"I ain't read not one bit of it": The Influence of Canonical Maps on the Knowledge Work of Public Library Staff

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ABSTRACT

The primary source of value in any organization is the knowledge of its workers. Yet, American workplaces are often not structured to support the unstructured and intellectual efforts of these workers. This makes it more difficult for a worker to apply what they know. This study looks at the knowledge work of library staff and how it is influenced by the presence of canonical maps that outline how work will and should go. Through think-alouds and interviews with six library staff, this study found that staff felt restricted by some canonical maps, faced challenges in following other canonical maps, and relied heavily on emergent noncanonical maps. These findings are significant to the practice of library management and the education of library professionals, suggesting ways to further support the efforts of library staff and prepare students for library work.

ALISE RESEARCH TAXONOMY TOPICS

Information use; public libraries; knowledge management; administration; library technology systems

AUTHOR KEYWORDS

Canonical knowledge; noncanonical knowledge; library management

INTRODUCTION

Since Machlup's (1962) investigations into the *Knowledge Economy*, researchers have asserted that the primary source of value in any organization is the knowledge of its workers. Knowledge workers (KWs) are those workers who are primarily engaged in tasks that are unstructured and intellectual (Shujahat et al., 2019), creative (Butt et al., 2018), and involve theoretical concepts (Bosch-Sijtsema et al., 2009) and skilled mental labor (Reyt & Wiesenfeld, 2015). Yet, in many ways, American workplaces were not structured for this kind of work. In the early 20th century, Frederick Taylor argued that the knowledge that matters in an organization is

not the knowledge of workers, but rather the knowledge of management who know best how to organize work. According to Taylor, "old rule-of-thumb knowledge or guesswork" (Taylor, 1912/2003, p. 63) should be replaced by a "foundation of fixed principles" (Taylor, 1947/2003, p. 29). Put another way, management should be solely responsible for creating the maps for how the journey of work will proceed. If employees simply follow these maps, productivity should increase.

Brown and Duguid (1991) suggested that these *canonical* maps are, by their very nature, inadequate. Yet, rigid job descriptions and management practices—coming out of an obsession with increased productivity and efficiency (Martin, 2013)—suggest that American workplaces may still favor these maps. And due to distrust, assumed incompetence, and increased surveillance (Payne, 2018), workers of color face additional pressures to follow these maps: "Anyone who is Black is always seen and operates under a microscope, and therefore subjected to more scrutiny and surveillance" (Sisco, 2020, p. 429).

The 2022 ALISE conference is a call to "incorporate unacknowledged knowledge and wisdom" into the profession (ALISE, 2022). The current study suggests that, when canonical maps constrain KW, a workers' knowledge is kept hidden and unincorporated. Thus, it is important to understand the interaction of library staff with these maps. In this study, six library staff completed think-aloud exercises and interviews that uncovered the nature of their KW and the presence of canonical and noncanonical maps. The study asked:

RQ1: Who creates the maps for library staff to follow?

RQ2: How do library staff feel about following these maps?

RQ3: Under what conditions do library staff create their own maps?

THEORETICAL BACKGROUND

Library staff are knowledge workers (Materska, 2004; Asogwa, 2012) who apply complex and valuable knowledge in ways that ensure the library's long-term survival (De Bem al., 2016) and sustained competitive advantage (Sheng & Sun, 2007). The current study defines KW by its form and formality. Drawing on the work of Michael Polanyi, form refers to the explicit-ness or tacit-ness of KW—or the extent to which KW occurs in the front or back of the mind. When driving a nail, for instance, one maintains a front-of-mind *focal awareness* of the nail and a back-of-mind *subsidiary awareness* of the feelings of holding the hammer and how to swing it effectively (Polanyi, 1998, p. 55). Accounting for both explicit and tacit knowledge provides a more complete picture of KW in the library—much of which has remained invisible to management and researchers.

Formality refers to a workers' reliance on organizational maps. Canonical knowledge represents the map of how work is supposed to go (Brown & Duguid, 1991), and it includes the formal concepts, procedures, and values of an occupation that are legitimated by management (Billett, 2010). Noncanonical knowledge represents emergent, employee-created maps that account for the situated realities of work (Brown & Duguid, 1991). Thus, while canonical

knowledge is separated from work, abstract, logical, alienating, and individualizing; noncanonical knowledge is situated, loosely structured, and created through mutual problem solving (Cox, 2005; 2007).

METHODS

KW is "negotiated, emergent and embedded" (Gherardi, 2009, p. 357) and "materially and historically mediated" (Nicolini et al., 2003, p. 26). To account for this, the design of the current study was informed by social constructivism, which assumes that individual behavior and cognition is heavily influenced by social context (Talja et al., 2005). Participants were recruited from public libraries in the southeastern United States (Table 1), and all worked full-time.

First, participants engaged in 20-minute *think-alouds* (TAs) while conducting their work in the library. TAs provide insight into working memory, where "only 'heeded' or noticed information goes" (Charters, 2003, p. 70). Thus, what can be—and is—said during a TA represents explicit knowledge. Second, participants engaged in a 30-minute semi-structured interview, where they were asked to reflect on the work they just did in the TA. This represents a form of retrospective questioning that is commonly used in conjunction with TAs (Charters, 2003) and allows the participant to "discover and articulate the implicit personal knowledge that we refer to as tacit, to critique it, and thus be ready for new understanding" (Carlsson et al., 2002, p. 145). Participants also completed a demographics survey. The research team then coded the transcripts using a process of inductive coding, aiming to allow codes to emerge from the data (Hsieh & Shannon, 2005).

Table 1

Participant demographics.

Name	Age	Race	Gender	Library Experience
Robert	59	Not identified	Man	Over 10 years
Mary	49	White	Woman	6 years
Brianna	47	Black	Woman	27 years
James	28	White	Man	3 months
Imani	43	Black	Nonbinary	10 years
Alexis	34	Black	Woman	1 year

FINDINGS

Canonical maps

Analysis uncovered four sources of canonical maps—guidelines that library staff followed about how work should proceed. The *mapmakers* include management, organizational culture, technology, and the physical workspace.

Managerial maps. Here, staff conducted their work according to the guidelines established by management. As Robert pulled holds, he noted, "My brain tells me that my boss says to squish them up like that. They don't want any gaps." When a patron asked James about using a room for a for-profit watercolor workshop, he reached out to management—the mapmakers—directly for help with interpreting the map: "When it comes to what he's trying to do, because it's a for-profit, I doubt he'd be able to . . . but, I'd rather my manager be able to give a clear-cut answer than me just say no." Alexis maintained a continuous tacit awareness of these maps as she worked on her "projects"—which give staff increased freedom to choose what they want to work on. She stopped herself from spending additional time on her project as she worked the drive-thru:

> "Another coworker here told me . . . you shouldn't do that, because then [management is] gonna think that you can't handle your work in the amount of time that you're here . . . maybe you shouldn't be promoted . . . That was one of the things that influenced me to not send a certain email . . . because if they see it, then they're going to be like, 'Hey, she's supposed to be at drive-thru. Why is she doing this right now?"

Organizational culture. Organizational culture presented itself to library staff as a series of maps outlining *how we do things around here*. Colleagues were common carriers of culture maps, reminding participants of what they were supposed to be doing. After a colleague delivered a cart of books to Alexis, she reflected on norms surrounding gender pronouns: "At first, I was scared to approach her...because you know we have to use pronouns now. I always thought she—I think it's they—I always thought they hated me. [This] definitely affects how I approach people." Robert maintained a continuous tacit awareness of maps outlining who can be trusted and who will "talk behind your back." He referred to his workplace as Peyton Place—a reference to an American soap opera—and noted that around certain people, he had to "Walk on pins and needles. Don't go poke the bear."

Technology. Technology introduced its own set of maps that placed boundaries around what a participant could do. Alexis noted that these technological maps were central to library work: "And I prayed to God the system doesn't go down again, because it's just what it does. There's, like, literally nothing to do, because everything revolves around a computer and Internet." For Brianna, these maps slowed down her work:

> "I'm thinking that this process takes . . . longer than I wish it would. I'm about to save this bibliography record, and . . . it would be nicer if I didn't have to keep hitting save over and over and over."

Failure to follow these maps usually meant redoing work, as when Mary accidentally hit the wrong button: "I always accidentally hit the back button . . . I closed out the reports and I got to go do the report again. That's unfortunate . . . I messed up and so I'm having to rerun my report."

Physical space. The physical layout of a space places restrictions around how someone can get from one place to another. Robert, who had "shot knees," noted that these physical maps forced him to bend over often: "My brain is saying, 'I hope it ain't on the bottom.' Because I

don't like to squat . . . man, I got to squat again." Although Brianna wanted to move around more during work, her work kept her at a desk for 6 hours of her 7.5 hours workday: "Sometimes I feel like I'm sitting too much. I need to move around more . . . it's not good to just be sitting, looking at a screen." Alexis appreciated how the physical layout of the drive-thru closed her off from the rest of the library: "I'm introverted. So being closed off . . . it's good for me . . . I'm like, 'yes, put me here the whole time. I'm good.'"

Noncanonical maps

Participants created their own maps when a) no map existed for a certain task, or b) the existing map had proven inadequate.

No map. Equifinality in complex systems suggests the presence of multiple pathways that lead to the same outcomes (Cicchetti & Rogosch, 1996). Brianna noticed this phenomenon: "Everybody doesn't do it specifically the same way, but as long as the record looks a certain way, you know, you can get there different ways." The absence of a *best* map allowed Robert to change his approach to work based on how he felt: "Where's the best place to start? Sometimes I'll just go in order and just really walk the whole floor back and forth if I'm just really not wanting to think too hard." Imani noted how these maps developed: "We're going to come together to see if we can incorporate several different methods to create one way that works really well and is easy and quick."

Bad maps. When existing maps failed, participants looked for alternative maps. Mary noted that existing maps could not account for COVID:

"I was never really good about . . . email newsletters, because all the volunteer research says don't do it. But when the pandemic first started, it was like the only quick, easy way to communicate with volunteers. And everyone seemed to really like it."

James recalled a 16-step process that he was trained in for setting up a display, noting that staff had identified a better way:

"Our system's set up a very unique way that a lot of the things that we get taught—once you get to the branch—is different, because somebody found out a faster way of doing something that somebody else, whoever wrote the stuff, didn't know about."

The reason existing maps failed for Alexis had to do with the format of these maps: "[The] policies and procedures . . . It is like 26 pages long. I ain't read not one bit of it—maybe the first and second page, but I'm a learner where I got to see you do it."

DISCUSSION

These findings suggest opportunities for library management to make use of canonical maps in ways that support staff and help them overcome work challenges. Some of these canonical maps restricted the KW of library staff. Here, management can support staff by providing room for the development of noncanonical maps. This might include communities of

practice that share technological and space-related issues and identify alternative approaches. This might include safe spaces to discuss problematic norms, like bullying, and identify new ways of working together. Management should also ensure they are applying managerial canons equally. It was notable, for instance, that Alexis—a Black woman—felt that spending time on her project during her downtimes would be perceived negatively by management. These same efforts might be perceived as dedication and hard work in White staff.

Not all canonical maps were restrictive or harmful, however. Staff generally appreciated the presence of managerial maps and relied on them to make their work easier. A map highlighting the proper use of gender pronouns helps create a more inclusive work environment. Yet, participants struggled at times to follow these maps. Here, management can support staff by clarifying these maps, sharing them in more accessible formats, and providing training and support to develop the skillsets necessary to follow them. This also suggests a role for LIS educators in identifying new ways to teach these maps.

Participants also relied heavily on noncanonical maps. Here, management can support staff by providing the space necessary for mapmaking. This might include space for non-work activities, where staff can focus on socialization and informal sharing of work challenges. This might include opportunities to provide feedback on and critique existing maps. This also suggests a role for LIS educators in ensuring students graduate with the social and professional skills necessary to identify new and emergent ways of working.

CONCLUSION

In this study, six library staff engaged in TAs and interviews to uncover the nature of KW and the presence of maps in the library—maps that outline how work will and should proceed. Findings suggest that staff felt restricted by some canonical maps, faced challenges in following other canonical maps and relied heavily on emergent noncanonical maps. These findings suggest ways to further support the efforts of library staff and prepare students for library work.

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