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Metatheory and knowledge organization[1]

ABSTRACT
Metatheory is meta-analytic work that comes from sociology and its purpose is the analysis of theory. Metatheory is a common form of scholarship in knowledge organization (KO). This paper presents an analysis of five papers that are metatheoretical investigations in KO. The papers were published between 2008 and 2015 in the journal *Knowledge Organization*. The preliminary findings from this paper are that though the authors do metatheoretical work it is not made explicit by the majority of the authors. Of the four types of metatheoretical work, metatheorizing in order to better understand theory (M_u) is most popular. Further, the external/intellectual approach, which imports analytical lenses from other fields, was applied in four of the five papers. And, the use of metatheory as a method of analysis is closely related to these authors' concern about epistemological, theoretical and methodological issues in the KO domain. Metatheory, while not always explicitly acknowledged as a method, is a valuable tool to better understand the foundations, the development of research, and the influence from other domains on KO.

1 Introduction

Metatheory is a meta-analytic work that comes from sociology (Ritzer 1991b, 237) and it is described as "the set of assumptions presupposed by any more or less formalized body of assertions," (Bullock 1988). Vakkari understands that "metatheory should be specified into unit theories by placing them in concrete social settings. One can say that a concept in a metatheory consists of a range of variation of meanings fixed by the definition of the concept", (1997, 453). Therefore, metatheorizing supports the analysis and understanding of the meaning of a concept in a domain.

The theme of North American Symposium on Knowledge Organization (NASKO) is "Visualizing knowledge organization: bringing focus to abstract realities" and we believe metatheorizing is a method that can be applied to better visualize theories in knowledge organization (KO). This work presents an analyzes of five papers that are metatheoretical investigations in KO. The papers were published between 2008 and 2015 in the journal *Knowledge Organization*. The paper's corpus consists of: Tennis (2008); Dousa (2010); Samuelsson (2010); Castanha and Grácio (2014) and, Tennis (2015).
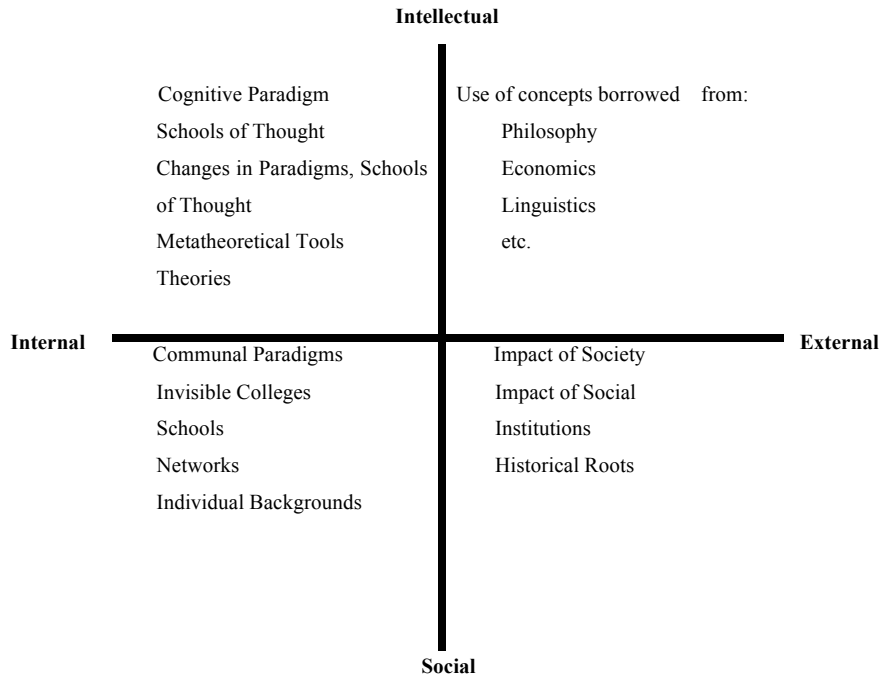
Following other authors, we recognize the value of metatheory to information science and KO (Vickery 1998; Vakkari 1997; Cronin 1998; Hjorland 1998; Dousa, 2010; Samuelsson 2010; Tognoli 2015; Castanha and Grácio 2014; Tennis 2005, 2008, 2015). In the next section, we describe metatheory. Following this, we outline metatheory related to KO. The third section is the application of metatheory as a method to better visualize theory in KO.

2 Metatheory

Metatheory may be compared to the analysis of the presuppositions of a domain. Following this thought, Vickery points out that to achieve success through metatheoretical work, it is important to make connections between the presuppositions that already exist in the domain, to show the weaknesses, and to propose alternatives, (1998, 458).

Ritzer (1991a) differentiates among three types of metatheory: metatheorizing in order to better understand theory (M_u), as a prelude to the production of a new theory (M_p) and to produce a perspective that overarches some part or all the theory (M_o). In addition, Colomy (1991) presented a fourth type of metatheorizing through the idea of metatheorizing as adjudication (M_a) or to evaluate a theory.

Metatheorizing to better understand a domain (M_u) has two dimensions: internal-external and intellectual-social. The combination of the internal-external and intellectual-social dimensions generate a table with four approaches (Figure 1) that express the four types of M_u.

Figure 1: Major Types of M_u (Ritzer 1991a)

Intellectual

Cognitive Paradigm	Use of concepts borrowed from:
Schools of Thought	Philosophy
Changes in Paradigms, Schools	Economics
of Thought	Linguistics
Metatheoretical Tools	etc.
Theories	

Internal ———————————————————— **External**

Communal Paradigms	Impact of Society
Invisible Colleges	Impact of Social
Schools	Institutions
Networks	Historical Roots
Individual Backgrounds	

Social

The *internal-intellectual* approach deals with school of thoughts, paradigms and theories in a domain and their influence. The *internal-social* approach "focus on relatively small groups of theorists who have direct links to one another", (Ritzer 1991a, 19–20). It involves the study of the theorists of the domain to identify communal paradigms, invisible colleges, schools, networks, individual backgrounds, etc, (Ritzer 1991a).

On the other hand, the *external-intellectual* approach is concerned with ideas, tools, concepts and theories from other academic disciplines. And, the *external-social* approach "involves shifting to the more macro level to look at the larger society and the nature of its impact on sociological theorizing", (Ritzer 1991a, 21).

The first (M_u) and the third type of metatheorizing (M_o) are used in this work. We analyze how the five papers apply metatheory in the KO domain. By doing so, we apply the *external/intellectual* (M_u) approach because we borrow the concept of metatheory from Sociology. This way we have a more comprehensive understanding of the use of metatheory as a tool to better visualize theory in KO.

3 Metatheory and Knowledge Organization

By discussing epistemology, theory and methodology in the field of KO, Tennis (2008) claims that the majority research in KO is done using writing as the technique, but this technique is not well understood in the larger Library an Information Science community.

Ritzer (1991a) critique to metatheorizing is closely related to this claim. He affirms that scholars that do M_u conduct abstract research and believe "that others will be able to translate their ideas", (Ritzer 1991a, 244). He recognizes that metatheorizing can proceed unconsciously, but the author argues it would be more productive if metatheorizing occurred in a more self-conscious way, (Ritzer 1991a, 1991b).

Another critique was presented by Vickery (1998) in his paper about metatheory and information science. He observes that many metatheorizing works remain at too general level. Hjørland agrees with this observation and points out that "epistemological and metatheoretical views have seldom been formulated or analyzed. Instead of conscious analysis such views have mostly been unconscious attitudes by information scientists", (1998, 620).

Metatheory "presents all the situations or states of affairs that can be expressed within the logical possibilities of the conceptual apparatus of a theory", (Vickery 1998, 453). We can consider that one of the reasons to apply metatheory to KO domain is, as argued by Hjørland, "to raise its theoretical and philosophical level, the better to understand the limitations and possibilities of different approaches", (1998, 620).

A preliminary classification of KO research is proposed by Tennis (2008). The author divides KO research among epistemology, theory, and methodology and suggests three spheres of research: design, study, and critique. He states that his work is "situated in a metatheoretical framework, drawn from sociological thought".

Tennis (2015) also takes a metatheoretical approach to analyze classification theory. The preliminary conclusion of the work is that classification theory can be separated into three kinds: foundational classification theory, first-order classification theory, and second-order classification theory.

Clearly, Tennis (2008; 2015) builds his metatheoretical work on Ritzer's metatheory. In both papers, the four purposes of metatheory are described as proposed by Ritzer

(1991a). In the first paper, Tennis (2008) recognizes that his work is an example of M_o that provides an overarching perspective on theoretical work. In addition, he explains that his work can also serve as a preliminary mechanism for evaluation, the type of metatheory presented by Colomy (1991).

Ritzer's metatheory was also used by Tennis (2015) as a method of analysis to understand how classification theory can be subdivided into the three kinds cited above. Therefore, his 2015 paper, is the only one to apply the three different types of metatheory: - metatheorizing to better understand theory (M_u); - encourage further theory development (M_p) (Ritzer 1991a) and; - evaluate theory (M_a), (Colomy 1991).

Dousa (2010) describes Pragmatism as a metatheoretical perspective in KO and reviews its three variants: Charles Sanders Pierce's scientifically oriented pragmaticism, William James's subjectivist practicalism, and John Dewey's socially oriented instrumentalism. He also indicates points of contact between them and KO theories propounded by Henry E. Bliss, Jesse H. Shera, and Birger Hjørland, respectively.

Looking at Dousa's (2010) research, we may consider that he is applying the external/intellectual approach of Ritzer's metatheory, the one that is concerned with ideas, tools, concepts and theories from other academic disciplines, in this case from Philosophy/Pragmatism.

KO for feminist research is the subject of Samuelsson's work (2010). The author analyzes Knowledge Organization Systems (KOS) that index and classify feminist dissertations in a Swedish bibliographic context. Discourse theory is used to analyze feminist KO and to discuss how KOS can articulate feminist perspectives. Samuelsson also says that her "theoretical and methodological approach is post-structuralist and discourse oriented," (2010, 5). She espouses "a social constructionist, anti-essentialist perspective," (2010, 5).

The paper highlights that "feminist discourse consisting of feminist theoretical and metatheoretical perspectives are not considered at all in the KOS", (Samuelsson 2010, 3). Discourse analysis is a concept borrowed from Linguistics, therefore we understand that Samuelsson (2010) also applies the external/intellectual approach of Ritzer's M_u on the empirical investigation of feminist metatheory in dissertations on this subject.

The contributions from domain analysis and metatheory to bibliometric studies were outlined by Castanha and Grácio (2014). Their concern relates to the need for epistemological, sociological and historical analysis of bibliometric data and the use of other qualitative approaches to enable a more consistent analysis of the data obtained through bibliometric.

While it is possible to study networks, and recognize invisible colleges through bibliometric research, this is not what Castanha and Grácio (2014) do. They are concerned with the influence of metatheory on bibliometric studies. The authors do not explicitly say they are using Ritzer's work. However, considering that metatheory is a concept borrowed from sociology, we understand that their study is part of the external/intellectual approach in Ritzer's M_u.

4 Surfacing metatheory in knowledge organization in order to visualize it

We presented the different applications of metatheory in KO research in the previous section. Ritzer's metatheory is cited by Tennis (2008; 2015), Castanha and Grácio (2014). However, just Tennis (2008; 2015) states the use of Ritzer's metatheory as a method of analysis in his research. Dousa (2010) recognizes the increasing importance of metatheory in KO. Samuelsson (2010) identifies the feminist metatheoretical, theoretical, and methodological stances articulated in the dissertations analyzed. And, Castanha and Grácio (2014) consider metatheory as a tool for the analysis of bibliometric studies results.

By analyzing the five papers, we recognize that four papers use M_u as a method of analysis (Dousa 2010; Samuelsson 2010; Castanha and Gracio 2014; Tennis 2015). Three of them (Dousa 2010; Samuelsson 2010; Castanha and Gracio 2014) apply the external/intellectual approach, since they consider concepts borrowed from other domains. Tennis (2008) uses two types of metatheory: M_o to provide an overarching perspective of the domain and M_a as a preliminary mechanism for evaluation. And in his 2015 research, Tennis applies metatheory in three different senses: M_u, M_p and M_a. With regard to M_u, Tennis uses the internal/intellectual approach because the author looks into the domain to better understand classification theory (Figure 2).

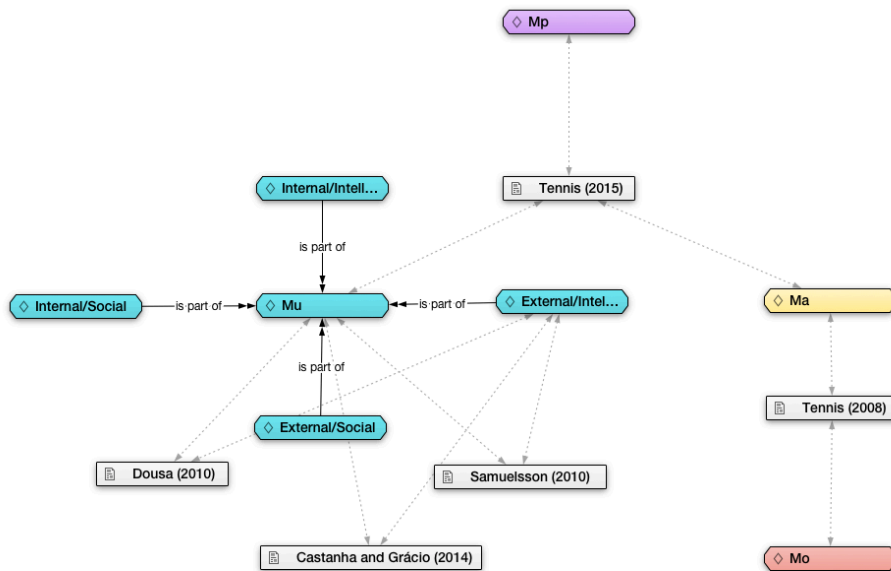Figure 2: Types of Metatheory applied to knowledge organization

Figure 3 shows a trend in the use of Ritzer's M_u, metatheorizing to better understand theory, in the journal *Knowledge Organization*. This type of metatheory is applied by all the authors, even though most of them did not state they were using this kind of meta-analysis.

Figure 3: Timeline of the use of metatheory in the journal *Knowledge Organization*
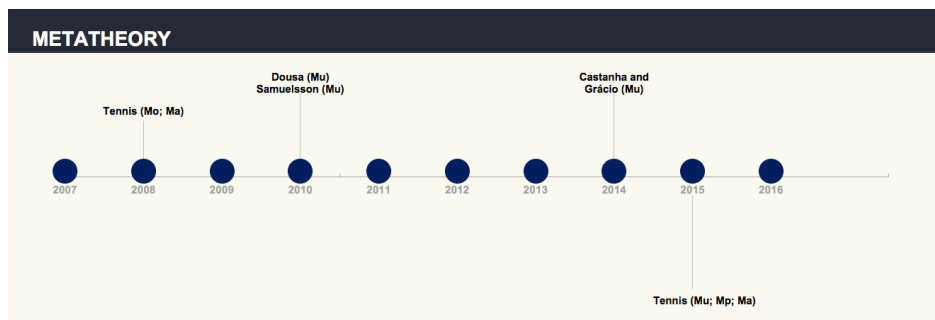
We can see from Figure 2 that M_u as the most popular type of metatheory among the papers analyzed for this work. Figure 3 shows the evolution of metatheorizing in the journal Knowledge Organization.

5 Conclusion

We observe in our study, following Ritzer critique, that metatheorizing work is not made explicit by the majority of authors doing that work (1991a; 1991b). For this analysis, we may argue that the use of metatheory as a method of analysis is closely related to the researcher's concern about epistemological, theoretical and methodological issues in the KO domain. For the authors and ourselves, metatheory is a useful tool to better understand the foundations, the development of research, and the influence from other domains on KO.

Metatheorizing to better understand theory is the most popular type of metatheory applied in the papers of the corpus. And, our analysis also takes us to consider if one author influences another as metatheorizing is used as a method in the KO domain.

Therefore, as further work, we can analyze the citations to the papers that are part of the corpus of this research. We believe that we could assess their influence in KO domain in seeking to shape the theoretical and philosophical discourse of KO and to understand the possibilities of different approaches.

References

Bullock, A. ed. 1988. *Fontana Dictionary of Modern Thought*. London: Fontana Press.

Castanha, R.C.G, and M.C.C. Gracio. 2014. "Bibliometrics Contribution to the Metatheoretical and Domain Analysis Studies." *Knowledge Organization* 41 (2): 171–74.

Colomy, P. 1991. "Metatheorizing in a Postpositivist Frame." *Sociological Perspectives* 34 (3): 269–86.

Cronin, B. (1998). Metatheorizing citation. *Scientometrics*, 43(1), 45–55.

Dousa, T.M. 2010. "Classical Pragmatism and Its Varieties: On a Pluriform Metatheoretical Perspective for Knowledge Organization." *Knowledge Organization* 37 (1): 65–71.

Hjørland, B. 1998. "Theory and Metatheory of Information Science: A New Interpretation." *Journal of Documentation* 54 (5): 606–621.

Ritzer, G. 1991a. *Metatheorizing in Sociology*. Lexington Books Series on Social Theory. Lexington, Mass.: Lexington Books.

Ritzer, G. 1991b. "Reflections on the Rise of Metatheorizing in Sociology." *Sociological Perspectives* 34 (3): 237–48. doi:10.2307/1389509.

Samuelsson, J. 2010. "Knowledge Organization for Feminism and Feminist Research: A Discourse Oriented Study of Systematic Outlines, Logical Structure, Semantics and the Process of Indexing." *Knowledge Organization* 37 (1): 3–28.

Tennis, Joseph T. 2005. "Conceptions of Subject Analysis: A Metatheoretical Investigation." PhD Thesis, University of Washington.

Tennis, J. 2015. "Foundational, First-Order, and Second-Order Classification Theory." *Knowledge Organization* 42 (4): 244–49.

Tennis, J. 2008. "Epistemology, Theory, and Methodology in Knowledge Organization: Toward a Classification, Metatheory, and Research Framework." *Knowledge Organization* 35 (2–3): 102–12.

Tognoli, N. (2015). Metateoria e Diplomática: a construção de um novo modelo de análise para a identificação de documentos de arquivo. Scire, 21(2), 75.

Vakkari, P. 1997. "Theory Growth in Information Science: Applications of the Theory of Science to a Theory of Information Seeking." *Journal of Documentation* 53 (5): 497–519.

Vickery, B. 1998. "Metatheory and Information Science." *Journal of Documentation* 53 (5): 457–76.