualizations of design practice.

In this study, we have demonstrated that ICTs like SE and Reddit have already shifted and influenced the epistemological and methodological aspects of design practice. Design practitioners are now able to collectively and dynamically construct the knowledge base for their field and define or shape valid methods for generating pragmatic, experiential forms of knowledge. By focusing on online design practice, we are not rejecting the importance of collocated design practice. Rather, these two types of practices are potentially closely related and complementary to each other. In our study, shared experiential knowledge often originated from collocated design practices in practitioners’ company or studio. Our contention is that as design practice expands into online spaces, design research in these spaces must keep up with the evolution of design practice through ICTs. Thus, we call for a “turn to online design practice” as an important step towards bridging research and practice communities, allowing design researchers to identify and document the richness of practice in both collocated and online environments.

6 Conclusion

In this paper, we have reported a mixed-methods analysis, comparing the communication of experiential knowledge in online design communities and academic knowledge in journal articles. We were able to demonstrate both commonalities and differences across the four scenarios, contributing to deeper understandings of experiential knowledge that is expressed by practitioners in online designerly communication. We suggest that researchers should focus additional study on online design spaces as ICTs transform the nature and form of design practice and research. In this study, we have only examined discourse and linguistic characteristics of online designerly communication. Future work is needed to more fully investigate the rhetorical and discursive aspects of this online communication in building knowledge-related argumentation and ultimately supporting community and professionalization practices such as collaboration and socialization.

7 References


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