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METAPHORS, FOR DEALING WITH DATA IN THE WORKPLACE

Abstract or Résumé:

This year the CAIS-ACSI cfp asked us to consider how data are involved in people's information behaviours, practices, and experiences. This paper responds by drawing on analytical themes and data from completed research on a standard classification system in workplace information practices. I take the view that classification systems are cultural artifacts (Beghtol 2010, p.10) and big data are social artifacts (Ibekwe-San Juan & Bowker 2017, p. 193). Metaphors for occupational data have become naturalized in workplace discourse. Metaphors also contribute to our understandings of information and its role in employment and migration. The research offers alternative readings of these metaphors and proposes ways these address information-centric beliefs in workplace practices.

1. Introduction

We commonly introduce ourselves by our names and affiliation with a job or workplace. Sometimes we list our workplaces and occupations on credit card applications. People often add job titles and workplaces to profiles created on social media platforms. Some of us may have responded to surveys that ask about our employment status or conditions. Typically, we do not consult standardized systems of occupational classification to identify ourselves in those everyday life situations. However, people relocating to Canada under various circumstances are often required to select from standard occupational categories to describe their work experience.

Over the past century, approaches to naming and sorting jobs into groups of occupations have been standardized and formalized into systems like Canada's National Occupational Classification (Jansen 2017, p 84). Currently, the National Occupational Classification (NOC) is one of the top 25 most downloaded datasets in Canada's open government framework (Open Government Analytics 2018). It is also a ubiquitous standard that people become familiar with in a range of work practices including those of immigration officials, census statisticians, insurance analysts and employment coaches. Naming jobs and occupations among work practices is characterized by a more rigid structure than everyday life situations.

This paper describes information practices with the NOC in working with data about the labour market. It draws on exploratory research that asked what the NOC is and how people understand and use it. Methods featured multiplane analysis (Lee 2017) of the classification system and its precedents; fieldwork documentation; and ethnographic interviews carried out during placement at an immigrant employment council. This study focuses on paratextual elements (Paling 2002) of occupational classification and aligns these with practical theories of information organization. I describe patterns among perspectives in the way that the NOC is understood in a work context and provide new analytical framework for discussing the challenge of working with labour market information in the age of big data.

2. Perspectives on Standard Occupational Classification

The NOC may said to possess a *self-perception*, or authorial voice (Feinberg 2011). Historically occupational classification emerged from *headings* across 19th century census tables to early 20th century *dictionary* lists (Jansen 2017). Over time, the NOC increasingly construed itself through scientific metaphors as a *barometer* of the labour market, a *taxonomy* of jobs and more recently as an *open data* resource.

Complicating the matter of self-perception, findings from ethnographic interviews demonstrate additional perspectives on the nature of the NOC. Career coaches described their experience working with NOC in terms of helping clients who are *"waiting for a match",* and being frustrated with an *"out of date"* and *"government controlled"* system. Managers cited the NOC in organizing the *"mentor pool"* and generating "*spreadsheets*" and "*snapshots".* One coach said it was like "Christmas morning" when categories were paired to match people for mentoring relationships. These metaphors characterise the role of the NOC in the context of a workplace. There is a tension among less data-centric and more document-based metaphors inferring a range of perspectives that extends beyond the NOC's somewhat scientific self-perception and toward material and affective role of the NOC in accomplishing work.

3. Metaphors for explaining Standard Occupational Classification

Exploring metaphorical understanding of information is an important interest in knowledge organization and LIS research. Recently, readers of the Journal of the Association for Information Science were warned of the implications of inappropriate use of metaphors in scientific articles (Sugimoto & Mostafa 2018). Interest in information metaphors exists across disciplines and relates to concerns such as how categories are tied to people (Bowker & Star 1999); the growing amount of information (Ratzan 2000); studying information use processes (Savolainen 2006); developing theories of knowledge (van den Heuvel & Smiraglia 2010); change over time in knowledge organizing systems (Tennis 2013) and describing the transition from linked data to big data (Shiri 2014). Additional perspectives include examining big data as discourse (Puschmann & Burgess 2014) and in relation to the history of social statistics (Beer 2016).

Several potential perspectives of occupational classification exist among theory and practice of the information sciences. For example, the NOC aligns with different understandings of information organization, knowledge organization and classification. It may be a classification when it describes occupations in a *logical framework* (Soergel, 1985, p. 5) or groups occupations together by *similarity* (Svenonious, 2000, p. 10). Because it undergoes ongoing development and application it becomes a *cultural artifact* (Beghtol, 2010, p. 1045) It may be useful at times to see the NOC as *scientific* classification (Hjørland 1997, 46) or as a *bibliographic* classification (Smiraglia 2014, 57). Based on sample data presented in Figure 1, it is unclear how these perspectives can best relate to conceptions of big data in a workplace setting so a framework based on information metaphors is proposed in the following sections.

4. Interpreting data metaphors as *social facts*

In a close examination of Paul Otlet's fragmentation of books Day (2014) traces the evolution of the metaphor *books as friends* to its present day manifestation as *persons are documents* (p. 20) and points out that this conceptual evolution is indicative of a new social fact. Metaphors

relying on the notion of *too many books* were precedent for the creation of an index. In turn, a discursive transfer from books and documents to *information* signaled by the mid twentieth century in metaphors of the information age and the information man (Day 2014). The trajectory to established by these metaphors of modernity lead toward the firm establishment of information metaphors as social facts. Now, we live in a *data deluge* and the belief that *people are data*. Just as the earlier metaphors did, these neologisms cannot be dismissed out of hand, they demand critical engagement.

An instance of this is demonstrated in the *pool* metaphor as a way to understand big data. The organizations working to relate the "big data" of a labour market are dealing with the social fact metaphorically understood as people are data. The *pool* is also a helpful metaphor for characterising the data collected at an organizational level. It aligns organizational work with social facts. In economic discourse, the notion of a *"labour pool"* may be taken as a social fact. Aligning with this discourse is instrumental in supporting newcomer employment initiatives. Accepting these metaphors represent *social facts* creates the possibility of engaging critically with such facts. The question of how to do that demands that we turn to another conception of metaphor.

5. Interpreting data metaphors as *alternative documents*

Another frame for interpreting metaphors by drawing on Weissenberger's conception of metaphors that act as alternative documents. In Weissenberger's analytical framework, metaphors may be construed as intangible aspects of knowledge, that which is contextual or philosophical, (p 293) hence metaphors represent a powerful means to influence change (Olson 1998 in ibid).

One instance of this is *snapshot*, a metaphor that denotes photography and invokes connotations of travel, shared experiences, and the fleeting temporality of visual memory preserved in a document. Cast as an alternative document the *snapshot* metaphor acts in opposition to the strictly scientific instrumentalism of *barometer* and *algorithm* and their attempt to predict conditions and alter future behavior. When NOC categories appear in a *snapshot* of progress toward an work-based goal, they are temporary in nature and demonstrate a short-term commitment. It is not the rigorous, decanal commitment to occupational categories implied by the logical, scientific understandings of occupational classification.

6. Conclusion

In his study of card indexes, Markus Krajewski (2011) also invokes the familiar *book flood* metaphor to describe the effect on readers of having too many books and not enough time. Krajewski claims that metaphors, integral to any description, ought to be used in "full consciousness of their effect" for their ability to "produce a surplus of meaning that stimulates thought." (7) It is this type of understanding of metaphor that is invoked to persuade the reader that metaphors provide a gateway for dealing with so-called big data at work. Data metaphors have come to be taken as social facts, as information, document and book metaphors before them. Reading data metaphors both as social facts *and* for their potential as alternative documents makes room for interventions. This is important if data is to perform as a resource for locating personal experience amid organizationally and socially mediated employment discourses.

Figure 1 Exemplars of metaphors invoked of occupational classification systems.

NOC self-perspective	Perspectives of work practitioners	Perspectives of LIS theory
• list • dictionary • barometer • taxonomy • open data	• out-of-date • government controlled • matches • snapshots • gifts • spreadsheets • pools	• similarity • logical framework • scientific • bibliographic • social/cultural artifact

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