A Postmodern Theory of Knowledge Organization

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Abstract

This paper argues that traditional theories of classification is based in the modern belief in dualism, and that this belief has led to the use of the concept of universe of knowledge as its main component. In this view knowledge organizations are seen as objective and neutral descriptions of an already there universe of knowledge. The tools provided for this task is mainly drawn from logic and are intended to be used independently of the domain for which the knowledge organization is created. The object is to mirror reality as closely as possible. However, the idea of objectivity and neutrality falls with the rise of the postmodern thought. In a postmodern view of the world facts, truth and knowledge is regarded as fabricated and constructed in particular discourse communities. A postmodern theory of knowledge organization therefore regards knowledge organizations as active constructions of a perceived conception of the particular discourse communities in the company, organization or knowledge fields for which the knowledge organization is intended. Therefore the rules, guidelines and standards for knowledge organization becomes of little interest – what becomes much more important is the interpretative processes in knowledge organization and the cultural and social context of which the knowledge organization is a part.

INTRODUCTION

The chief task for knowledge organization and representation is to organize and represent documents for effective retrieval and to build systems for this. These tasks primarily deal with language and meaning, therefore any theory of knowledge organization and representation must explicitly include theories of language and/or meaning.

Any theory of knowledge organization must further involve considerations regarding the epistemological basis of the theory and regarding the practical utilization of the theory. The epistemological basis should address the problems of how knowledge is generated and realized, the practical level should regard how knowledge is organized and represented. A knowledge organization cannot be epistemological neutral. Scholars and practitioners within the field of knowledge organization and representation must base their practical work and discussions in a epistemological tradition.

Scholars of knowledge organization have traditionally been centered around the idea of a universe of knowledge. And, that the perfect, ultimate, correct classification scheme reflects this universe of knowledge. Miksa (1998) argues that this idea falls with the rise of the postmodern age, in which classification theory cannot be tied to a universe of knowledge, because this universe is person and situation dependent and therefore constantly changing. In the postmodern age the observer is not regarded independent of an external world. However, if a knowledge organization is not a reflection of a already existing knowledge structure, what then should a knowledge organization be build up around? If knowledge organizations are not representative of how things really are, how useful are they then? This paper will address these and similar questions.

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The paper will argue that the classic tradition of classification theory is based on a modern view of the world. This includes the idea that classifications can be a neutral and objective mirror of an already there universe of knowledge. A postmodern theory of knowledge organization rejects this assumption and instead places focus on the social praxis and the language of the community for which the knowledge organization is created.

This approach to knowledge organization is useful both in understanding the limitations of traditional universal schemes of knowledge organization but also to the emerging fields of knowledge organization. The Internet and knowledge management are examples of these. Within the Internet community there is a growing focus on organization of the resources available on the Internet, and in knowledge management there is focus on capturing, representing and organizing a company's or organization's knowledge. These are interested in approaches to knowledge organization that focuses on the specific tasks and user groups for which the knowledge organization is created. They are less interested in traditional, neutral, and objective representations of an universe of knowledge.

THE MODERNS

Traditional theories of classification (Dewey, Bliss, Ranganathan, Richardson, Sayers, etc.) have at their heart the idea of a universe of knowledge. The idea is that all knowledge is interwoven into a great web. That there is some pre-established links between all knowledge, and that the tasks of classification systems are to represent this web of knowledge. This could be named the modern theory of classification. It is fundamentally based on what Latour (1991) calls 'purification' and 'translation.'

Latour argues that modernism can be characterized by two opposing practices or ways of thinking. The first is called 'purification,' this is the idea that there are two entirely different ontological zones; one which deals with human beings and another which deals with non-human nature. That is, on the one side there are the ideas, objects and things created by humans, and on the other side is the natural world which has always been there. The latter consists of predictable and stable interests and stakes, which can be represented in the first zone through discourse and research. The two zones operate independently of each other.

The second practice or way of thinking which characterize modernism is 'translation.' Latour describes this, as the idea that everything is somehow interwoven and therefore explainable. We are somehow able to explain how the discovery of a hole in the ozone layer is connected to the politics of heads of states, to the prize of gasoline, to some ecologists talk about international treaties, to the biologists' analysis of nature, and so on. The moderns explain that all this is related to each other, that everything is connected, that any event causes other events and can be explained by previous events. The idea is that the worlds of ideas and nature are interwoven together in to one great network, in other words, that they can be translated into each other.

What the moderns fail to do, Latour argues, is to explain how these two ways of thinking cooperate.

Modern science's task is explain, clarify, investigate the non-human zone, and explain it is the human zone. However, this should be done in a way, such that the facts speaks for themselves. It should not be an interpretation or particular understanding of the non-human, it should be a replication of the non-human zone. It should be neutral and objective. The two zones should not be mixed. Modern science is based on the assumption that nature and the non-human zone consist of mute objects which can speak through the intermediary of loyal and disciplined scientific spokespersons. Therefore, these

scientists do not make nature, nature exists before them and has always existed and has always been there. Modern scientists only discover nature's secrets.

The guarantee for this neutral and objectiv reporting of nature is the scientific method; the observations, the laboratory, the controlled conditions, the empirical data, the statistical methods, the belief in a master plan, the trust in nature, the demand for repeatability, the reliability and trust in the inner properties of objects. The disrespect for interpretation.

This belief and trust in science and the scientific method has shaped the task of scholarly work during this century, and information science and knowledge organization is no exemption. Information science and knowledge organization rest on the premise of the moderns, the fields build this belief and trust in science and the scientific methods.

Moderns, Latour argues, are invincible. Their belief in the total separation of the human and the non-human on the one hand, and on the other hand, their belief that everything is connected in networks makes it impossible to convince them that they are wrong, as Latour argues (1991, 37),

> If you criticize them by saying that Nature is a world constructed by human hands, they will show you that it is transcendent, that science is a mere intermediary allowing access to Nature, and that they keep their hands off. If you tell them that we are free and that our destiny is in our own hands, they will tell you that Society is transcendent and its laws infinitely surpass us. If you object that they are being duplicitous, they will show you that they never confuse the Laws of Nature with imprescriptible human nature. If you believe them and direct you attention elsewhere, they will take advantage of this to transfer thousands of objects from Nature into the social body while procuring for this body the solidity natural things. If you turn around suddenly, as in the children's game 'Mother, may I?', they will freeze, looking innocent, as if they hadn't budged: here, on the left, are things themselves; there, on the right, is the free society of speaking, thinking subjects, values and of signs. Everything happens in the middle, everything passes between the two, everything happens by way of mediation, translation and networks, but this space does not exist, it has no place. It is the unthinkable, the unconscious of the moderns.

Modern classificationists would argue that their task is to describe an objective non-human nature, this could be the entire universe of knowledge, the universe of knowledge in a particular domain, or the universe of knowledge within a particular organization or company. The underpinning idea is that there is such an universe of knowledge which can be mapped, and that this can be mapped by someone who comes from the outside into the domain or company. And that this person simply should possess knowledge of how to build knowledge organizations, knowledge structures or classification schemes.

Richardson (1930) was pretty clear in his premise. He found that the task of classification is to represent "the real order of arrangement of things in the universe" (Richardson 1939, 1), what is represented should be represented according to likeness. Likeness, in Richardson's terms, is defined by interchangeability. Two things are alike when they can be interchanged with each other; they can "be taken from one and put in the other and *vice versa* without changing the real character of each" (Richardson 1939, 3). The idea is that it is possible to determine the objective character of the things to be classified, as Richardson (1930, 2) states: "It is *a* and it is not *b*. It is discrete, separate, and in short, subject to classification."

Ranganathan (1967) explains that the work of classification should be separated into "three planes of work" (Ranganathan 1967, 327). The three planes are the idea plane, the verbal plane, and the notational plane. The ideas on the idea plane is created by human minds, language is used as a tool to communicate ideas from one person to another person, in other words "language is the medium for communication of ideas" (Ranganathan 1967, 327). In this sense, the meaning of words exists before the words themselves are used for communication – the words merely point out the idea or meaning they refer to. The task of the two other planes of work is to represent the ideas of the idea plane. The assumption here is that there beforehand exists a world of thought and ideas independently of language and communication. The task for classification is then to map and represent this world of ideas.

Bliss (1929) stresses that "brain, experience, knowledge, and mind . . . are organized concurrently and correlatively" (Bliss 1929, 77). Later he defines himself as conceptualist, and says that we perceive the objects in the world, which exist independent of humans (Bliss 1929, 128). Since Bliss regards both the mental sphere and the external world as organized in some way, he defines truth to be "the relative quality of knowledge veritably correlated to reality" (Bliss 1929, 129). This means that provided that more and more people have the same experience with reality, then this becomes the truth about the world. This implies that truth depends on external physical realities, and that the physical world is primordial to mental understandings of it. Our mental understandings of the world and the truth of the world is derived from perceptions of the world. According to Bliss these perceptions are assimilated into concepts, which again is organized into knowledge (Bliss 1929, 128). The physical world causes a change in the mental sphere. The organization of knowledge correlates with reality, and as we slowly have the same experiences with reality, we slowly develop the same understanding of reality.

These modern classification theorists would further argue that to build structures of knowledge they simply need knowledge about techniques and standards for doing so. These techniques and standards could be described once for all and would be alike for all environments in which they were to build these structures. This has generated the enormous amount of standards and textbooks in classification and thesaurus construction which deals with the exact techniques for building structures. Only little space--if any at all--deals with how to analyze the domain, organization, or company in which the knowledge organization shall be implemented and used.

A large degree of research and thinking in knowledge organization has been centered around rules and guidelines for creating knowledge organizations. Most textbooks on the creation of classification systems are focused on rules and guidelines to explain the technical side of the problems of creating classification systems. Many of the techniques used--such as exclusiveness, exhaustivity, etc.--are brought in from thinking in logic. The same approach is typical for studies of thesaurus construction. Manuals and standards on thesaurus construction are mostly concerned with exact rules and guidelines, e.g. factoring of compound terms, creation of relationships. This technical approach to knowledge organization offers valuable information on the specifics of creating structures, but it often ignores the most difficult part of creating a knowledge organization, namely the application of these rules and guidelines in specific domains. In other words, how to organize the universe of knowledge in specific domains. It is as if the library and information science community accepts that the field is a technical field, in which practitioners simply applies a set of universal rules in a rather neutral way to any particular situation. It is as if neglects the most difficult task, the application of the standards and guidelines. Further, it is as if the field ignores the fundamental tasks before the use or rules and guidelines, namely the analysis of the individual domains. The reason for this probably lies in the rationalistic underpinnings dominating the field of knowledge organization for the past century.

One example of an apparent innocent and obvious assumption is made in the ISO "guidelines for the establishment and development of monolingual thesauri" (ISO 1986). In the introduction to this standard is it stated that there are two kinds of inter-term relationships; "syntactical or *posteriori* relationships" (ISO 1986, 1) and "*a priori* or theasural relationships" (ISO 1986, 1). The first of these, posteriori, is defined as the relationship between terms that are document dependent. This means that this relationship is not "normally associated according to common frames of reference" (ISO 1986, 1). The second relationship, a priori, is document independent, the idea is that these relationships exist before a particular document was ever thought of – before a particular utterance was ever uttered. These relationships "are generally recognized and could be established through reference to standard works" (ISO 1986, 1). On the surface such a separation may seem logical and useful, but it presupposes a certain epistemology, but this is not made clear in the standard. The standard is based on the idea that the world exists independent of our interactions with it. This is generally known as a realistic point of view. In a realistic epistemology one assumes that it is possible to realize the world as it really is and that it is possible to describe the world independent of social contexts and particular people. The ISO standard assumes that it is possible to establish situation independent relations between terms used in a thesaurus.

A common distinction in the modern tradition of classification is the distinction between artificial and natural classification. Sayers (1926), for instance, noticed that there are classifications based upon "the inherent properties in things; upon those properties without which a thing could not be that thing it is" (Sayers 1926, 48) these, he said, are the natural classifications. On the other hand, we have the classifications based upon "some accidental property of the things classified" (Sayers 1926, 47) these are the artificial classifications. Just as the aim of modern (natural) science is discover and reveal the causal connections in nature and thereby to represent the a priori of things, the aim of the modern classificationists is to discover, represent and organize the universe of knowledge already there. The question is, however, who classified nature? Albert Einstein is quoted for saying that what really interests him "is whether God had any choice in the creation of the world" (Dupré 1993, 7), of course, if the great twentieth century scientists were right, God had not choice. The same idea drives the modern classificationist, as Sayers (1926, 62) says "the Universe as it came to the creative mind was not chaos; but and orderly system of things."

The moderns base their view of the world in the idea that there exist a world of ideas outside the human, and that the task of science and classification is to represent this world of ideas or universe of knowledge.

THE POSTMODERNS

In its essence postmodernism is based on two key assumptions. The first is the assumption that there is no key dominator to understanding the world, neither in nature, truth, God, or future. Such a key dominator has to be present to speak of neutral or objective thought. The second assumption is the belief that there is nothing, ideas or thought, prior to language. The idea is that language does not points out objects to which they refer, in other words, language acts self-reflexive (Ermarth 1998). The upshot of this is that the "postmodernist subject simply cannot be severed from her everyday life, her cultural and intellectual activities, her language and what is most crucial, from her world" (Merrell 1995, 29). This means that in a postmodern approach to language, meaning, understanding, and knowledge organization it would be impossible to describe and represent the world objectively and neutrally.

In the modern tradition of thought truth, and especially scientific truth, is defined as a correlation between reality and a description or representation of reality. In other words, the truth of some matter is how things are in reality. Hence, modern science aims at an objective and neutral description of reality. In a postmodern world truth and facts are not validated by some objective criteria, in fact, truth and facts are only dependent upon the use of them – they are fabricated or constructed (Latour 1991, 18). Where the moderns believe that they can separate the observer from the observed, the postmoderns would argue that scientific knowledge is not a passive, neutral, and objective copy of the world, but an active construction of it.

Likewise, 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 a particular view of the world. Such a creation can never be neutral and objective – and in fact, knowledge organizations are never neutral and objective. "Classifications are never innocent but streaked with arbitrariness and motivated by preconceptions and prejudices. Besides they are constantly shifting, whether by design or in spite of our efforts to capture them" (Merrell 1995, 92). As Hjørland (1998) has shown, any organization of a knowledge field is based on a epistemological tradition, a classification is just one view of how the knowledge could be organized and this organization could be justified using various methods.

The moderns argue that they in fact can be neutral and objective since they base their creation of knowledge organizations on rules and a logical doctrine (Sayers 1926, 52) and on the inherent properties of the things classified (Richardson 1930, 4).

Broadfield (1946) argues against this notion by stressing that any creation of categories are based on the qualitative aspects of the categories. He gives the example of Plato's classification of forms of government as "the rule of one (monarchy or tyranny), of a few (aristocracy and oligarchy), and of the many (democracy)" (Broadfield 1946, 13). The basis of this classification, he argued, is "really the quality of government, rather than the number of people exercising power" (Broadfield 1946, 13). The difference between categories must be based on some qualitative difference, and not merely with degrees of quantitative difference, since the quantitative difference only provides a series but to divide the series into categories some qualitative interpretation has to be exercised over the series. Logical division provides no guidelines for creating categories, but merely states that "only one characteristic of division should be applied at a time" (Buchanan 1979, 53) and that if the rules of logical division is followed, they will "ensure the efficient derivation of the species of a genus" (Buchanan 1979, 53). Broadfield (1949, 14), however, argues that this is not the case,

> Classification of things according to their kinds does not result in a series, since every genus has under it co-ordinate species, and the arrangement of all these terms in a linear sequence would be meaningless. Genera and species lose all significance as kinds if they are forced indiscriminately into a series. Nor does logical division supply any principle upon which a serial arrangement of co-ordinate species can be effected. Such an arrangement often can and must be made, but this is done not according to the principles involved in the recognition of terms as kinds, but with some historical, causal, or other non-classificatory purpose.

The very process of splitting up a whole into parts, which logical division suggests, is based on the assumption that the whole, genus, is the sum of its parts, species. But the "notion of species is of how, not of how much" (Broadfield 1946, 35). The creation of a knowledge organization is to determine

where the genus is present and where it is absent, but this has nothing to do with logic. Because when opinion is divided whether a feature is this or that it "reflects uncertainty not as to what [it is], but as to how this particular feature . . . is to be thought of" (Braodfield 1946, 20). The determination of categories in knowledge organization is related to the historical, social and cultural context in which the knowledge organization is created and used. Therefore the mere enumeration of logical rules will not guarantee a good organization of knowledge.

Gilbert Ryle (1949) once noted "to be intelligent is not merely to satisfy criteria, but to apply them; to regulate one's action and not merely to be well-regulated" (Ryle 1949, 28), along the same line of thought Wittgenstein (1958; 1969) argues that to follow a rule is to understand language and to understand language is to part of a social praxis. According to these views the application of rules and guidelines are closely related to the social praxis in which the rules and guidelines are produced and used. Furthermore if the idea about the stable universe of knowledge is rejected (according to postmodern thought), then the creation of the knowledge organization must be closely related to social praxis in which it shall be used. This means that each individual social praxis will in effect will create its own small universe of knowledge.

Organization of knowledge basically deals with the problem of language. In this sense organization of knowledge is actually organization of words and the their meaning, the meaning of words therefore are of interest. The meaning of words can, at one end of the spectrum, be regarded as that which the words point out. Hence, the meaning of a word is whatever the word refers to or points out. This definition has been criticized by a number of people, such as Wittgenstein, Heidegger and Gadamer. They do not separate the meaning of words from the people or the community in which the words are used. They argue that language is not a tool for pointing at the world, but "the very constitution of the world" (Introna 1998, 5). In this sense words and their meanings cannot be separated, "there is no meaning and word; the word *is* the meaning" (Introna 1998, 5).

When meaning and words cannot be separated into two different kinds of phenomena, then the meaning of words can not be define by whatever the words refer to. The meaning of words is the very use of them. Language is therefore not a tool used to speak with, but the very social and cultural context in which the language is situated, in other words "I do not speak with language, as a tool, but *from* language" (Introna 1998, 8). The community we belong to has a language, language is not something which is added on to the praxis. The praxis is the language.

Therefore the meaning of words and the correct use of language can not be studied separately from the community in which the words and the language is used. Even though words come from an individual person and is perceived by an individual person, language is the product of these individual persons. Language belongs to the community in which it is used. It is the community that defines and determines the meaning the words used. Words therefore do not have an objective and all true meaning neither are the meaning of words fluid and individual. Introna (1998, 8-9) gives the example that one needs to start with the community's already there language, even if one wants to disagree with the community,

> I can not stand up in conference on the philosophy of language and propose that the audience somehow entirely 'forget'--if this is possible at all--the already there tradition of philosophical discourse on language that emerged over thousands of years. Even if I want to disagree with it entirely, or use concepts in totally different ways, I will still have to draw on this tradition--of linguistic distinction--to say how, or in what way, my use of this language will be different.

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Wittgenstein (1958) defined these discourse communities as 'forms of life,' which form the shared understanding of the praxis and reality. The meaning and correct use of words and discourses within theses 'forms of life' are determined and established through 'language games.'

To create an organization of knowledge in a particular company, organization or any other information center or library, one needs to start with the discourse in the organization or domain. One needs to learn the language used in the community, since the knowledge organization must reflect this particular discourse community, or form of life. A knowledge organization is not something that can be created to an organization, a knowledge organization must grow out of the organization. The knowledge organization is a standardization of the language games in the organization. This means going through ever single term that is considered for the knowledge organization and discussing its means, what its use in the organization is. This might be relatively easy for some terms, but for others it will be more difficult. To create a knowledge organization is to create a standard terminology, to create a standard terminology is highly political and a thorough intervention in the freedom of expression in an organization. However, in the long run the result could be a common language for communication in the organization.

A knowledge organization, therefore, is a social construction. It is not a reflection or mirror of an already there structure nor an objective description of reality. The knowledge organization is an active construction of a perceived conception of the form of life and language game in an organization, company, or domain.

CONCLUSION

The view of knowledge organization should change from a (intended) reflection of the universe of knowledge to a pragmatic tool in the mediation between author and user. The knowledge organization could be thought of a boundary object (Star 1989) and function as a discursive area or public domain (Albrechtsen & Jacob 1998).

Instead of attempting to adapt or reflect the authors' or users' way of thinking the knowledge organization should be seen as an autonomous structure (and representation of documents in a structure). The knowledge organization is a common platform for communication between authors and users. The information retrieval interaction is not a communication flow from user to author but between author and information retrieval system and between information retrieval system and user. It is two different and independent interactions and should be seen as such. The challenge for the indexer is to interpret the world picture (Wittgenstein 1969) embedded in the document and translate it according to the world picture embedded in the knowledge organization. The intermediary's task is to interpret and translate the world picture embedded in the knowledge organization. The indexer, intermediary and others working with, creating and maintaining the knowledge organization should be able to make the knowledge organization transparent for the users. The users tasks in understanding and using the knowledge organization then becomes easier and more effective.

When knowledge management people talk about organization of knowledge, one of the techniques they mention is, in fact, the thesaurus. They are aware that the technical side of building a thesaurus is the least complicated. For instance, Davenport & Prusak (1998) state that the most complicated task is "to compile a set of meaningful terms by which your knowledge repository can be searched" (Davenport & Prusak 1998, 135). They point out that the determination of the words used in the thesaurus is the most difficult task.

If the universe of knowledge is determined by and linked to the cultural and social situation, then the rules, guidelines and standards for knowledge organization becomes of little interest – what becomes much more important is the interpretative processes in knowledge organization and the cultural and social context which the knowledge organization is a part of.

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