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Re-conceiving time in reference and information services work: A qualitative secondary analysis

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Introduction

Time is often perceived as something fixed and regular, a consistent structure with which we measure our lives. But in fact, our perception of time is all but fixed and regular. It speeds up when we are engaged in a task and drags when we are bored. At times, it seems in short supply, and at others, it seems like it never ends. In the workplace, conceptions of time are often reduced to efficiency and productivity, ignoring how time is perceived by workers and how this perception affects performance, job satisfaction, and other cognitive and affective dimensions of work.

This study focuses specifically on perceptions of time in the work of reference and information service (RIS) professionals. It aims to refocus the discussion of time in RIS from efficiency and productivity to how it is perceived by professionals and how it defines and shapes their work. The insights gained from this new focus will further our understanding of RIS and contribute to the broader discourse on the sociology of time. It also suggests strategies that professionals and managers can use to improve RIS practice.

The study is a secondary qualitative analysis of the data from two phenomenological studies on reference and information service work. In neither study was time an aspect of the initial research questions, nor did it emerge as a theme in relation to those research questions; however, in both studies issues concerning time were regularly mentioned. Therefore, the researchers decided to focus on the concept of time and re-analyze both data sets with this new lens. We found that while many of the passages referring to time focused on mundane aspects of work, such as time pressure or productivity, some passages provided deeper insight into how time relates to self-image or meaning, especially within the context of the profession.

Literature Review

The information provision, communication, and instruction that comprise reference and information services work is bounded by both the imminent reality of the reference transaction and the librarian's experience of the work itself. It is measured in the outcome of the transaction and the perception of the interaction. This presents several possible ways to talk about the space and time in which reference work occurs. The concept of time, and its cognitive and affective impact, has not been explored as an aspect of the work experience of the RIS professional, although the sociology of time is an important area of research for other professions. The literature review synthesizes the scholarly conversation concerning time and professional work with relevance to the emerging themes in the study.

Bergmann (1991) writes a thorough review of various sociological analyses of time of most of the twentieth century. Of particular pertinence for this study are his discussions regarding the sense of time as a nonlinear phenomenon, the effects of industrial capitalism on the sense of time, and the perception of time scarcity. He explains that sociological time is not natural; it arises from impositions, limitations, and demands of social systems, or from the “relationship between temporal perspectives and social roles, social classes...social planning, and so on” (p. 85). The feelings of scarcity or inadequacy that arise in relation to time come from the disjuncture of personal sense of time versus expectations. This ‘time pressure’ is experienced in the professions (p. 113 – 115), though he says that the sociology of time in professions had not yet been fully explored. In fact, the interest in time in sociological circles has ebbed and flowed and wide areas remain to be studied.

Time as commodity

A concern about time, often framed by a valuation of efficiency and economy, has played a central role in the foundations of modern librarianship. Samuel Swett Green (1876), for example, said that “Almost all investigators are glad to have their labors shortened by availing themselves of assistance”, and Melvil Dewey, who was reportedly obsessed with time and efficiency (Wiegand, 1996), expressed a preference for efficiency through his eponymous classification schedule and his school, the School of Library Economy. Dewey would have been keenly interested in the impact that library automation had on the field. Ralph Parker, the first person to begin work on and to automate library workflows (Burns, 2014), was motivated by a future that would entail greater efficiency and less drudgery. Ranganathan (1931), whose five laws of librarianship have helped shape the values of the profession, named *Save the Time of the Reader* his fourth law. This law has endured as a value for RIS. According to Brewerton (2003), “If there is a future role for us...it must be tied up with Ranganathan's Fourth Law” (p. 53).

Given such early concerns about productivity, activity, effectiveness, and functionality, it makes sense that there is a considerable amount of literature about time and its relation to the practice of modern librarianship. Many studies, for instance, have measured the time that librarians spend in reference interviews, especially as a matter of assessment, on time as a measurement of service quality, including the amount of time devoted to user or professional interactions (Friesen, Cooke and Raynard, 2014), or on the amount of time users wait for service (Cassidy, Colmenares and Martinez, 2014). Those studies focus on time as a commodity: a return-on-investment for the library user or the employer.

While much of the literature about time as a commodity is from the assessor's point of view, the librarian plays a role in the "market" too. When a commodity, a limited resource, is constrained, mismanaged, or placed outside one's control, then work life and experience are diminished. For instance, "lack of time" was identified as a factor in job stress and burnout for librarians (Wilkins-Jordan, 2011; 2014). Whisner (2011) noted that "having more than you can do is a chronic condition of reference work" (p. 147), and advised the time-crunched librarian to come in early or on Saturdays for brief periods of time to catch up while conceding that doing so often will result in burnout.

The notion of time as a commodity is captured in other metaphorical expressions. *Time famine*, for example, signifies a severe lack of resources---a starvation for time. Perlow (1999) investigated the concept of time famine in the world of software engineers and defined it as a "feeling of having too much to do and not enough time to do it" (p. 57). This shortage of time suggests a lack of sustenance and a continuum in its severity: from a short aridness to a long-lasting famine. With respect to librarianship, Whisner (2011) claims that the length and seriousness of lack of time results in a corresponding lack of job satisfaction.

Bailey and Madden's (2015) study of meaningfulness of work found that individuals, regardless of their position, feel a greater connection to their work when it invokes the greater good or connects to a higher power (p. 2), but also when they can look back over time and see the significance of their completed work. Time structure was an important aspect of meaningfulness: meaning exists in "reflection on past experiences, awareness of the present itself and in anticipation of the future. Experiences are accumulated over time and these become interconnected through symbolic systems of relevances, so that every lived experience relates both to past and to potential future experiences" (p. 4). In other words, events are "embedded within an individual and social timescape that casts some events or experiences in a more meaningful light than others." They also found that a lack of autonomy (i.e., having to adhere to rules that were not meaningful, or doing administrative work) led to feelings that their work was meaningless, commodified, or inauthentic.

Time famine is related to the connection between work interference and professional identity-making. Epstein (2000) discussed how managed care, which assumes that time can be regulated, administered, and partitioned, has reduced the physician's autonomy, her ability to use professional judgment, and consequently, her job satisfaction. Within librarianship, Burns and Bossaller (2012) described distractions through numerous communication channels at work, termed *communication overload*, and that contributed to a feeling of interference or disruption in their participants' notion of their real work, which is to serve patrons. Jestes and Laird's (1968) study of time in reference work found that librarians spent an inordinate amount of time being interrupted by "sub-professional' activity" (p. 15) and recommended hiring non-professionals to staff the reference desk so librarians could devote more time to substantial projects. In essence, professionals acquire their identities, in part, by self-authority---the ability to steer their days, define their interactions, and perform their tasks under their own direction.

An important aspect of RIS is connecting people to information. Many studies of patron satisfaction focus on how well librarians do this (Lancaster, 1993; Ruppel and Fagan, 2002; Ross, 2003; Pomerantz and Luo, 2006), and how quickly librarians find answers to facts (Nilsen and Ross, 2006). Professionals who provide RIS do not simply answer questions about facts, though. Google and the web have made fact-finding easy, and librarians more often deal with in-depth or difficult questions (Maksin, 2014), possibly even aiding in people's decision-making processes by locating evidence (Vassilakaki, 2015). Koufogiannakis (2013), however, found that a lack of time is a significant barrier in evidence-based librarianship: "In essence, a lack of time is about priority setting and competing interests. When immediate work such as public service, meetings, and unexpected issues arise, it is more difficult to find quiet time to think, read and reflect, or conduct research" (p. 149), all of which are crucial steps for librarians who work in evidence-based settings.

Time pressure serves as an alternate physical metaphor for *time famine*. Linzer *et al.* (2000) described time pressure as an unbalanced ratio between time needed to time allotted, and that this imbalance contributes to job stress. Pressure arises from the self-driven nature of professionalism or the external expectations about the completion of work related tasks. Radford (1999) observed the challenge of time pressure on provision of reference service. In her study of reference encounters, she noted the time pressure caused by multiple users requiring service at the same time, user deadlines, and user unwillingness to devote time to the reference encounter (p. 124-5). Time pressure, though, need not always be negative. Baer and Oldham (2006) found that time pressure benefits creative problem-solving, though extremely high or low demands on time had negative effects on the worker. A benefit observed by Radford (1999) was that users perceive time invested in them by librarians as particularly valuable when it is clear that the librarian is under time pressure (p. 124).

In essence, time, in all its metaphorical variations, has both positive and negative connotations. Time, like money, is an asset that can be wasted; like food, it is a sustenance that can be denied; and, like a chemical mixture, time can be pressurized. Regardless of the metaphor, autonomy and power over how a person is able to use his time at work has positive effects on feelings about work. However, if a professional's time is largely outside of his control, if he is unable to use professional judgment and do his job as he sees fit, time is experienced negatively.

Time and Technology

Much modern work life, including reference and information service (Butler and Perini, 2015), revolves around the use of technology (Rule and Besen, 2008; Rayward, 2014). Since new technologies emerge constantly and become obsolete quickly, technological developments tend to mark the passage of time as epochs or eras (i.e., the time before CDs; the era of the 8-track), and provide a temporal narrative of "then" vs. "now."

Technology is also ubiquitous; scholars have investigated the experience of time in modern life as a function of this prevalence. Judy Wajcman (2008) claims that while leisure time has increased in the last few decades, the sense that time has accelerated has also increased. This feeling is particularly acute in countries with well-developed information and communication technologies (ICTs) where the sense of time is attributable to the idea that we are now governed "less by a principle of society than by a principle of information" (Wajcman, 2008, p. 60)---cf. Nowotny's (1994) "extended present" (p. 54). Wajcman concludes that although "duration or volume of time" (p. 64) is critical to understanding this sense of time, it is also critical to exploring the sense of time as 'harried,' multi-task driven, or consuming, since this experience, sometimes referred to as a state of *time poverty*, is less restorative or fulfilling.

Time, Space, and Being

Librarianship is an applied, practical science and craft. Research on time in librarianship is thus oriented to its practices. As illustrated above, this type of research is conducted to measure accountability, to justify the expense of the librarian and her return on investment. However, people experience time in more nuanced ways: as philosophical, affective, and not always practical nor isolated. Furthermore, we often link time to the physical, the digital, and the mental *spaces* we occupy. Time, framed this way, may prove helpful to library and information studies and to studies of the professions more broadly. McKenzie and Davies (2002), for example, explored how LIS might use time in defining the relationship between information seeker, setting, and relations: that which is sought in some *place* and in some social context. The way that people describe these relationships is constructed in narratives. These narratives, Riessman and Quinney (2005) explain, provide the grounds for phenomenological research because they are “central to human interaction in relationships” (p. 231). That is, narrative provides a lens to view both experience and relationships; happening in both time and space, it contextualizes and creates meaning of events: “Respondents narrativize particular experiences in their lives, often where there has been a breach between ideal and real, self and society” (Riessman, 1993). The narrative is a place that can explain disjuncture or dissatisfaction; it gives insight into why the storyteller was unhappy with the situation and how they think it might be solved.

Time and space both play an important role in the stories we tell about our work. Bakhtin's (1937/2002) chronotype places narrative within ‘spatial-temporal’ boundaries that in turn characterize the qualities of literary genre. He proposed that time and space are inseparable, neither favored, and exemplified by “traces and signs of time's passage, by markers of the era” (p. 17). Furthermore, storytelling is fundamentally based in a spatio-temporal landscape. Being at work and the experience of working is narrated by our own construction of what it means to do *this*, to be that character, and to experience *this* within a kind of coherent system (Fisher, 1987).

Under a more consummate view, Heidegger (1953/1996) proposed that *being* is necessarily temporal and spatial and presented a holism of interconnected and contingent involvements between action and things (Wheeler, 2011). Nowotny (1994) applied the notion of *proper time*, from Einstein's theory of relativity, to show how organizations shape our thoughts and experiences of time and space. Suda (1989) explored the digital age's ramifications on this holism by showing how time, when represented in the digital clock, fosters a discrete and disconnected perception of being in the world, as opposed to when time, when represented in the analog clock, fosters a perception of continuity between past and present.

The experience of time is not merely bound by the clock, but also by our feelings and affectations. While at work, a person might become engrossed in an experience where time disappears and rests under concealment by the activities at hand. Emergence from such a state produces a feeling of exiting from a ‘time warp.’ Csikszentmihalyi (1998) describes this as a state of flow—a feeling that the rest of the world falls away when one becomes engrossed in an activity. It is an enjoyable state that occurs when a person is highly skilled, is uninterrupted, and is relaxed.

Everything that people do is bound in some way by time. Time provides a way to understand and describe things that we have done, about how we feel about them, and by what we plan to do. It is inextricably linked with place and to our sense of being and being in the world. When people talk about life at work, they often use time as a referent. The way that professionals discuss their relationship within the boundaries of time provides insight into various feelings about jobs and professional status.

Methodology

This paper presents the results of a qualitative secondary analysis (QSA) of two phenomenological studies (Burns and Bossaller, 2012; VanScoy, 2013) about the experiences of reference and information service (RIS) librarians and how they make meaning of the work. Qualitative methods provide rich, interpretive, and descriptive information about people and their lives (Creswell, 2007), and phenomenological analysis, specifically, attempts to explain how things are experienced, rather than how they are measured (Vagle, 2014, p. 22). The two original studies sought to uncover how academic librarians experienced work life, and this secondary analysis examines the way that time was referenced in these experiences. The study contains both practical and theoretical implications.

Secondary analyses of quantitative data have been used in LIS (e.g., Crawford, 2015; Zhang and Kudva, 2014; Kwon and Kim, 2009, Whitmire, 2001), and Johnston (2014) argued for increasing the use of this method. However, we were unable to find studies in the library and information science literature that re-used qualitative data similarly to our study. QSA reuses or re-purposes previously collected data to "glean new social scientific and/or methodological findings...thus enable[ing] greater use to be made of qualitative data beyond the project which originally produced them" (Irwin and Winterton, 2011, p. 2-3). Re-using data makes sense; the processes involved in qualitative research (data collection, transcription, etc.) are time-intensive and expensive (Corti and Thompson, 2006). Although new data repositories are facilitating data sharing in the social sciences (Kim and Adler, 2015), these repositories are built more for quantitative data and, often, out of concerns about the reproducibility or the replication of scientific findings (Gewin, 2016). QSA has been criticized, though, because drawing conclusions from data collected for a different purpose might introduce problems with validity (Boslaugh, 2007).

Since the researchers performing the secondary analysis were previously immersed in the data, there was no concern about misinterpretation of context, however. In one of the studies, Burns and Bossaller (2012) conducted nine in-depth interviews with academic reference librarians on the subject of information and communication technologies and librarianship. From seven emergent themes, they described synchronous and asynchronous communication patterns that disrupt workflow and the ability to assist users. In the other study, VanScoy (2013) used interpretive phenomenological analysis (VanScoy and Evenstad, 2015) to study how eight academic librarians make sense of their experiences doing reference and information services work. The themes for these participants were the importance of the user, variety and uncertainty, fully engaged practice, emotional connection, and sense of self as a reference professional. In neither study was time a standalone theme, but in both studies it was dispersed throughout the interviews and intrinsic within each theme. The two studies were similar in terms of research aim, methodological approach, and participant group, and thus were ideal for a joint secondary analysis.

The original researchers, respectively, re-analyzed their own datasets (the transcripts) using both inductive and deductive coding processes. We re-analyzed our own datasets because while participants understood that excerpts from their interview data would be shared, there was no discussion with participants during the consent process about the possibility of other researchers having access to the original data. That is, the researchers felt that it was important from an ethical standpoint to maintain the privacy of the original transcripts and to share only excerpts with the research team. This methodological choice ensured we maintained context as well as sensitivity towards the participants' data.

We used the process of horizontalization (Creswell, 2007) to identify meaningful words, phrases, or concepts related to time. We coded these statements inductively but also assigned codes, such as time famine, time pressure, time poverty, and time fatigue, based on key theoretical concepts from the literature. Although we agreed on the use of the codes derived from the literature, we extensively debated and discussed the inductive codes that we independently created in our re-analyses until we agreed on codes and themes that were common across both datasets and that captured an understanding of time as a phenomenon in reference and information service. This process was more common for concepts that were *prima facie* related to time, such as the experience of work flowing quickly or slowly, and that ended up becoming significant thematic elements of the experience, than for concepts that specifically mentioned time (e.g., "that saves some time") or some aspect of it (e.g., "back in the mid-90s").

The data coded as relating to time were then excerpted, shared, and analyzed thematically by all of the authors. Data were grouped and regrouped to develop the themes. The interview participants were renumbered to integrate the data. Participants 1 – 8 are associated with Study 1 (Burns and Bossaller, 2012) and renamed P 1.1 - 1.8. Participants 9 – 17, originally referred to by pseudonyms, are associated with Study 2 (VanScoy, 2013), and are renamed 2.1 - 2.8.

Findings

The three themes that arose during the secondary analysis of data are *perceiving time as discrete and continuous*, *the consequences of time as a commodity*, and *framing narratives and identities*. These themes are described below.

Perceiving Time as Discrete and Continuous

We may experience time as linear, moving from the past to the present to the future, but how individuals contextualize and accent events within time differ. In our secondary analysis, we found that the participants essentially referred to events in their lives in two ways: as events that were isolated or discrete or as connected and unfolding over a span of time, which was often only apparent in hindsight. Both, described below, provide insight into the ebb and flow of our participants' work lives.

Sometimes events are framed in memory as discrete events. These experiences stand out as isolated, quarantined happenings within specific times and places. Participants sometimes used the word "moment" to emphasize this sensation of a detached phenomenon. Virtual reference encounters, for example, happened in isolated moments, as bounded events, defined by the connection and the disconnection between the librarian and the patron through a communication technology. The connection, initiated by a query from a remote user, appears on screen, and the librarian attempts to answer and respond. And then it is over; it is a moment. P 2.8 said, "I really like doing virtual reference. I love the in-the-moment-ness of it, that the student is right there in their work." The same in-the-moment-ness can happen at the reference desk, though. For example, P 2.2 describes, more generally, the impact that librarians have on the patron at the moment of need: "our interactions really are, you know, they may have some long-term impact, but they are, they're about the moment. The moment of need."

A state of flow is an overwhelmingly positive experience, and is something that experts strive for because of its intrinsic rewards. Although participants tended to focus on continuous distractions, they also, at least intermittently, described the experience of being 'in the moment', such as being asked a steady stream of questions at the desk that are interesting and engaging, and, necessary for this experience, they felt confident in knowing exactly where to go and how to respond.

Such moments are often framed by a sense of focus, such as the act of meeting an information need or solving a problem. The experience of flow was identified in the interviews when it was discussed in relation to interruptions or by disruptive encounters with patrons. P 2.6 shared the challenge of re-focusing on a new patron in front of her after dealing with an angry user: "you have to... try to come back to... that moment and that place."

There were few examples of this in the data, but the experiences were affectively strong when they appeared. For example, P 1.2 describes his experience of flow as 'a golden day:'

P 1.2: For me a golden day is when I arrive and there are questions waiting for me and I finish up my last question of the day right at 5 o'clock and I've been working on questions all day long, challenging questions, but not so challenging that I can't find the answer. That's a golden day.

Interviewer: That's a golden day.

P 1.2: It doesn't happen very often.

These uninterrupted moments, where a series of small events (like a series of individual, random queries at the desk) become connected to a larger one (like a shift or day at the desk), allow participants to become "immersed" in their work. For instance, P 2.8 discussed work preferences in terms of immersion in the job: "I'd rather work an evening shift, for example, so that I'm there for several hours and like, more immersed in it...". She wanted to be able to work at the desk, undisturbed by outside events and meetings.

Lastly, some events and tasks, such as reference encounters, are not discrete events, but feel continuous or connected even if only in hindsight. One participant perceived her interaction with a user as an extended "thread" across isolated instances of contact: "So I think, you could think of that as a thread that's running through, through it all" (P 2.5). Another participant described a particular patron who needed help with a project over a period of time: "when I was helping this girl, I don't know, it was over a period of several months and, you know, she would seek me out at the desk" (P 2.4). These long-term or extended encounters bear witness to a more profound role of the librarian in the life of the user; as recalled, they were pleasant events marked by a sense of continuity.

Consequences of Time as a Commodity

The literature presented time as a commodity, and our participants experienced time this way too. Here we found that participants referred to time as a measurable phenomena, one that, like wealth, can be amassed or lost, and if lost could result in a kind of debt. Two participants, for example, noted that time had a sunk cost. One participant (P 1.6) discussed the sunk cost of learning to use various technologies and challenged the assumption that technology produced workflow efficiencies. For instance, she found that the time it takes to produce the documentation and the learning aids for emerging or revised technologies, such as new bibliographic tools, social media platforms, or new database interfaces, is a hurdle: "the hidden cost is that I have to work more...." She expressed some frustration with this part of her job but recognized it was impossible to keep up with everything and resigned to let go what she could not sustain:

There is so much, so fast, and it changes so quickly. How can I keep up with it? I finally realized, "oh, I can't." So part of that came with a little bit of apathy, but part of it is like, "oh, let it go." (P 1.6)

Similarly, P 1.9 felt as if she wasted time learning and integrating a constant stream of new technologies:

I think that if we're only trying to connect people with gimmicks and whatever is popular and trendy and going to the thing at the moment without having real services and real people and real resources then it's maybe just a waste of time.

The overall feeling about the dynamic communication and work technology landscape is that it is both a blessing and a curse. While emerging technologies sometimes make it easier to find things and to accomplish certain tasks, they carry a price. That is, keeping abreast of change ironically requires financing time, so to speak. P. 1.2 captured this general feeling of irritation with the time it takes to maintain awareness and mastery: "I'm not an early adopter. There are some librarians that are. I'm glad they do because they find out all kinds of things and I just don't have the time—I don't have the patience to find out."

Strongly related to the view of time as a resource, participants often spoke of the harriedness of their days and lamented a lack of time for other things. They wanted to spend more time with patrons to help them find the appropriate and relevant information, but instead they experienced interruptions that reduced the time that they had to do their "real job." Participants found such interruptions to be distressing and developed strategies to respond; for example, P 1.5 said that she frequently sequestered herself so that she "simply cannot be interrupted," and P 1.4 felt the need to eliminate distractions, such as email notifications: "I did take the little alert off so it doesn't pop every time I get an email in the corner."

P 2.5 explained that there were "constraints to how much time you can spend" on any task; P 2.2 used a number of phrases to refer to lack of time, including "eleventh hour," "due in three hours," and "under the pressure of time." The participants' impatience with these unavoidable constraints led to coping strategies to avoid apathy or resignation. For example, P 1.1 wished she could regularly remove herself, or retreat, from colleagues and the public in order to catch up: "I want to set aside two days every week for professional development, project work, where literally my door is shut and I'm not checking my email." P 1.6 remarked on the limited time to learn the new (but necessary) tools for her job: "it's not like I want to learn how to use another database or something when I need the information." Likewise, P 1.3 said that the group of librarians that she works with have been thoroughly overwhelmed because of a lack of time, and they feel that they can just barely cope: "And so it's just...I don't know...we're just coping. For the past two years, we've just been coping."

P 1.1 described the different cognitive demands of short-term tasks and thinking versus long term tasks and thinking. She used first, second, and third person language when explaining the problem, indicating its perceived universality across the profession:

It's more and more difficult for me to focus on larger, deeper, longer term tasks just simply because of the onslaught of things coming at you. It's much easier to get through your day focusing on short-term projects, short term needs and short term tasks, like email! But trying to get the bigger things done is more and more challenging in this environment because this idea of multitasking is completely bogus. People do need to think deeply, they need to be able to focus on, all day, on just one thing, to make any real progress, and it's very, very difficult in this environment.

Time pressure was not only a result of interruptions but also a result of more responsibilities. For example, P 1.3 stated that "my ability to do follow through is so limited because I'm in meetings almost all the time," and another (P 1.4) said that she felt overwhelmed by her service work:

I sort of brought it on myself—how many different tasks and committees. Because sometimes I feel frustrated that I'm not spending enough time on my actual job, government documents and doing reference.

Across the board, participants in this study lamented the fact that they have less control over their jobs than they would like. They discussed having to keep up with technologies, vendors, publishing, or other external forces that compel them to adjust their work lives. The feeling was that the "information landscape" itself is under constant demolition, reconstruction, and redevelopment, and as such, time is needed to re-survey this landscape with each change. For example, maintaining awareness of publishing industry developments was problematic because of the volume and pace of change in this industry. P 1.3 stated

One of the hardest things for me is keeping up with what the general spectrum is in the information landscape, because everything is changing so quickly—not only with the publishers and who's bought whom, and trying to figure out the implications of what that might mean for costs and how they might behave—if they're going to do a modest cost increase or what...

The reference interview, and expectations about what can be accomplished in an interaction at the desk, also served to pressurize time, especially when the librarians felt that a patron's needs called for extensive research. For example, the difficulty of a particular reference question might have been described in terms of "a two-minute answer," (P 2.2), indicating that such a question was easier than most. However, P 2.2 described a frustrating encounter when her patron would not wait for the right answer: "...with three hours to go, you know, it was obvious that this woman was not going to do that. I hate that...when things like that happen." P 2.4 contrasted the patron who was not "in a rush" with the one who is: "sometimes they're in no rush and they'd like to learn more. Sometimes they just need those three [articles] and it's, it's business and they just want out, you know." The participants took different approaches in coping with time pressure in the reference encounter. P 2.3 said that she resigned herself to the fact that there simply is not enough time to do what she wants: there is "only so much time, you know?"

Lastly, two participants tied weariness or fatigue to the time of day that they were expected to perform. P 1.2 said that it was difficult to focus during late night chat reference exchanges: "at 11:30 at night it's challenging to think clearly." Another (P 1.5) cited the need to take a break and step back to recuperate:

You have to take some time off, and there are times when you think "oh my god," I'm not performing up to...very well, and you can tell in the afternoons, where it's like, I just can't do another thing, and then you have to take a break.

The implications and consequences of these findings become visible when time is framed as a kind of commodity. This was often expressed as a negative experience--- interruptions, commitments and responsibilities, or time of day. The next section discusses more ephemeral concepts of time: reflections on the sensation of time and connections between time and space.

Framing Narratives and Identities

The original studies were completed through interviews with reference librarians at academic libraries. The process of in-depth interviewing asks participants to provide answers to questions, and the responses often came in the form of stories that help illustrate concepts and experiences. In these interviews, the participants would often set the stage by indexing their stories to some point in time. For instance, one participant prefaced a story by recalling that "it was at this time of year. It was two years ago" (P 2.2). Another participant illustrated how the ebb and flow of the academic calendar affects her job, beginning her story with: "especially this time of year, not like little bit sooner, when it's the end and you know, students are desperate" (P 2.6).

Some participants framed their experiences in terms of epochs, such as the pre-Internet/web versus the post-Internet/web era. Such temporal narratives, defined by the then and now, at times suggested either a nostalgia for a bygone era or a strong and holistic impression of the profession and its challenges, given these differences in epochs. P 2.3 said that he entered the workforce during a time of transition in librarianship: "there really was a great tradition here, and I came in on the very tail end of that old humanities tradition." P 2.7 discussed an "evolution" marked by a change of thinking that had occurred over the course of his career: "that's kind of evolved to become, to become more than just what we thought of typically before." P 1.7 reflected on changes in the profession over the course of his fairly long career:

Conceptually, a lot of the things, most of what we did in 1985, we still do in 2011. But our toolkit has changed. We can do things now faster. We can do things with greater comprehensiveness. But the fundamental "what are you trying to accomplish" is the same. The biggest issue I run into, the way I describe it, is a signal to noise ratio. There's a whole lot more, even for a library like us, there's a whole lot more signal available now than there was in 1985 because of the electronic transition. But the noise, and driving down the noise in that signal, is a real concern. And that's a big qualitative difference.

There was also a sense that the experience of the library and of the profession hinges on a fragile sense of continuity that, tied to place and task, provides a feeling of identity. P 1.2 noted that,

I've seen a lot of change in the...almost 25 years that I've been a librarian. And if the amount of change continues, the rate of change increases as it has, by the time I retire we may not recognize the place.

Despite of, or in spite of, how different the profession has become in the course of a few decades, longevity was a major component of expert identity-making. Several participants remarked that wisdom, skill, and mastery are associated with how long they had been doing their work. P 2.4 said, "you always get a better sense of how to answer questions the more you're doing it."

Discussion

In this study, we used qualitative secondary analysis of two separate phenomenological studies on reference and information service work to understand the temporal aspects of this work. We found three themes that provided an understanding of this temporal dimension. These themes are *perceiving time as discrete and continuous*, the *consequences of time as a commodity*, and *framing narratives and identities*. The first theme touches upon the perception of time overall and highlights how the professional experiences time as discrete, bounded moments but also witnesses threads through these moments that provide continuity. The second theme contributes some insight on how the treatment of time as a commodity influences how we measure and place value on the time we spend on tasks and on how we suffer and benefit under this view. The third theme encompasses the first two such that it highlights the central role that time plays in how we tell stories about our work lives and how we build our professional identities. In the following passages, we comment on these themes and situate their relevance to RIS work, discuss some practical implications, and then comment on secondary qualitative analysis as a research design.

Thematic Elements of Time

The authors were surprised by the emphasis on *moments* and the lack of evidence in the data for Csikszentmihalyi's (1998) "flow" in the experience of RIS. Participants, clearly engaged professionals, were generally enthusiastic about their work, but the concept of the "golden day," when time flies while expertly engrossed in challenging work, was rare in the data. Although there has been research on the experience of flow for information seekers (for example, Pace, 2004; Chen, Wigand and Nilan, 2000), there have been no studies of flow in the experience of the work of information professionals. It is possible that the findings related to interruptions provide a partial explanation for the lack of mention of flow. Constant interruptions of their work and short stints at the service point may not be conducive to flow, and also suggest a desire for "temporal autonomy" (Nowotny, 1994, p. 137). Librarians may need longer periods of uninterrupted time to focus on the task at hand or a user's need in order to achieve a state of flow. A future study specifically focused on the concept of flow in RIS may help to illuminate whether and how flow manifests itself in this work.

Participants experienced time famine, time pressure, time poverty, and time fatigue. This echoes the experience of physicians (Epstein, 2000) and software engineers (Perlow, 1999). Participants in this study experience similar interruptions, and thus may experience the lack of restorative power of time as described by Wajcman (2000). Thus, the findings support some commonalities in the experience of time by professionals, and in the experience of time in the workplace.

Of concern is an overall emphasis on using time as a device to measure worth. As mentioned earlier, efficiency has long been a professional value. Indeed, some participants repeated Ranganathan's "save the time of the reader" during the interviews. A concern with this emphasis, though, is that information professionals may be creating time pressure where it does not necessarily exist. Certainly there is some pressure imposed on the librarian from users or from administration; users sometimes need to have references or materials "yesterday"; there might be scenarios governing how much time a librarian can spend with one particular patron, such as a user need to have materials by a certain time. However, self-imposed pressures, defined by the value system embraced by librarianship, may be more common. In fact, one person participating in Nilson and Ross's (2006) study on virtual reference stated that, "After this experience, I think quality is a far better attribute than speed, especially if it means getting a better response." In this study, the pressure on professionals to complete a digital reference transaction quickly was expressed by some participants, while others noted that these interactions sometimes continue on for an hour or more. So it is important to distinguish between time pressure imposed by library policy and self-imposed time pressure. Recommendations for chat reference do include maintaining a connection with the user by letting the user know that the librarian is still working on the problem, but not doing it so quickly that the quality of work is diminished. The time pressure, in other words, should not interfere with the quality of work.

The prominence of time as a context for many of the narratives provided by participants lends legitimacy to the study of time in RIS. Clearly, participants contextualize their work with respect to seasons or extended periods (the regularity of the semester or the technological epochs). The narratives that the participants constructed were based in a particular time and space, and this gives insight into how they work within imposed limits. Therefore, the limits themselves (time and space) serve two functions: a source of dissatisfaction and a narrative element.

The participants' framing of their experience as two distinct epochs of "then" and "now" also may be problematic. This distinction tends to focus on surface operations of RIS, such as use of various technologies or asynchronous communication, rather than on the enduring core of RIS – information provision, communication and instruction. It suggests that librarians focus on the medium -- books versus e-books or the reference desk versus digital reference -- rather than on the context of the interaction. As a profession, LIS must be careful not to create and reinforce a narrative that is counterproductive. This narrative of distinct epochs of RIS should be examined both through individual reference on the part of professionals and through discussion in the literature.

Practical Implications

Our findings point to a need to consider how professionals in RIS can structure their own time. What is important? How can they best meet the needs of their patrons in a changing information landscape/ecology? If, indeed, quality in reference and information service is more important than speed, and depth is more important than breadth, that indicates that in some environments RIS work should be restructured so that librarians can use their professional judgment about the amount of time or the quality of time they spend with a particular user.

The findings point to a need for studies such as this one that probe the work experience of information professionals. RIS is often studied in terms of behaviors of librarians, such as which sources they use or whether they provide correct answers. While this approach may lead to useful findings, it only examines RIS from the standpoint of the observer, and it fails to examine what professionals think and feel as they do their work. Without a better understanding of the practitioner experience, the field cannot contribute to the larger discourse on professional work. This study contributes to this discourse by revealing the work of RIS professionals in terms of time and contextualizing it in the literatures of sociology of time and time in professional work.

These findings have other implications for RIS as professional work. As Linzer *et al.* (2000) found, increased time pressures in physicians' work led to decreased job satisfaction and sometimes an intention to leave the profession (p. 448). Studies of physicians also indicate that the experience of time pressure is greater for female physicians than for male physicians, with female physicians feeling that they needed more time than male physicians to provide quality medical care (McMurray *et al.*, 2000). Our study did not examine gender issues, but it is a natural concern due to the large proportion of women in librarianship and its historical status as a woman's profession. In librarianship, it may be that all practitioners, regardless of gender, feel pressed for time and feel that sufficient time is necessary to provide quality service. In light of findings regarding physicians, though, studying job stress and dissatisfaction in relation to gender and time pressure may yield important findings.

Qualitative Secondary Analysis

This research used secondary qualitative analysis as a means to document the experience of time in RIS. Because it was a secondary analysis, there were fewer overt references to time than there would have been had there been questions relating to time in the original studies. However, the fact that this subject arose so often supports its importance, and it deserves to be given more serious consideration in LIS.

The secondary analysis approach offered several advantages for the study. It allowed the researchers to explore the issue of time in a dataset that was already rich with references to this topic without the process of collecting new interview data, which is time-intensive. By re-using existing data, the researchers were able to focus on data analysis rather than collection. In addition, re-using data from two existing studies allowed for a larger dataset than would ordinarily have been collected. Another benefit to the secondary analysis is the increased sense of the reliability of the themes. When a particular theme emerged in both of the original datasets, the researchers felt more confident that the theme was not a result of the original study's participant group or interview protocol, but rather a broader aspect of the experience of time in reference and information services work.

It should be noted that this secondary analysis was informed by the phenomenological approaches that were the intent of the original studies. Since the original studies sought to capture the experiences of some phenomenon, the transcripts from both studies were laden with these experiential descriptions. As such, our secondary qualitative analysis is very close to a secondary phenomenological analysis. Future studies that use qualitative data based on other research designs might also apply designs derivative of the original studies or approach secondary analysis using alternate methods. This makes secondary qualitative analysis an important area for advancing our methodological analytical abilities.

Conclusions and Recommendations

Time is a practical boundary to everyday existence, and people use it to frame their experiences. It is inextricably linked with place and with a sense of being. Studying how people talk about time is a way to gain insight into how they make meaning of their experience. In this study, we used a rigorous qualitative methodology to deeply examine how professionals discuss time in their work, and thus, gain insight into their work experience and meaning-making.

This study repurposed the data sets of two phenomenological studies for a novel study. As a method, it worked well in locating intersections and commonalities in the two studies. The phenomenological approach of the research design and data collection for the original studies resulted in rich data about the participants' experience of their work. The secondary analysis allowed for a larger data set than would normally be available for such a study. The effectiveness of the method is demonstrated by the relationship between the findings and the existing literature on time in professional work and by the new insights gained into the work of RIS. The research added a new dimension to the discourse on professional work in LIS in that it exposes experiences of management, autonomy, and job satisfaction. The study suggests future research about the relationship of time to job satisfaction, as well as the experience of flow in RIS work. In addition, it suggests some re-thinking of appropriate models for RIS and reconsideration of professional values. Moving forward, research should continue to focus on articulating and characterizing professional work, not just in RIS, but in information work in general, for both theoretical and practical purposes.

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