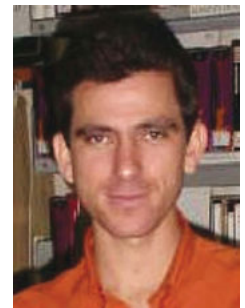# Knowledge Organization in the Context of Postmodernity from the Theory of Classification Perspective

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Abstract: This paper addresses issues related to knowledge organization (KO) in the context of postmodernity from the theory of classification perspective. The methodology is a bibliographic analysis of the representation of these issues, and in relation to modernity, in the Brazilian and international literature. It was possible to verify that: a) while in the modern context there is the idea that classification can be a neutral and objective mirror of the universe of knowledge, the postmodern theory rejects such hypothesis moving its focus on the social praxis and the community language; b) while the modern classification aimed to represent the universe of knowledge, the postmodern classification aims to provide a pragmatic tool for specific domains; and, c) if classification in modernity focused on KO due to the physicality of documents, with the advent of new technologies and a new space of production of digital information, studies related to classification seem to be displaced. We identify a trend in the area where studies on indexing can take a very important part in this context.

1.0 Introduction

Changes in society, such as the new social, political, and economic conceptions that humanity lives with, directly affect the conceptions and development of science. One of these changes concerns the discussion addressed by postmodernity regarding the problems of information science (IS) and, more specifically, in knowledge organization (KO). According to Smit, Tálamo and Kobashi (2004), the transition from modernity to postmodernity was so quick and intense that several domains did not take the necessary reflection on the very path of its constitution.

It is not an easy task to understand what postmodernity is. Many authors tried to define it, but there is not a consensus. Harvey (1994) and Santos (2000, 2003), for example, agreed to consider postmodernity more as an instance of reflections or a period of self-analysis than a new historical period. Postmodernity would be more inclusive of socio-cultural problems; in fact, it emerges in a discursive environment involving social actors linked to gender and ethnic movements (movements for civil rights, for gender equality, etc.). It is also worth noting the emergence of a linguistic movement known as political correctness that demands human relations in common language human relations and avoids the reification of

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prejudices towards minorities. Contrary to modernity in which history and human relations would not be very important, as projects, planning and sudden changes seem inevitable, postmodernity presents itself as a turning point and becomes a space of dialogue and questioning of the situation that modernity left behind.

Problems questioned by postmodernity make an impact on the ways of producing knowledge and proposing practical solutions in various areas, including, above all, knowledge organization. As Alexiev and Marksbury (2010, 364) pointed out, "the epistemological basis of any theory of KO is an accepted postulate. In other words, how knowledge is organized and represented depends largely on the understanding of how knowledge is generated and realized." According to Rendon Rojas and Herrera Delgado (2010), one of the aspects in which postmodernity addresses the problem of knowledge organization is in the introduction of relativism, subjectivism and certain "disorder" in the organization (use of free language, fuzzy logic) as an influence of an anti-modern postmodernity.

In this paper, we aim to reflect on knowledge organization in the context of postmodernity. For this, we conducted a literature review to survey how this aspect is discussed in the literature, holding the hypothesis that classification is very sensitive to the postmodern questioning.

2.0 Modernity and postmodernity

Modernity, as a historical moment, presents the following features: antitradition, the overthrow of conventions, customs, and beliefs, the opposition of universalism to particularism, or entering the age of reason. The term "modernity" was used in a broad meaning to characterize all the intellectual, social, political, cultural, and religious changes that were happening in the new direction that the world was taking. According to Pereira (2014), some categories about what the world "was" are affirmed and also support the structuring of the way knowledge is produced in this context. These categories, which according to Pereira can be called fundamental, go over the centuries to establish the belief that there is one and only one way to construct true knowledge.

Some consequences of this worldview are directly connected to knowledge organization, as it is done as a dichotomy, and one possibility excludes the other. Thus, it emphasizes the dualistic thinking in antinomies: mind and body; reason and emotion; physical explanations and cultural explanations. When one aspect predominates the other one would be excluded.

Areas of knowledge are separated so that each entity of knowledge is produced in its specialty. Science builds on the concept of uniform order as the dominant orga-

nizing principle in reality. This led to the adoption of some postulates (Pereira 2014) such as: change is uniform and linear; the universe is stable and mechanical; reality is simple and quantifiable; progress is linear. These questions guide the development of classification systems and play a key role in issues related to KO (Monteiro and Giraldes 2008), especially considering that they, at first, have a greater focus on storage, that is, on keeping information (focus on media), and not on its circulation.

Postmodernity, according to Monteiro and Abreu (2009), indicates a temporal state that is posterior to modernity resulting in changes in various contexts: social, thought, and in the area of information. However, we prefer to think of postmodernity as a period of reflection of modern conditions that shaped our society and our knowledge organization systems, since we do not deviate completely from modern structures of conceiving reality, the communities, and knowledge.

Mai (1999), and Hjørland and Nicolaisen (2011) suggested that, although diversified and eclectic, postmodernism can be recognized for two main assumptions (Hjørland and Nicolaisen, 2011):

> First, the assumption that there is no common denominator—in "nature" or "truth" or "God" or "the future"—that guarantees either the One-ness of the world or the possibility of neutral or objective thought. Second, the assumption that all human systems operate like language, being self-reflexive rather than referential systems—systems of differential function which are powerful but finite, and which construct and maintain meaning and value.

Thus, more than a philosophical movement, postmodernism would be a sociocultural paradigm based on new assumptions for life and human society (Gonçalves 2008), resulting in a departure from the "modern" in the sense that the postmodern philosophy will claim a mature position against the positivist model, characteristic of the so-called "modernity." While postmodernity refers to the period of reflection, or even historical phase, in which this occurs, postmodernism would be the set of ideas that give ideological, aesthetic, cultural, and political content to postmodernity.

According to postmodern thought, ways of knowing and thinking knowledge can no longer follow a mechanistic and deterministic logic. The repercussions of the ways of thinking and feeling, living, and acting in the world affect the philosophical conceptions of reality. Territorial spaces without borders, common markets, transnational currencies, scientific developments, and the advent of new technologies are challenges to the human mind that

cannot coexist with divided, hierarchical, and systematized knowledge that, throughout modernity, guided the development of classification systems and had a central role in the studies on knowledge organization.

3.0 Knowledge organization in the context of postmodernity

In order to analyze the insertion of knowledge organization in the context of postmodernity, we tried to do so considering that theory of classification is of central importance in issues related to KO. According to Mai (1999), and Alexiev and Marksbury (2010), traditional theories of classification (Dewey, Richardson, Bliss, Ranganathan, etc.) are based on the modern view of the world, which is supposedly neutral and objective. In this sense, nature has always existed and has always been there, what scientists did was just to discover and systematize its secrets. In this context, according to these authors, language is simply a means of communicating ideas. Provided that a world of thoughts and ideas exists *a priori*, regardless of language and communication, the classification task is reduced to mapping and representation of the world of ideas. This view assumes that the world can be described without making any reference to social, cultural, or individual contexts (Alexiev and Marksbury 2010).

However, according to Dousa (2007, 6), "over the course of the last decade, the theoretical literature on KO has taken a 'postmodernist turn' that marks a profound shift in attitudes towards the epistemological foundations of KO." Considering that a key modern assumption has been that classifications are based on objective facts about the world, and therefore represent a pre-existing order of things, there exists a dominant perspective that best captures the universe and therefore a classification best represents, Dousa continues that, "there has been an increasing awareness of the culturally and historically contingent nature of classification as both process and product."

On the other hand, Mai (1999, 552) argues that, "modern classificationists would argue that classification should be a neutral and objective representation of an already there universe of knowledge, the postmodern knowledge organizer, on the other hand, would argue that the creation of a knowledge organization is an active construction of a reality and particular view of the world."

Therefore, according to Alexiev and Marksbury (2010), a field of knowledge can be organized according to various methods based on the epistemological tradition of that field. They also draw attention to the fact that it is also important to note the postmodernist interpretation of language as knowledge organization, defined in terms of words and their meanings. In this view, they argue that the meanings of words are not related to their referents, but

are conformed at the moment of their use. Nevertheless, it is fundamental to question the semantics of words and propose a pragmatic analysis of the meaning. Knowledge organization systems in the context of post-modernity should project a semiotic analysis of the production of meanings in a discursive community, even before suggesting a possible arrangement of their knowledge. Thus, the semantics of words cannot be studied separately from the community in which they are used. As explained by Alexiev and Marksbury (2010, 365), "On the whole, it can be concluded that the post-modernist conception defines KO as a social construction in which it is possible to make a KOS (ontology, thesaurus, etc.) more transparent for the users and more effective. Thus KO is interpreted as part of the social and cultural context."

In this sense, Dousa (2007) states that an important consequence in this context is referred to the change from monism to pluralism, pointing out that the proper task of the KO practitioners is not the development of universal systems, but rather the creation of classifications, and more specifically, the development of indexing languages that capture the diverse perspectives about the world according to the discourse of different communities, organizations, and individuals. Thus, knowledge organization would be interpreted as part of the social and cultural context in which it no longer fits into a closed and linear structure and the social aspects are left out. We must revise our taxonomist stance that seeks fitting beings into their respective biological class, and approximate to the logic of the ethnographer that knows about the functioning of communities and get integrated into them. Mai (2004, 39), while analyzing the differences between modern and postmodern theories of classification, notes that, "While modern classification aims at representing the universe of knowledge, postmodern classification aims at providing a pragmatic tool for specific domains."

While classification schemes provided the basis for knowledge organization and retrieval in the context of modernity, with the exponential advancement of science and the development of information and communication technologies (ICTs), there is a need, in the context of postmodernity, to create new forms of organization. In this sense, Monteiro and Giraldes (2008) argue that indexing seems to be the most appropriate model in the digital environment, because unlike classification, which organizes knowledge by classes, divisions, sections, and facets, it does not treat texts as external description and content (at least not with the same rigor of cataloging and classification) but rather aims to organize knowledge through a semantic and thematic work operating within the structure of language.

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KNOWLEDGE ORGANIZATION		
	MODERN	**POSTMODERN**
IMAGE OF THE KNOWLEDGE	Tree: hierarchical structure	Rhizome: interconnected distribution
WAYS OF BEING	Actual (reified)	Virtual
LANGUAGE	Analogic	Digital
SEMIOTIC PARADIGM	Verbalist (logocentrism)	Sound, visual, and verbal (semiotic multiplicity)
MEDIUM	Physical, material, palpable: paper for book, photographic and cinematographic film, magnetic tape for sound	Digital, virtuality: convergence of media for the same medium of record, dissemination and access
PHYSICAL REPRESENTATION	Data: descriptive representation of the works and their media: (cataloging)	Metadata: there is no physical narrow of the virtualized works. Hypertext (XML) is at the same time language and tag
SUBJECT REPRESENTATION	Vocabulary control in the subject representation by classification and indexing allows the semantic narrow: unique sense or meaning	There is no semantic narrow in the practices of social tagging and in the multiple syntaxes of the mechanisms of indexing and search (multiplicity of meanings)
ONTOLOGIES	Human	Human and machinic

Table 1. Knowledge organization in the postmodern context.

Table 1 is a summary of knowledge organization in the postmodern context developed by Monteiro and Abreu (2009).

4.0 Conclusions

A summary of the ideas discussed by these authors, points to the following consequences: the classical tradition of the theory of classification based on a modern view of the world includes the idea that classifications can be a neutral mirror and objective of a universe of knowledge; in contrast, the postmodern theory of knowledge organization rejects this hypothesis and puts the focus on social praxis and community language; while mo-

dern classification seeks to represent the universe of knowledge, postmodern classification seeks to provide a pragmatic tool for specific areas; in modernity, classification had a centrality in KO because of the physicality of documents, with the advent of new technologies and new space for the production of digital information, studies on classification seem to suffer a displacement.

The postmodern critique suggests, ultimately, that the ways of organizing knowledge might not be reflecting the socio-cultural context, or even being as pragmatic as we think with the structures of knowledge of modernity. Such postmodern reflection applied to tknowledge organization suggests the need of an ethnographic design instead of taxonomic logic.

Although it was not the object of our analysis, we cannot ignore the importance of the advent of new technologies in issues related to knowledge organization in the context of postmodernity, since they directly interfere in the way knowledge is produced in the digital environment that also have consequences in the way in which they are organized.

Ultimately, ethnically hybrid societies such as Brazil (García Canclini 2001), with such disparate communities including quilombolas groups, indigenous people, and immigrants, among others, with a significant number of native languages, can navigate between tradition and modernity. These societies could only be recognized through a postmodern approach to their knowledge and their languages. Perhaps the social role of knowledge organization and its products are strengthened in this period more than in others. They should be consistent with the reality of the discursive communities and ethically committed to the representation of knowledge and learning.

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