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The Politics of Knowledge Organization:
Introduction to the Special Issue

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Abstract: Politics is about the distribution of goods and risks. We can describe the distribution of goods, and we can also characterize those distributions as a kind of inequality. As a baseline definition of “politics of information” we mean the distribution of information goods across different populations. Despite a strong tradition of disciplinary focus in information science, much of the literature is still given over to fairly simple notions of social form and structure. A nascent knowledge organization practice dedicated to social difference is explicitly motivated by justice and nomenclature. Not only is knowledge organization a tool of cultural hegemony, but also it can be read as a product of cultural ordering and bias. Identifying unjust and politically oppressive practice must be part of the path to justice. Understanding the political construction of knowledge organization is essential for the theory of information service in order to build a more just professional practice.

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Welcome to Knowledge Organization’s special issue on the Politics of Knowledge Organization (KO). What do we mean by the politics of KO? Politics, according to Lasswell’s classic (1936) formulation, is “who gets what, when, how.” Recognizing that politics is often perceived to be about power, he begins the book with a chapter on elites, stating “The influential are those who get the most of what there is to get. Available values may be classified as deference, income, safety. Those who get the most are elite; the rest are mass” (1). Politics is about the distribution of goods and risks. Lasswell states that politics can be described, and that we can also talk about it in moral ways, stating (1) “the science of politics states conditions; the philosophy of politics justifies preferences.” We can describe the distribution of goods, and we can also characterize those distributions as a kind of inequality.

Writing in 1936, Lasswell perhaps did not consider information or access to information in his analysis as a particular social good, but developing notions of the “underserved” within library and information science (LIS) identifies unjustifiable distributions of information as a significant social concern. In many ways, the library profession led the
way ahead of the LIS research community in creating and defining library services for black readers. Collectors like Arturo Schomburg, Mayme Clayton and myriad other librarians helped shape library services for research in black culture, and by black researchers. However, the treatment of minoritized user populations in the literature of the period as well as mainstream library practice is probably best characterized by efforts to assimilate recent immigrants and ethnic minorities into predominant American culture and its framework of a universal white identity (Honma 2005, 5). Although we see the initial formation of information services as dedicated to African-American users, the research literature itself was still far from articulating black experience as distinct from mainstream American experience, much less joining a description of that experience with the principles of librarianship to develop new kinds of information service based on an explicit recognition of social differentiation.

Which is not to say that information studies (IS, which we are using as the term to indicate the following-on and broadening-out of LIS) was not aware of social context as a way of differentiating user needs and information services. IS, as a discipline and as a group of scholars, has long associated itself with studying the information needs of various groups, particularly in disciplinary and professional settings. Bates and others (1993, 2), in a series of articles that introduced her investigations in the information seeking of humanities scholars, stated “Empirical research into information-seeking behavior among members of various academic and research communities focused almost exclusively on engineering and the sciences during the 1960s, and on the social sciences in the 1970s.” The premise of the activity was to describe and produce theory around the “documentary products” of various “domains and professions” (Bates 1999, 1043), “always looking for the red thread of information in the social texture of people’s lives” (1048). Following the mid-century period of trying to discover universal laws of information, IS became oriented toward information practices in domains (e.g., Hjørland and Albrechtsen 1995) and disciplines. Information was contextual (e.g., the “Information Seeking in Context” conference series, first held in Finland in 1996), though perhaps not yet fully cultural, as it was described within IS.

Also in the 1990s, economists of information such as Hal Varian, founding dean of Berkeley’s School of Information Management and Systems (now School of Information) and now chief economist at Google, started a series of projects aimed at market segmentation for information goods, which he defined (2000, 137) as “a good that can be distributed in digital form. Examples are text, images, sounds, video, software.” Varian more popularly argued in (1998) for “versioning,” that is (2000, 137-38), “offering a product line of variations on the same underlying good. The product line is designed so as to appeal to different market segments, thereby selling at a high price to those who have a high value for the product, and a low price to those who value it less.” For more traditional scholars of information studies, the framework for understanding the distribution of information was one based on need or relevance and they were uncomfortable with segmentations based on the ability to pay. But such approaches accompanied the new economic and political realities in information, and with the rise of Google, in knowledge organization. While traditional forms of IS were grasping towards social contexts based on domains and professions, the realm of commercial information services was obliterating the affirmation of social difference based on cultural identity and developing notions of elite based solely on the ability to pay. For-profit information services cares about the ability to pay, not about social identity, but of course the inability to pay premium prices maps back onto pre-existing social difference, this time in an oppressive way.

Implicit in these examples are illustrations of the definition of “politics” or the “political economy” of information and KO. Following Lasswell, for a baseline definition of “politics of information” we mean the distribution of information goods across different populations. We can distinguish between two kinds of unjust distribution:

- The problem of “unequal information distribution.”
  This occurs when two groups of presumed equal ability receive unequal distribution of information services. Consider the possibility of two different communities that are generally similar in terms of population, demographics, income, educational attainment, etc., but with different levels of information service, such as access to high quality libraries, book stores, schooling, etc. This is the way that school districts or neighborhoods are often popularly compared, one with “good schools” and the other with “bad schools,” where the schooling (teaching, etc.) itself is the presumed independent variable that accounts for different levels of educational attainment, such as high school graduation rates or scoring on high school graduation exams. In other regards, the neighborhoods are presumed to be comparable.
- The problem of “inequitable information distribution.”
  This is the situation, less common in the popular mind, of different groups having different kinds of need, vulnerability or requiring a particular kind of service. This problem is commonly encountered in the arena of special education, where a student receives an individual education plan that tailors instruction and other accommodations to the student’s particular need. For information services that are directed to communities rather than tailored to individuals, community needs may be resources
that reflect localized cultural identities, practices or expertise, or some other variation that results in resources or methods of accessing those resources.

Despite a strong tradition of disciplinary focus in IS, much of the literature is still given over to fairly simple notions of social form and structure. This may be because of a common implicit attitude to a general social unity and civic cohesion present in the United States political discourse. Appeals to such a tradition is easily found in the literature discussing library services, with popular statements such as (Lankes 2011) “the mission of librarians is to improve society through facilitating knowledge creation in their communities,” certainly a welcome refocus on the social rather than the technological orientation that has dominated much of the literature for the last twenty-five years. But the concept of community is still relatively underdeveloped, as well as how they relate to epistemic dimensions such as what they know, what information they use, and how they seek it. The predominant mode of interpreting “community” within the LIS context is still around disciplinary knowledge (e.g., academic vs. public, or art history vs. engineering) rather than the categories associated with cultural pluralism or social justice, such as race, ethnicity, gender, sexuality, religion, or class. Such generally undifferentiated accounts of social formation lead to concepts of the “under-served” and “under-representation” that is present in much of information policy and in the delivery of information services, and their tacit appeal to the inequality theory of information distribution. Everyone should get a basic level of information service, so the thinking goes, and the problem in poor neighborhoods and regions is the problem of absent libraries or rudimentary information service.

Thanks to the work of Berman (1971) and Olson (2001), however, there is a nascent KO practice dedicated to social difference. Their work was explicitly motivated by justice, and addressed the nomenclature problem in KO: that different communities of people used different terminology to identify and describe concepts, people, organizations and creative works, and that marginalized groups were excluded. Berman, specifically addressing problems associated with the Library of Congress Subject Headings, identifies the prototypical user of controlled vocabularies, stating (ix):

headings that deal with people and cultures—in short, with humanity—the LC list can only ‘satisfy’ parochial, jingoistic Europeans and North Americans, white-hued, at least nominally Christian (and preferably Protestant) in faith, comfortably situated in the middle and higher-income brackets, largely domiciled in suburbia, fundamentally loyal to the Established Order, and heavily imbued with the transcendent, incomparable glory of Western civilization.

Olson focuses on the difficulties faced by the marginalized communities (639):

A large body of research and recorded experience has documented biases of gender, sexuality, race, age, ability, ethnicity, language, and religion as limits to the expression of diversity in naming information for retrieval. These limits, of course, have direct, practical consequences for users of libraries…. Library users seeking material on topics outside of a traditional mainstream will meet with frustration in finding nothing, or they will find something but miss important relevant materials. Effective searching for marginalized topics will require greater ingenuity and serendipity than searching for mainstream topics.

Olson’s essay is also notable for “trac[ing] the presumption of universality from its formal adoption into library practice in the nineteenth century to its manifestation in today’s libraries by examining” (640) subject headings and classifications, and the “singular public” (642) that defines the selection, naming and arrangement of concepts in those systems. Olson’s work supports a theory on the inequitable distribution of information by claiming the presence of social groups that use naming practices that are incompatible with majoritarian (white, etc.) culture. Berman and Olson both pit universalism against a pluralism where an alien other is marked both by cultural difference and also by linguistic difference. Unposed questions here are to what degree does cultural variation correspond with variations in language or in knowledge and ways of knowing and thinking? To what degree do we accommodate or exclude difference? Can KO be a mechanism for communicating across social formations of knowledge and language use? Perhaps our KO, once viewed in the light of mediating access across forms of knowledge, can shed its biases and be more ameliorative by giving voice to the alien other?

Lasswell describes the problem of politics as the problem of distribution, but the social differences identified by Berman and Olson are not merely problems of language and the distribution of information, but are actually also problems of justice. Young (2011, 3) states in her foundational text that “instead of focusing on distribution, a conception of justice should begin with the concepts of domination and oppression … where social group differences exist and some groups are privileged while others are oppressed, social justice requires explicitly acknowledging and attending to those group differences in order to undermine oppression.” An examination of the politics of KO need reference not only social difference, but the fact that many of the social formations of interest are the result of historic and present day oppression, and are fundamentally unjust. Developing an understanding of these formations requires relatively
more sophistication in our use of social theory and history, which is provided by Honma (2005) and Noble (2018), both of which reference race as a key difference.

For Honma, not only is race a generally unaccounted problem in the theory and practice of librarianship, but it also provides the basis for advancing a framework for reconceptualizing an information practice that accounts for epistemic difference and injustice. Building on the work of Sandra Harding, Honma states (16) that “all Western sciences and Western knowledge systems need to be considered as local knowledges so that the work of nonwestern and nonwhite scholars are not simply viewed as peripheral fields of thought ... If we view the current state of LIS as a local knowledge system, particularly as one that has been dictated through the voice of whiteness, we must do better in finding nonwhite local systems of knowledge that more adequately encompass the populations that have been silenced, marginalized, and overlooked.” The politics of information advanced by Honma models sociality as an open field of relational difference to include erased groups, with no center, the position generally occupied by western science and knowledge. Noble provides direct evidence of the mechanism of injustice present in Google as a KO system, by erasing local knowledge and substituting racialized and oppressive knowledge structures in their place. KO, as she describes it, is less a mechanism for locating relevant information, but is essential to realize the full benefit of our collections to transform lives and society by building a more just professional practice. An ameliorative and inclusive KO will not only result in more effective retrieval of relevant information, but is essential to realize the full benefit of our collections to transform lives and society by interacting with the full range of recorded knowledge and cultural expression.

In this short essay we have attempted to describe three ways KO might be considered political: in the asymmetrical definition and distribution of KO services across social groups, their interaction and reproduction of social bias and oppression, and briefly two examples of how KO systems can be read as a source of evidence regarding the deployment of socially and politically oppressive concepts. We have, given our space limitations, not tried to be comprehensive, but only indicate one, short, path through texts we have found formative in our thinking about politics and KO. Honma was modest in 2005 when he claimed (20) that for IS the “path to [justice] has yet to be charted, but opening up a space for us to critically dialogue about various interlocking systems of oppression and their intersections with the field of LIS is the first step.” Identifying unjust and politically oppressive practice in KO must be part of that path. Understanding the political construction of KO is essential for the theory of information service in order to build a more just professional practice. An ameliorative and inclusive KO will not only result in more effective retrieval of relevant information, but is essential to realize the full benefit of our collections to transform lives and society by interacting with the full range of recorded knowledge and cultural expression.

References


Philosophical Foundations for the Organization of Religious Knowledge: Irreconcilable Diversity or a Unity of Purpose?†

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Abstract: We examine the way in which religion is managed in the major library classification schemes and in archival practice and how and why bias and misrepresentation occur. Broad definitions of what is meant by diversity and religious pluralism and why it is a cause for concern precede a discussion of the standard model of interreligious attitudes (exclusivism/inclusivism/pluralism) with particular reference to the philosophy of John Hick. This model is used as a lens through which to evaluate knowledge organization systems (KOSs) for evidence of comparable theoretical positions and to suggest a possible typology of religious KOSs. Archival and library practice are considered, and, despite their very different approaches, found to have some similarities in the way in which traditional societal structures have affected bias and misrepresentation of religious beliefs. There is, nevertheless, evidence of a general move towards a more pluralistic attitude to different faiths.

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In these our days it is almost impossible to speak of religion at all, without giving offence, either on the right or on the left.

Max Muller Introduction to the science of religion (1873)
1.0 Introduction

Much has been written in recent times about the phenomenon of diversity, and the way in which diverse communities are affected (or more often disaffected) by the composition and vocabulary of established knowledge organization systems (Olson 1998; Szostak 2014; Mai 2010, 2013a, 2013b, 2016). Some of the earliest of these studies were concerned with the misrepresentation, or lack of representation, of women (Foskett 1971; Marshall 1977; Olson and Ward 1997; Olson 2007), and they were followed by analyses of ethnic and racial groups (Duarte and Belarde-Lewis 2015; Adler and Harper 2018), sexual identity and orientation (Drabinski 2013; Fox 2016; Howard and Knowlton 2018), and more recently the description of refugees and migrants in the Library of Congress Subject Headings (Lacey 2018).

Rather less has been said about biases and prejudices in the field of religion, despite its more substantial presence in most KOSs, and the equal capacity of its vocabulary to disregard, misrepresent, or offend a variety of persons. It is also a powerful characteristic for some ethnic minorities is their religion” (Office for National Statistics (United Kingdom) 2019).

There are various understandings of the concept of religious pluralism, is not the same thing as diversity” (Marty 2005, 70) states:

There are numerous examples of religious faiths coexisting in different societies over the centuries. Today, however, religious diversity is more usually regarded as a source of potential social and political conflict and a problem that needs to be addressed urgently. Cragg states (1986, 5):

There is nothing new about such coexistence. Faiths have been interpenetrating and interacting through all their histories, often with a strange non-cognizance of their mutual debts. What is new in the present is the degree of their involvement with each other. Global exchanges, mobility, migration, international politics, technology, and problems of world ecology and world economy, demand that they converse, and that they repudiate assumptions of self-sufficiency. To be duly contemporary is to be mutually related.

3.0 Pluralism as a strategy

There are various understandings of the concept of religious pluralism, or more narrowly, different views of the level at which it operates. Some form of pluralism is often regarded as a political necessity, a kind of civic pluralism, or polity of religious tolerance designed to address the consequences of diversity by avoiding or resolving conflict, rather than to formulate a theoretical or theological position. Marty (2005, 70) states:

The religiously informed civic pluralism that is my subject differs from either theological pluralism, or turning pluralism itself into a theological theme. I have located pluralism in the sphere of politics, not metaphysics ... The civic pluralism that concerns me relates more to practical adjustments in ways of life, and then in theology.

Eck (2002, 12) also takes a social view of pluralism as “not an ideology, but rather the dynamic process through which we engage with one another in and through our very deepest differences.” This proactive view is also shared by non-Christian believers: “Pluralism is not just tolerance, but actively seeking to understand differences between religions and finding the core values” (Ahmed 2017, 1). Caswell (2013) (in citing Eck) uses pluralism in a somewhat similar pragmatic way, as a practical strategy to manage diversity, to acknowledge difference and foster understanding.
4.0 Models of interfaith attitudes

A distinction may be drawn between a theology of religious diversity, in which believers consider religions other than their own, and a philosophy of religious diversity which offers a more general, non-embedded understanding (Tuggy n.d., Section 1.a). The first meaning is more often referred to as a “theology of religions,” which itself arose as a Christian response to the phenomenon of increasing religious pluralism in society in the 1960s and 1970s. A number of studies from the period address the question of how Christians should regard other faiths in that context; initially this was as a means to “the theological interpretation and evaluation of the claims made by believers in religious traditions other than Christianity” (Veitch cited in Race 1983, 5). Race (1983, 5), in a seminal work which is normally considered as the first formal statement of a typology of religions, takes a broader and more theoretical view:

In my own definition I have purposely built in more flexibility than Veitch, by focusing on the relationship between faiths ... rather than the straightforward evaluation of one set of claims, by another, Christian set of claims.

Within Race’s model, inter-faith relationships can be broadly categorised as exclusivism, inclusivism, or religious pluralism, and he develops the argument with respect to Christian theologians and philosophers. A graphical representation of this analysis underlies Figure 1. Although this is not the only model within the field of religious studies, it has been well established since the 1980s and is generally regarded as the “standard” typology (Huang 1995, 127). Although the original analysis is based on Christian writings, the categories themselves can equally be applied to other belief systems, and there is evidence of similar studies in non-Christian faiths.

Based on the idea that alternative examples of religious faiths are necessarily conflicted, the exclusivist view holds that only one faith can be “right” (Alston 1988; Gellman 2000, Kwesi 1991, Newbiggin 1969); believers in the non-favoured religions are necessarily mistaken. At this conceptual level, exclusivist views may be held by those who are otherwise in favour of freedom of religion and social tolerance. Belz states (2003, 5):

The pluralism which I call a false god is pluralism which suggests that all religions are equally true or valid. When pluralism moves beyond everybody’s right to believe and even to propagate that belief peacefully, and then argues that none of these beliefs is more true than any other of those beliefs - then something that started off as very good, has become a false god.

In some models, a distinction is made between exclusivism and particularism, the latter defined as “a belief in the exclusive authenticity of one’s own religious tradition” (Jelen 1998, paragraph 1). Particularism may extend beyond a belief in the invalidity of religions other than one’s own, to an identifiable hostility towards them.

An inclusivist position is an intermediate one, generally accepting that there are true and valid elements to many religions while maintaining the superiority of a single faith. This is the stated position of the Roman Catholic Church (Paul VI 1965, Section 2):

The Catholic Church rejects nothing that is true and holy in these [other] religions. She regards with sincere reverence those ways of conduct and of life, those precepts and teachings which, though differing in many aspects from the ones she holds and sets forth, nonetheless often reflect a ray of that Truth which enlightens all men.

There are various specific interpretations of inclusivism, such as the idea of “anonymous Christians” (Rahner 1969), who are partially validated by their non-Christian beliefs but also benefit unknowingly from the saving actions of Christ. McKim (2012, 161-2) introduces the narrower idea of reclusivism, which aims to “withhold judgement on whether there are routes to salvation other than ours.”

Religious pluralism proper maintains that religions have more in common than divides them and are predominantly different manifestations, or experiences, of a single truth. In particular, the analytical school of philosophers (Hick and Knitter 1987; Hick 1973, 1995, 2000, 2004) has regarded the different faiths as such representations of a universal truth. Hick is undoubtedly the primary exponent of pluralist thinking and has been described “as one of the most—if not simply the most—significant philosopher of religion in the twentieth century” (Smid 1998, final paragraph). His potential importance for the current paper is indicated by the view that “[h]is contributions ... have been so substantial that they easily spill immense implications over into related fields” (Smid 1998, final paragraph).

Hick’s core proposition is that it is not possible for humans to experience the divine, or transcendent reality (what he calls “the Real”), directly, but that their religious experience is always mediated through the culture in which they find themselves. In this view, any religious faith is as valid as all others, and it is impossible to suggest that one or another is true or untrue. This idea of experiential mediation is very well worked out in a number of his writings and it draws on established philosophic tradition, notably Aquinas (1265-1274) (Summa theologica II/II, Q1 art 2) “Things known are in the knower according to the mode of the knower” — and Kant’s distinction between the noumenon and the pheno-
nommenon. The distinction between the thing itself (the noumenon, which cannot be experienced) and “its phenomenal appearance(s) to consciousness, the latter depending on the cognitive equipment and the conceptual resources of the observer” (Hick 2000, 78) is often referred to as Hick’s neo-Kantian hypothesis. Hick refers to Kant’s distinction between the noumenal and the phenomenal as a “Copernican” revolution in understanding of the “mind’s contribution to perception” (Hick 2004, xix); the label of the Copernican revolution is also often applied to his own pluralistic theology in the sense of moving from a Christocentric view to a theocentric one. He also connects with Wittgenstein’s concept of “seeing-as” in the case of ambiguous images such as Joseph Jastrow’s “duck-rabbit” or the “goblet-lady” (Wittgenstein 1963, II xi) in his own notion of “experiencing-as.”

Hick has been controversial and has many critics, not all of them on the basis of straightforward theological disagreement as might be expected from the exclusivists and inclusivists. There are also objections on philosophical grounds, some of whom maintain that any understanding of religion in the cultural-linguistic model is proof that religions are irreconcilably different and have nothing in common. Lindbeck states (1984, 40):

Adherents of different religions do not diversely thematize the same experience; rather they have different experiences. Buddhist compassion, Christian love and ... French Revolutionary fraternite are not diverse modifications of a single human awareness, emotion, attitude, or sentiment, but are radically (i.e., from the root) distinct ways of experiencing and being oriented toward self, neighbor, and cosmos.

Other objectors to a more pluralistic theology of religions fear that “the real diversity among religions becomes submerged in a placid sea of sameness” or that “some ... theologians have swung towards a facile universalism” (Knitter 1995, 31). Forrester (1975) considers that Hick may have “capitulated to a relativism which is unlikely to be acceptable to committed believers except Vedantic Hindus,” (69) that is, both Christians and non-Christians alike. In a similar vein, Mavrodes (1995, 262) concludes that Hick’s position is essentially one of polytheism, calling him “probably the most important philosophical defender of polytheism in the history of Western philosophy.”

A more worrying phenomenon is that a generally pluralist society, with high levels of acceptance of diversity, may apparently obviate the need for dialogue, or that dialogue “between those who assume in a rather woolly fashion that in all fundamentals they are in agreement ... is unlikely to be other than tedious and unproductive” (Forrester 1975, 71).

Nevertheless, these objections do not invalidate pluralism as a position along the spectrum of interreligious attitudes, whether or not one agrees with its premises. Hick’s idea also has consequences for the knowledge organization of religion, since it effectively requires that, in addition to providing for different faiths equally, we should also represent the religious experience with respect to its cultural-linguistic context, that is using the cultural mores and the language of the faith concerned.

### 4.1 The standard model beyond Christianity

While the preceding discussion has concentrated on the Christian origins of the standard model, it should not be assumed that interreligious attitudes are of exclusively Christian concern. Knitter (2005) provides a useful overview of pluralism considered from a number of different faith perspectives, partly in an attempt to counter the argument that the pluralist model is a western imposition, but also to demonstrate that interreligious attitudes vary considerably within individual faiths. For example, while Hinduism is generally regarded as naturally sympathetic to pluralism, there are nevertheless schools of thought that show an exclusivist stance, notably the “Indoecentrism that is at the heart of ‘orthodox’ Hinduism” (Sharma 2005, 58; quoting Halbfass 1981, 186-87). Sharma (2005) tells us that for some Hindus “the mlecchas [non-Hindus] are nothing but a faint and distant phenomenon at the horizon of the indigenous tradition.” That said, there is evidence of inclusivism even in “allegedly conservative texts” (59).

Religions that do not seek or even allow converts, such as classical Hinduism, Buddhism and Judaism, may, perhaps surprisingly, be considered as pluralist when they do not consider salvation to be restricted to their own faith (Gross 2005, 77). An interesting parallel to Karl Rahner’s 1969 concept of “anonymous Christians” is to be found in Judaism, where “in ... rabbinic sources is the beginning of a form of inclusivism in which foreign people - despite their seeming polytheism - were seen as ‘anonymous monotheists’” (Cohn-Sherbok 2005, 121). Islam is perhaps the faith least inclined to validate other systems, but even here there is widespread evidence of inclusivist and pluralist thinking (Aydin 2001; Asani 2002; Johanson 2016).

All the world religions exhibit some degree of inclusivism in terms of tolerance of other faiths and the acknowledgement of value in them. It seems reasonable to conclude, then, that the three categories of exclusivism, inclusivism, and pluralism apply equally well to the interreligious attitudes of belief systems in general, and that they constitute a transferable typology for the whole of the religious domain.
5.0 Religion in the major knowledge organization systems

5.1 Classification of religions

There are various models for the understanding of religions and religious study that potentially inform classification and knowledge organization in the discipline. The classification of religions per se has been a scholarly enterprise from the nineteenth century onwards with the seminal work of Muller (1873) on the comparative method. Other nineteenth century studies include Tiele (1897-1899) and Chantepie de la Saussaye (1891). Early twentieth century scholars are Ward (1909), Jastrow (1901) and Pinard de la Boullaye (1922-1925), followed in the mid-twentieth century by Parrish (1941) and Mensching (1959). Muller in particular speaks of the “science of religion,” a very early indication of a more neutral and less confessional approach to the study of human belief systems, and rather appositely suggests that “all real science rests on classification” (Muller 1873, 123).

The historian of religion and Islamic studies scholar Charles Joseph Adams (2018) identifies several principles underlying the “many schemes suggested for classifying religious communities and religious phenomena” (paragraph 2): normative (whether a religion is true or false), geographical (a simple classification based on distribution), ethno-graphic-linguistic, philosophical, morphological, and phenomenological. However, it is arrived at, there are some dangers in adopting a classified approach to the sequence of religions in a KOS, as decisions made about relative structures, location, and prominence will be seen as an indication of perceived status. Relatively non-contentious orders, such as those based on chronology or geography, are less likely to offend than classifications based on beliefs or practices.

5.2 Classification of religious studies and religious studies methodology

Elements in other conceptualizations of the religious domain could influence the way in which we create KOSs. Not least is the distinction between traditional “theology” (in which the model of the domain is predominately a Christian one) and the phenomenological approach of the more current discipline of “religious studies” (in which a social scientific observational view is taken of the world’s faiths). A common structure adopted in general works on religious studies is that of methodological or disciplinary positions. A broadly-based study of different epistemologies is provided by Peter Connolly in his Approaches to the Study of Religion (1999) in which seven perspectives are covered: anthropological, feminist, phenomenological, philosophical, psychological, sociological, and theological. Another overview of the structure of religious studies is Ninian Smart’s “seven dimensions of religion” (1996): practical and ritual, experiential and emotional, narrative, doctrinal and philosophical, ethical and legal, social and institutional, and material. These clearly refer to the subject content of the religion domain and what might need to be represented for an individual religion. There is an obvious correspondence here to the structure of a faceted KOS for religion as in BC2 (Figure 3 below).

What may be most useful to us, however, in considering the design of KOSs is the classification of interreligious attitudes and its tripartite division into exclusivism, inclusivism, and pluralism. In addressing diversity, it may be particularly useful to adopt this “standard model” as a lens through which to examine different KOSs.

6.0 Failures in the existing systems

It is clear that current tools for knowledge organization represent some particular world views and disregard others. Duarte and Belarde-Lewis, when discussing classification in respect of indigenous ontologies, argue (Duarte and Belarde-Lewis 2015, 699) that western approaches have favoured literary cultures and omitted other ways of knowing such as orality:

When we understand how colonization works through techniques of reducing, mis-naming, particularizing, marginalizing, and ghettoizing, we can better appreciate practices that more accurately and precisely name, describe, and collocate historically subjugated knowledge. In this article we gave examples revealing why and how tribal peoples need to be able to command the tools and techniques for building relationships with their knowledge artifacts toward decolonization. We described how state institutions need to acknowledge the inherent epistemological distinctiveness and value of local Indigenous epistemologies prior to setting up collaborative projects.

Unsurprisingly, the treatment of religion in library classification schemes has often been the subject of criticism if not mockery. Usually, although not always, Dewey is seen as the offender, possibly because it is the most likely to be familiar.

In addition to the risk of social disorder, failure to properly represent diverse faith perspectives creates the same kind of problems as it does for minority groups of all kinds. Feelings of offence or disadvantage and of being “invisible” are common, and, at an operational level, poor representation in cataloguing and indexing leads to information being effectively hidden so that retrieval is hampered and misinformation and ignorance persist. Broughton (2000, 2) identifies three ways in which religious bias is manifest in classification and indexing tools:
Bias occurs, or is perceived to occur, in three main areas:

- an illogical order, or distribution of notation, that causes one system to appear as dominant
- use of vocabulary that has a strong flavour of one system or is special to that system
- inadequate provision of detail other than for the ‘favoured’ religion

It is acknowledged that in some cases the impression of dominance/marginalization is accidental and not editorially imposed. In other cases, addressing the situation proves difficult because of user resistance and institutional barriers such as the lack of resources to effect change. Additionally, bias is not always a negative feature; where collections are for the use of a particular faith community, bias towards that faith is necessary and a positive characteristic.

7.0 Methodology

Various KOSs and archival standards and models were considered to determine whether a comparable typology of philosophical views can be observed; namely a situation where:

i: a single religion is privileged in terms of the allocation of vocabulary and notation (= exclusivist)
ii: other religions are acknowledged for but there is a clearly dominant faith (= inclusivist)
iii: there is even-handed treatment of all religions, both structurally and linguistically (= pluralist).

Particularism may be considered to be the case where a single religion is the main purpose of the KOS, as, for example, in Elazar’s classification for Judaism (1997) or Pettee’s Roman Catholic classification (1957). This has relevance to traditional western archival approaches as defined by the Dutch Manual (Muller et al. 1898) or Jenkinson’s Manual of Archival Management (1922). The traditional approach to archival management has been to develop understanding through the lens of the creator. Later archival science has sought to consider functions while taking into account the contexts around those functions; these wider contexts have not been formalised in terms of KOSs. The archivist has largely continued to represent an understanding of the structures and working practices of an organization or individual with a consideration of the transactions between key agents. As such, archival and business classification schemes have evolved still based on the archival creator, albeit with
8.0 The place of religion in knowledge organization systems

Religion, or theology, is included at main class level in all the major bibliographic classification schemes. Library KOSs enable a perspective to access these information objects across collections. Within the archival context, there is currently no worldview of the positioning of an archive within classification schemes; rather, traditional classification happens within a given administrative unit termed the “group.” The group is provided with the name of the originating organization’s records or a private individual’s papers. If one searches for religious archives generally in, for example, the UK’s National Register of Archives (https://discovery.nationalarchives.gov.uk/find-an-archive), it returns only one result for La Sainte Union Religious Congregation Provincial Archives, as all listed religious archives must be accessed by the administrative name. Thus, this process in terms of classification is seemingly neutralized but limited. This is not to say that the archivist does not hold power or bias access, as critically the archivist can influence those records/papers deemed worthy of permanent preservation and acquisition within the archives. In addition, the further description applied to the records can build and influence access and interpretation through time. As Schwartz and Cook (2002, 1) discuss:

Certain stories are privileged and others marginalized. And archivists are an integral part of this story-telling. In the design of record-keeping systems, in the appraisal and selection of a tiny fragment of all possible records to enter the archive, in approaches to subsequent and ever-changing description and preservation of the archive, and in its patterns of communication and use, archivists continually reshape, reinterpret, and reinvent the archive. This represents enormous power over memory and identity, over the fundamental ways in which society seeks evidence of what its core values are and have been, where it has come from, and where it is going. Archives, then, are not passive storehouses of old stuff, but active sites where social power is negotiated, contested, confirmed. The power of archives, records, and archivists should no longer remain naturalized or denied, but opened to vital debate and transparent accountability.

They go on to remind us (2002, 1) of Maurice Halbwachs’ assertion that “no memory is possible outside frameworks used by people living in society to determine and retrieve their recollections.” Traditional archival description has not sought to be comprehensive. It has focused on describing existing items, which has, as already identified, privileged western ways of knowing, omitting orality. It is to be noted that, in addition, these omissions are not transparent. Not overlaying a KOS can result in a lack of oversight in terms of underrepresented religions within archives, i.e., the absence of record or areas of total silence and space.
Religion ... has a psychological background, an ethnical perspective, and an ethical foreground. As belief and service, as theoretic and ethic, it is at once personal and social, but the social predominates; and therefore the science of religion belongs to the anthropological and more especially to the social sciences.

However, Bliss had no religious beliefs and “considered religion to be a delusion” (Goforth 1980, 34), and this lack of a personal experience of religion may have coloured his thinking.

Other schemes treat religion (or more properly theology) as disciplinarily distinct in terms of the main class structure, although this might not have been very thoroughly worked out from a theoretical perspective. In revision for the second edition of Bliss, we considered the need to create a class to accommodate the fundamental discipline of religion; where would be located books “of” religion (confessional view) as opposed to books “about” religion (phenomenological view)? In practice, no such distinction is made by the major schemes, and religion classes contain the whole spectrum of theological writing, primary sacred texts, liturgical and devotional works, descriptions of and guidelines for religious practice, historical and social studies of religion, written from the perspective of believers and non-believers, and factual, analytical, critical (and non-critical) in approach.

8.1 Library of Congress Classification

Library of Congress Classification (LCC) is initially rather difficult to analyse. It has detailed provision for the major faiths but has a strong notational bias towards Christianity. There is relatively little structure in the scheme, with a dependency on alphabetical arrangement to accommodate nearly all of the religion specific vocabulary. Some language-specific vocabulary is used, principally for named texts and named movements, which do not usually have English language equivalents. For example:

- BP Islam
- BP186.2 New Year’s Day (The first of Muharram)
- BP186.3 ‘Ashura (The tenth of Muharram)
- BP186.34 Mawlid al-Nabi
- BP186.36 Laylat al-Mi‘ra’aj

It is also hard to establish any editorial principles behind the arrangement, although the Religion Collections Policy (Library of Congress 2008) gives a good sense of the scope of the collection at Library of Congress, which necessarily drives the content of the Classification. The Classification and Shelflisting Manual (Library of Congress 2013) is not helpful, being primarily concerned with the construction of shelfmarks and with the classification of materials in a variety of different formats and genres. The “Preface to Classes BL-BQ” (Library of Congress 2018) tells us that the original schedule was published in 1927, followed by second and third editions in 1962 and 1984. There have been several recent editions (2008, 2015, 2016, 2017, 2018) that record changes during that period, which suggests that the editors may have been responsive to increasing diversity.

8.2 Dewey Decimal Classification

Of all the general schemes, that which has been most subject to criticism is Dewey, doubtless in part because it is geographically so widely used, and hence more likely to be applied in a culture not predominantly Christian. The main criticism of DDC (and unfortunately one which it is extremely awkward to address) is the notational allocation, as Zins and Santos (2011, 881) explain:

The way DDC covers the monotheist religions is even more problematic. DDC dedicates eight subclasses to the three religions: Bible (220); Christianity and Christian theology (230); Christian practice and observance (240); Christian pastoral practice and religious orders (250); Christian organization, social work, and worship (260); history of Christianity (270); Christian denominations (280); and other religions (290). Six classes are exclusively dedicated to Christianity, and one is dedicated to the Bible, which is common to both Judaism and Christianity (i.e., Bible [220]). Only one class, other religions (290), represents Judaism and Islam in addition to all the other religions. ... DDC relates to all the religions, except Christianity, in the vague category named “other religions” (290).
8.3 Universal Decimal Classification

Of the other schemes the one with a leaning towards universalism is Otlet and La Fontaine’s Universal Decimal Classification, intended for the organization and management of a global bibliography. Nevertheless, editions before 2000 display a western and Christian bias in the allocation of notation and the choice of vocabulary. Although there is some non-Christian vocabulary in Class 2 Religion, this is only in the section 290, and notionally 90% of the class is given over to a detailed treatment of the Bible and Christianity (UDC 1993). Provision for the major world faiths is very limited with only eleven classmarks for “religion of the Hindus,” five for Buddhism, and three for Islam; Taoism, Shinto, and Sikhism each have only a single classmark, although Judaism is more generously provided for.

It might be expected that the major classification schemes show some bias towards a Christian position given that all originate in a western context. The only non-western scheme, Ranganathan’s Colon Classification, although it has been hugely influential on the development of classification theory and the design of modern KOSs, is practically unknown in application outside India. It too, however, has been subject to criticism (Sharma 1978, 300), of “its treatment of Indian philosophy and Indian religion [which] indicates that this part of the scheme is not systematic or practical; the schedules for these subjects need restructuring.” A significant element is the “wrong representation” (through order and notation) of Hinduism (298), the “wrong representation” of Indian religions, and the relationships between Hinduism, Buddhism, Jainism, and Sikhism (299), and the “absence of provision for reformatory Hinduism” (299).

8.4 International Standard Archival Description—
General (ISAD(G)) and business classification schemes

Within the context of archives, the traditional process for arranging and cataloguing is based around the processes for the creating entity, whether that be an individual or organization. The International Standard of Archival Description (ISAD(G)) sets out the framework of description. First published by the International Council on Archives in 1994, it was revised in 2000. It defines the concept of hierarchical structure moving from fonds/group (the creating entity), through sub-groups, series, item, and piece. Within the standard are twenty-six elements of description, six of which are mandatory: reference code, title, name of creator, dates of creation, extent of the unit of description, and level of description. The product of these endeavours tends to result in a catalogue that defines creators and record types and thus relies on knowledge of record formats to enable access to any required set of information. ISAD(G) is applied in conjunction with ISAAR (CPF), which sets out to produce corporate bodies, persons, and families authority files, which provide for access through creator searches (ICA 2004, 38). The diagram below depicts the relationships between the descriptive elements and authority records based on an example of Methodist Church and missionary records in Canada (ICA 2004, 38) and evidences the catalogue data which in turn demonstrates relationships, networks, and the positionality of a religion.

In addition, ISAD(G) links to the International Standard for Describing Institutions with Archival Holdings (ISDIAH) (ICA 2008) and the International Standard for Describing Functions (ISDF). ISDF defines twenty-three elements in four areas of a function record (identity, context, relationships, and control) (ICA 2007).

It is important to note that often the archivist will link into records management systems that are driven by current operational considerations. Thus, the archivist may inherit a predefined business classification scheme (BCS) for a particular organisation. Archival classification and business archival classification schemes (BACS) (Bedford and Morelli 2006) have aligned with both focusing on the particular record creator. Aligned to this classification have been the approaches taken to appraise or value records in order to determine whether they will be permanently preserved within an archive. Concepts around how to approach the structure, management, and selection through time have evolved from:

- Traditional appraisal with a focus on the particular records (Scott 1997, 103-104).
- Functional appraisal that aligns decisions and understanding on the basis of what should be documented taking into account the functions that drive the organisation (Scott 1997).
- Macro appraisal that takes a top-down approach, which reviews the creators, the functions, and in addition the activities of which they are a part. It takes a step further to look down at what should exist and how it could be used. This approach potentially considers wider societal needs (Cook 2005).
- Flexible retention scheduling/big buckets theory further develops the macro approach to move to an even higher level of an analysis. This, however, remains centred on the organization (NARA 2004).

Shilton and Srinivasan (2007) describe this as having utilized archival arrangement.

Whilst new forms of archival management and control have emerged, such as community archives, these have often deferred to traditional ideas of management. The guidance for managing the community archive and cataloguing aligns
Figure 2. Relationship between ISAD(G) descriptive and ISAAR(CPF) authority records illustrated with an example from the Methodist Church (Canada) Missionary Society.

Reproduced from ISAD(G) (ICA 2000:38).
to the ideas within ISAD(G), i.e., that it is essential to capture the record creator and hierarchy as the primary elements for accessibility. The donor, who presumably would be a part of the community, is only an optional recommended descriptive element despite the idea that the records gathered are representative of community (Community Archives and Heritage Group 2017). Many community archival projects work by bringing together the sources for religion by linking to other collections. For example, Everyday Muslim (https://www.everydaymuslim.org/) states its aim is to collect and document the presence and contribution of Muslim life in Britain through images, interviews, and documents and to provide a comprehensive and unmediated portrayal of Muslim life in Britain by providing links to key sources. Thus, at the heart of these systems remain central archival tenets around capturing provenance rather than a wider sense of place.

8.5 Records continuum model

In the twenty-first century, there has been a move towards wider understandings of recordkeeping. Key to reconsidering archival practice has been the records continuum model. The model has embedded archival practices from the moment of record creation drawing in all stakeholders (Upward 2005). Within the continuum model is a dimension to pluralise, which involves pushing out information (Upward 2000, 122):

- taking information out to points beyond organisational contexts into forms of societal totalities, still more distant from the organisations, community totalities, and whole of person views of the individual, within which the creation and capture processes took place. This is a nebulous region in the broader reaches of spacetime, involving memory as it is formed across societal totalities. It involves the use of information in ways which are less predictable or controllable.

However, it is argued that the model can be read in multiple ways and as such it should be understood that information can flow in multiple directions, sometimes as a result of co-creation. As noted by Caswell (2013), the model has the potential to influence religious organization (276-278). Upward considers the aggregation of groups and societal totality. The model provides for a potential rebalancing of power, which can incorporate new ways of archiving, for example, community archives with citizens engaging, collaborating, and leading in the production of memory. Within this context, it is possible to have multiple co-existing perspectives. New ways for conceptualising the underpinning description associated with the model, however, are still emerging both through the lens of the continuum and concepts around the archival multiverse, which McKemmish et al. (2011, 218) seek to examine:

How do we move from an archival universe dominated by one cultural paradigm to an archival multiverse; from a world constructed in terms of “the one” and “the other” to a world of multiple ways of knowing and practicing, of multiple narratives co-existing in one space? An important related question is How do we accept that there may be incommensurable ontologies and epistemologies between communities that surface in differing cultural expressions and notions of cultural property and find ways to accept and work within that reality.

9.0 Addressing the problem

9.1. Alternative archival approaches

It has been argued that the power to name, as asserted in ISAD(G) and ISAAAR(CPF), reinforces power (Duarte and Belarde-Lewis 2015). Luehrmann, in a counter-archives movement used to manage the Keston Archive, asserts (Luehrmann 2015, 1) that there are other ways to shape understanding:

following the archival principle of provenance, reflecting the bureaucratic agencies that created records, the collection is organized by subject. By preserving the subject categories that interested an original group of users, the archive itself becomes a historical source on the role of Western readers and advocates in shaping our views of religious life in the Soviet Union.

Current archival systems make visible administrative structures where records are in existence rather than considering the absence of record or areas of total silence and space. Furthermore, they have, as noted, favoured certain kinds of recordkeeping. In Canada, Cook asserted the concept of the “total archive” to better reflect the complexion of society (Thompson 1990, 104). Hurley (1995) has considered the need for wider holistic connections with some sense of hierarchical KOSs. This could mean the utilization of KOSs from library and information science which make visible certain worldviews.

To develop archival approaches, the ICA has started work on considering “records in contexts.” The work is intended to provide a conceptual model for archival description termed “records in contexts” (RIC-CM) and a “records in context” ontology (RIC-O) (ICA 2016). The ontology will be developed after the model. It is intended to evolve specifically for application to archives. However, it is sug-
gested that this should take account of the learning from the library and information science, for example, in terms of the potential of faceted classification.

### 9.2 Bibliographic KOSs

The question arises as to whether a more equitable treatment of religions can be devised. The methodology of faceted classification aims to provide a conceptual framework for religion in terms of religious beliefs, practice, worship, institutional structure, and so on, which can be combined with a variety of different belief systems. The major facets of the domain of religion can very easily be mapped onto Smart’s seven “divisions” of religious studies (1996).

The viability of such a structure rests on the (pluralistic) belief that all religions have a common core that can be reasonably identified. In practice, such a conceptual structure has to be expressed through language, and here we do find a major difference between the faiths in line with Hick’s thinking about the mediated experience. It has been argued (Duarte and Belarde-Lewis 2015) that with archives the authority to name reinforces power. Conversely, Olson (2004, 4) shows that representation through names, labelling, and the use of meaningful terminology, may be generally acknowledged as a mechanism for mitigating bias:

Naming is the act of bestowing a name, of labelling, of creating an identity. It is a means of structuring reality. It imposes a pattern on the world that is meaningful to the namer. Each of us names reality according to our own vision of the world.

The question then is whether reasonable parallels can be drawn across the different manifestations of a concept when expressed in a variety of natural languages: is the Hindu word “atma” equivalent to the Christian word “soul” or the Hebrew word “nephesh” (Broughton 2008)? Although Lindbeck (1984) challenges the validity of equating similar concepts across religions because they are theologically or philosophically different, for the purposes of organization and retrieval, acknowledging the near equivalence may be a useful means of identifying related material.

### 9.3 Revision of Bliss Bibliographic Classification and beyond

The conceptual model was first proposed in the revision of Bliss’s Bibliographic Classification (Mills and Broughton 1977), where it was used to provide a consistent approach to the organization of material in different faiths with respect to both the level of detail and the allocation of notation. This was one of the first attempts to apply facet analytical techniques to a humanities discipline and to engage with the problem of the multiple vocabularies generated when the primary facet was varied (Broughton and Slavic 2007; Broughton 2008).

In principle, the faceted classification ought to approximate most closely to the pluralist view, and it has been suggested (Mai 2010, 629) that the work of the Classification Research Group in the 1960s and 1970s regarding specialized libraries is essentially pluralistic in nature. However, while a faceted method may remove inequality in the structure of the classification and the notational allocation, it does not in itself do anything to accommodate the language of individual faiths; so an impression of bias towards a favoured religion may remain simply through the choice of captions or class headings.

The revised class for religion was the first subject volume of the second edition to be published after the introduction and auxiliary schedules in 1977 (Mills and Broughton

<table>
<thead>
<tr>
<th>Ninian Smart: Seven dimensions of religion</th>
<th>BC2: facets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systematic theology</td>
<td></td>
</tr>
<tr>
<td>doctrinal and philosophical</td>
<td>Doctrines, concepts</td>
</tr>
<tr>
<td>narrative</td>
<td>Evidences</td>
</tr>
<tr>
<td>experiential and emotional</td>
<td>Texts and sources</td>
</tr>
<tr>
<td>ethical and legal</td>
<td>Religious experience</td>
</tr>
<tr>
<td>material</td>
<td>Moral theology, ethics</td>
</tr>
<tr>
<td>practical and ritual</td>
<td>Practice of religion</td>
</tr>
<tr>
<td>material</td>
<td>Agents, artefacts</td>
</tr>
<tr>
<td>social and institutional</td>
<td>Religious systems, religions</td>
</tr>
<tr>
<td>practical and ritual</td>
<td>Activities, ritual, worship</td>
</tr>
<tr>
<td>social and institutional</td>
<td>Institutions, administration</td>
</tr>
</tbody>
</table>

*Figure 3. Comparison of Smart’s dimensions and facets in BC2 religion.*
1977b). In this early volume, the preliminary matter is not as well developed as in later classes, and not very much is documented about the thinking behind class P. This is not perhaps unusual for those classes developed in the early days of the revision programme, when the focus was primarily on the use of the faceted methodology for the analysis of the various subject areas, and little attention was paid to any philosophical underpinning or to the vocabulary per se. Consequently, most of the discussion is about the facet structure, citation order, and notation, and references to the reasons for revision are referred back to the introduction volume (Mills and Broughton 1977a) where there is a broader account of the sustainability, currency, and theoretical rigour of the classification.

In the introduction to class P (Mills and Broughton 1977b), a discussion of the relationship with the first edition of Bliss indicates some of the objectives:

Islam has been relocated to PV in order to preserve the chronological sequence which Bliss clearly intended. This has the added advantage of diminishing the bias towards Christianity which is implied by locating it separately and out of order at the end. (Section 13.21, xv)

[As in existing BC the Bible is given a considerable amount of enumerated detail not given for other scriptures. However, the structure of the class is valid for all scriptures and all its divisions except the enumerated books could be added to any other scripture. (Section 13.43, xvi)

In this edition, the fully synthetic retroactive notation allows for the qualification of any religious system or subsystem by the full detail of the remaining facets. [...] This removes further the imbalance between the provision for Christianity compared with that for other systems. (Section 13.61, xvi)

Clearly a primary purpose was to correct the bias shown towards Christianity and to attempt a more "objective" treatment of the faiths overall. The faceted structure was regarded as instrumental in achieving this re-balancing through the creation of a model of the religious domain that could be used in synthesis with any faith system. Hence representation at the conceptual level was, therefore, equalized across religions.

There is a partial expansion of the Christianity section, however, that is not provided under other religions, and the language of the schedule retains a distinct Christian flavour:

<table>
<thead>
<tr>
<th>PDR Y</th>
<th>Buildings, architecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDR D</td>
<td>Church furniture</td>
</tr>
<tr>
<td>PDR DH</td>
<td>Monuments and memorials</td>
</tr>
<tr>
<td>PDR DJ</td>
<td>Church brasses</td>
</tr>
<tr>
<td>PDR DL</td>
<td>Accessories used in worship</td>
</tr>
<tr>
<td>PDR DP</td>
<td>Altars</td>
</tr>
<tr>
<td>PDR DR</td>
<td>Relics</td>
</tr>
</tbody>
</table>

Of course, this is difficult to avoid when Christianity is (usually) the dominant religion in English speaking countries, but it is noticeable that the only religion specific vocabulary for most non-Christian faiths is restricted to the enumeration of sacred books and to the naming of particular movements and divisions. So, under Judaism we find classes for the Talmud, Midrash, Orthodox, and Reform Judaism but no specification of, for instance, synagogue, Hanukah, shema’, menorah, or bar mitzvah. Although classes for all of these can be synthesised (as Judaism-religious building, Judaism-festival, Judaism-prayer, and so on), the Judaic terms do not appear in the vocabulary as such, either in the schedules or in the alphabetical index.

A significant feature is the chronological approach (within a very few broad categories) taken to the primary facet of religions. Although various classifications and typologies of religions might have been adopted, all were liable to provoke a negative response, and the chronological order of foundation (which is for the most part indisputable) seemed most in line with an objective handling.

In 2000, it was decided to build a new classification for religion in the Universal Decimal Classification. An attempt had been made in 1980, but the results were not altogether satisfactory. In the meantime, the decision had been made to introduce a more evident faceted structure to the classification, using, where appropriate, the terminologies of the revised Bliss (McIlwaine and Williamson 1993;1994; McIlwaine 1997). The use of the BC2 work would provide a very rich source of classification data and also shortcut much of the groundwork of vocabulary collection and analysis. Religion would be based on the model of BC2 class P, as part of this general programme of "facetizing." A formal proposal was published in Extensions and Corrections 21 in 1999, and the final version presented both in Extensions and Corrections 22 (2000) and at the 2000 IFLA Conference in Jerusalem (Broughton 2000).

In theory, any selection of classes could have been combined through the use of the colon as a linking agent, and although the schedule could be designed as an inverted one (i.e.,
in which the citation order is reversed in the filing order to maintain a sequence of general before special), the default UDC rules for combining in ascending numerical order would confound the desired citation order and would distribute rather than collocate materials on a given religion. The resulting class numbers would also be very long and cumbersome, and we know that this is one of the major ongoing criticisms of UDC from a user viewpoint. For example:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Class Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prayers for Yom Kippur</td>
<td>296.383.2: 291.31</td>
</tr>
<tr>
<td>Persecution of Buddhist holy men</td>
<td>294.3: 291.75: 291.6</td>
</tr>
<tr>
<td>The Hindu doctrine of reincarnation</td>
<td>294.5: 291.23: 291.2</td>
</tr>
</tbody>
</table>

From a facet analysis perspective, things had moved on since the creation of class P in 1977, and a more sophisticated and flexible approach was taken to faceted schemes (Broughton 2010, 273):

The new Class 2 was modelled directly on the BC2 1977 vocabulary with some modifications and expansions. Twenty years on, it was easier to spot weaknesses and omissions in the BC2 structure, and while maintaining the general principles and the broad facet structure of that class, a more detailed and a more rigorously organized terminology was developed for UDC. Terminology was assigned... attempting as far as possible to maintain a linguistically neutral tone, although that was to some extent difficult, as religious language in English tends to be Christian in nature.

At a more theoretical design level, the rather flat structure of the faceted scheme with its proliferation of “non-classes,” the principles and characteristics of division or node labels that mark the arrays and sub-facets are not easily translated into the more hierarchical structure of UDC with its close notational correspondence to the hierarchy and careful typographical distinctions. Most of these difficulties were resolved by the use of a single “special auxiliary” for religion, the notation of which could be combined with any class in the primary facet through the use of the hyphen.

For example:

<table>
<thead>
<tr>
<th>Class Numbers</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-144.2</td>
<td>Names of god(s)</td>
</tr>
<tr>
<td>2-23</td>
<td>Sacred books. Scriptures. Religious texts</td>
</tr>
<tr>
<td>2-24</td>
<td>Specific texts. Named texts and books</td>
</tr>
<tr>
<td>2-282.5</td>
<td>Prayer books. Books of prayers</td>
</tr>
<tr>
<td>2-442.45</td>
<td>Dietary requirements. Dietary limitations</td>
</tr>
<tr>
<td>2-523.4</td>
<td>Centres of worship (religious significance)</td>
</tr>
</tbody>
</table>

Using this “basic” schedule as a model, classifications for individual faiths could be developed in which faith-specific “terms” could be substituted for the more neutral “concepts” of the basic schedule. While these terms are not absolutely equivalent across religions, they do occupy the same conceptual space in the domain, and it is hard to see what could be achieved by any attempt to differentiate them, nor indeed how this could economically be done. A number of special expansions were developed to demonstrate how this would be effected for individual religions and faiths; in the original revised schedule, examples were provided for Hinduism, Judaism, and Christianity, and later those for Buddhism, Islam, and Orthodox Christianity were created, these being published in Extensions and Corrections to the UDC.
In 2006, the *Dewey* editors proposed a faceted type revision of that class in the *UDC Harmonization Project: Religion* (Dewey blog 2006). Here, the faceted baton was passed from UDC to *DDC* in a discussion of the “feasibility of using the Universal Decimal Classification’s revised religion scheme as the framework for an alternative view of 200 Religion in the Dewey Decimal Classification, and as a potential model for future revision” (McIlwaine and Mitchell 2006, 9).

The *Dewey* editors were well aware of the shortcomings of *DDC* in a multi-faith world, and in recent years had adopted an incremental approach to reducing the notational imbalance between Christianity and the other world faiths, although the provisions can appear complex (McIlwaine and Mitchell 2006, 9):

In the past two editions, the *Dewey* editors have reduced the Christian bias in the 200 Religion schedule and provided deeper representations of the world’s religions. In *DDC* 21 (Dewey, 1996), the editors moved comprehensive works on Christianity from 200 to 230, relocated the standard subdivisions for Christianity from 201–209 to specific numbers in 230–270, and integrated the standard subdivisions of comparative religion with those for religion in general in 200.1–9. They also revised and expanded the schedules for 296 Judaism and 297 Islam.

The moving of comprehensive works on Christianity from 200 to 230 also corrects the impression that general works on theology are necessarily Christian, but nevertheless “the fact remains that Christianity is still prominently featured at the three-digit level” (Dewey blog 2006).

In the *Dewey* blog of May 3, 2012, recent changes to religion were listed, all of which are available in the print publication *200 Religion Class*. According to the blog, these included provisions for the Orthodox Church, initiated updates for Islam, and several changes elsewhere. *200 Religion Class* also contained additional updates for Islam and a number of minor updates not ready for publication in the print *DDC* 23.

The blog also identified “another exciting feature” of *200 Religion Class* in the form of an optional arrangement for the Bible, and specific religions, based on a chronological/regional view. This development of an alternative view of 200
religion to reduce Christian bias in the standard notational sequence arose directly from the collaboration with UDC. A virtual browser for religion based on the new arrangement was made available in mid-2012, although in that version, no greater detail for individual religions is apparent (Dewey Religion Browser, https://www.oclc.org/en/dewey/resources/religion/browser.html).

In 2019, discussions still continued in the DDC Editorial Policy Committee about ongoing changes to the religion class. These are mainly focused on stabilising the “standard” notation so that the options can be applied with greater confidence. An interesting feature of the current document is the attempt to relate the notational footprint to literary warrant based on an analysis of the distribution of different religious documents in WorldCat. This also gives an indication of the million-plus items potentially difficult to classify in some schemes.

In a modification of the methodology, DDC follows the general theoretical approach of BC2 and UDC but does not elaborate the core model in the same way as UDC, instead simply making it available for synthesis with any named religion. This is perhaps the best that can be hoped for in a general scheme with a moderate sized vocabulary, but the testing carried out in the UDC case supports this as a legitimate manner of accommodating complex content. Hence, although the editors have put in place some measures to better represent non-Christian believers, the general impression of “standard” Dewey is still heavily dominated by Christianity, with its 80% allocation of the notation.

On the basis of the features displayed by various schemes and versions of schemes, it was possible to construct a typology based on the standard model of interfaith perspectives shown in Figure 1. The progression from exclusivism to pluralism is determined by the degree to which the KOS

<table>
<thead>
<tr>
<th>Specific religions</th>
<th>Standard notation</th>
<th>Count in WorldCat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prehistoric religions</td>
<td>201.42</td>
<td>113</td>
</tr>
<tr>
<td>Religions of East and Southeast Asian origin</td>
<td>299.5</td>
<td>15,166</td>
</tr>
<tr>
<td>Religions of Chinese origin (5.5%)</td>
<td>299.51</td>
<td>11,217</td>
</tr>
<tr>
<td>Taoism</td>
<td>299.514</td>
<td>5,592</td>
</tr>
<tr>
<td>Confucianism</td>
<td>299.512</td>
<td>3,009</td>
</tr>
<tr>
<td>Religions of Tibetan origin</td>
<td>299.54</td>
<td>422</td>
</tr>
<tr>
<td>Religions of Japanese and Ryukyu origin</td>
<td>299.56</td>
<td>1,774</td>
</tr>
<tr>
<td>Shinto</td>
<td>299.561</td>
<td>997</td>
</tr>
<tr>
<td>Religions of Korean origin</td>
<td>299.57</td>
<td>726</td>
</tr>
<tr>
<td>Religions of Burmese origin</td>
<td>299.58</td>
<td>6</td>
</tr>
<tr>
<td>Religions of miscellaneous southeast Asian origin</td>
<td>299.59</td>
<td>307</td>
</tr>
<tr>
<td>Religions of Indic origin</td>
<td>294</td>
<td>160,288</td>
</tr>
<tr>
<td>Hinduism (15.1%)</td>
<td>294.5</td>
<td>59,127</td>
</tr>
<tr>
<td>Jainism</td>
<td>294.4</td>
<td>2,982</td>
</tr>
<tr>
<td>Buddhism (6.9%)</td>
<td>294.3</td>
<td>85,888</td>
</tr>
<tr>
<td>Sikhism</td>
<td>294.6</td>
<td>5,800</td>
</tr>
<tr>
<td>Bible</td>
<td>220</td>
<td>440,770</td>
</tr>
<tr>
<td>Judaism</td>
<td>296</td>
<td>95,004</td>
</tr>
<tr>
<td>Christianity (31.2%)</td>
<td>230–280</td>
<td>2,013,663</td>
</tr>
<tr>
<td>Islam (24.1%)</td>
<td>297</td>
<td>155,559</td>
</tr>
<tr>
<td>Babism and Baha’i Faith</td>
<td>297.9</td>
<td>2,533</td>
</tr>
<tr>
<td>Modern spiritual movements</td>
<td>299.93</td>
<td>17,147</td>
</tr>
<tr>
<td>Subud</td>
<td>299.933</td>
<td>91</td>
</tr>
<tr>
<td>Theosophy</td>
<td>299.934</td>
<td>2,406</td>
</tr>
<tr>
<td>Anthroposophy</td>
<td>299.935</td>
<td>2,742</td>
</tr>
<tr>
<td>Scientology</td>
<td>299.936</td>
<td>1,453</td>
</tr>
<tr>
<td>Modern paganism, neopaganism, wicca</td>
<td>299.94</td>
<td>896</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>3,142,038</strong></td>
</tr>
</tbody>
</table>

*Figure 4. Number of items on world religions in WorldCat.*
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Some representation of world religions</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Equal representation of world religions</td>
<td>●</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Notational equivalence</td>
<td>●</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Capacity to combine terms/notations for additional detail</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Faith related language used for texts and movements</td>
<td>●</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Faith related language used for other concepts</td>
<td>●</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

*Figure 5. Summary of features in general schemes of classification.*

*Figure 6. Standard model applied to knowledge organization systems.*
acknowledges and represents the spectrum of world faiths and the way in which this is done, either notionally or through the use of religion-specific language. Only the 2000 version of UDC meets (in part) the criteria of pluralism, but the other general classifications show a trend towards a more inclusive position with elements of pluralism clearly intended. Aspects such as notational parity, a systematic and logical structure, and the inclusion of cultural terminology help to support the appearance of greater diversity and to move a KOS from a situation of perceived Christian dominance to that of a neutral stance.

10.0 Conclusion

Some interesting parallels emerge between classification and archival description. In both spheres, there is evidence of the influence of inherited institutional structures over practice. In the case of archives, these are largely administrative and in religious KOSs cultural, but there is indication of a similar western societal approach to information organization. Although practice is very different, both identify the process of naming as a source of power and as a means of diffusing bias, and in both spheres, there is a clear intention towards pluralism as a route to greater equality.

The use of an exclusivist/inclusivist/pluralist model to represent the variation in KOS exposes some of the strengths and weaknesses of different schemes, and it is not difficult to line up KOSs with their apparent attitudes to religious faiths as these are represented through language and notation. These characteristics are not necessarily related to the conceptual structure of schemes. Although a faceted scheme offers greater potential for a properly pluralist approach to religious knowledge organization, it does not of itself address the matter of access through a “religion specific” vocabulary. The concept of archival description, which draws out the context around creation, has a value and place within this KOS. So, too, do ideas on the archival multiverse. In the context of KOSs more generally, one advantage of faceted systems would be the relatively easy conversion to a thesaurus format, which could provide a richer source of subject metadata for archival description and influence work on archive specific KOSs. Overall, it is encouraging to see a gradual move towards a more inclusivist approach in most KOSs and an obvious intention to embrace diversity, even where financial and institutional factors make this harder to achieve.

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Centring LGBT2QIA+ Subjects in Knowledge Organization Systems

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Avi Grundner is a recent graduate of the University of British Columbia’s dual MAS/LIS program’s First Nations Curriculum Concentration, where they focused on the intersections of metadata, special collections, and services for marginalized communities. From 2018-2020, Avi was Co-Coordinator for Out on the Shelves Library, and Technical Services Student Librarian for Xwi7xwa Library.


Abstract: This paper contains a report of two interdependent knowledge organization (KO) projects for an LGBT2QIA+ library. The authors, in the context of volunteer library work for an independent library, redesigned the classification system and subject cataloguing guidelines to centre LGBT2QIA+ subjects. We discuss the priorities of creating and maintaining knowledge organization systems for a historically marginalized community and address the challenge that queer subjectivity poses to the goals of KO. The classification system features a focus on identity and physically reorganizes the library space in a way that accounts for the multiple and overlapping labels that constitute the currently articulated boundaries of this community. The subject heading system focuses on making visible topics and elements of identity made invisible by universal systems and by the newly implemented classification system. We discuss how this project may inform KO for other marginalized subjects, particularly through process and documentation that prioritizes transparency and the acceptance of an unfinished endpoint for queer KO.

1.0 Introduction

LGBT2QIA+ (lesbian, gay, bisexual, transgender, 2-spirited, queer, intersex, asexual, and nonbinary) subjects are ill-served by the universal systems of classification and subject access that currently dominate libraries and cultural heritage institutions. Here we employ the notion of “subjects” with deliberate ambiguity. Knowledge organization systems (KOSs), including classification systems and subject cataloguing, have historically placed and defined topics such as
homosexuality and gender non-conformity as types of mental illness and social deviance (for an extended discussion, see Adler 2017). These subjects-as-aboutness emerge from the literature as library collections reflect the historical medicalization and pathologization of sexualities and gender identities outside a cisnormative and heteronormative patriarchal framework. In turn, KOSs and their libraries fail LGBT2QIA+ communities as they instantiate and reaffirm the discrimination patrons experience in other aspects of their lives—addressing one’s information needs regarding sexuality and gender identity may mean finding oneself in between autoerotic asphyxia and child molesting (Library of Congress Classification [LCC] RC560.B56). We subjects-as-members have not had an authoritative position in the creation of the knowledge organization (KO) schemas that determine how we and our cisgender and heterosexual peers find information in the library. Indeed, even as library workers, LGBT2QIA+ individuals encounter systems that resist accountability to their lived experiences (see Nectoux 2011).

The marginalization of LGBT2QIA+ subjects occurs within the larger scope of KOSs’ privileging of the majority or normative viewpoint. Berman (1979) and Olson and Schlegl (2002) document how current, dominant systems disenfranchise marginalized populations not only by virtue of discriminatory, out-of-date, and pathologizing terminology, but also through the fixed structures and modes of authority and meaning they enact. We draw attention to the names and locations of subjects, because “the categories that designate what library books are about actively produce, reproduce, and privilege certain subjects and disciplinary norms” (Adler 2017, 2). Furthermore, we consider the structures within which subjects are named and controlled as these instantiate particular theories of knowledge and being (Olson 2004) incompatible with certain subjects and lived experiences.

In considering how KO structures might better serve LGBT2QIA+ subjects, we as designers of these systems struggle with whether existing tools are compatible with lived experience of sexuality and gender. In this contested space, we explore the question: “To what degree do KOSs facilitate and restrict queer forms of culturally-based meaning and interest?” More specifically, we examine tools and functionalities among KOSs that may facilitate queer identity and meaning. Here we report on the challenges to representing queer subjects in KOSs and document two approaches within a single library to remedy historical discrimination, bias, and distortion of queer subjects. Our setting is an exemplar for such a question: rather than finding space within or subverting a dominant, universal system (as in Olson 1998) we begin in a library made for, run by, and answerable only to the local LGBT2QIA+ community.

2.0 Background

2.1 Related work

In light of foundational gender and queer theory, particularly via Sedgwick (1990), we recognize that affirmative identification and the adoption of labels are necessary tools to claim space and power within a sexist, cisnormative, and heteronormative culture while also necessarily being contradictions to lived experiences within the LGBT2QIA+ community; we need labels and we need to acknowledge that labels are always already distortions. In this framework, individuals within the LGBT2QIA+ umbrella are unified not only by a shared experience of marginalization but also by an orientation against fixity or normality among identities. In this paper, we use the initialism “LGBTQIA+” when referring to the community of individuals identifying with one or more of the collected labels; we use “queer” as an adjective or verb when discussing the discursive practice characteristic of these collected identities to challenge normative structures of identity. The same contrast is summarized in the community’s protest slogan, “Not gay as in happy but queer as in ‘fuck you.’”

Scholars in KO have taken up the examination of this duality of categories and their application to marginalized sexualities and genders. Particularly generative for our framing of interventions into this space, Drabinski (2013) contrasts two tactics in queering the catalogue: first, to correct the terminology and continually align our controlled vocabulary and classification labels with more respectful language and second, more radically, to challenge the notion of fixed categories and objective labels as being at all compatible with queer subjectivity.

The question, “are user-focused standards likely to be objective?” (Olson and Schlegl 2001, 76) as well as Feinberg’s discussion of responsible bias (2007), inspired us to discard the pretence of neutrality in favour of a system based on context, one that is equitable rather than equal. In Drabinski’s terms, this would suggest a notably queer solution “built to highlight and exploit the ruptures in our classification structures” (Drabinski 2013, 96-97). Butler’s discussion of language, that categories and abstractions can, “effect a physical and material violence against the bodies they claim to organize and interpret,” (Butler 1990, 116) inspired deliberation and care in the creation processes. The many critiques of shortcomings within LCC and Library of Congress Subject Headings (LCSH), notably Adler (2017), have detailed practices to avoid in KO for LGBT2QIA+ subjects. Several chapters within Greenblatt’s (2010) Serv ing LGBTQ Library and Archives Users note how recently pejorative terminology was still used and alerted us to the danger of basing our decisions primarily on literary warrant as LCSH does.
2.1 Out on the Shelves

The site of our work was Out on the Shelves (OOTS), a library with a mission to “foster a free, accessible, and safe space for LGBT2QIA+ people and their allies to discover and share stories and resources centering on LGBT2QIA+ experiences” (About: Out on the Shelves). Located on the University of British Columbia (UBC) campus and the traditional, ancestral, and unceded territory of the xwmə̓sqəy̓omə (Musqueam) People, the library is an independently-operated, volunteer-run initiative and is the largest LGBT2QIA+ library in Western Canada.

Out on the Shelves Library has existed in Vancouver in various locations and forms since 1983. Its move to the University of British Columbia was a recent and necessary one, as the library had been forced out of its previous location in 2015 and spent approximately two years scattered in boxes in garages across the city before finding a new home. This move was accomplished with the assistance of The Pride Collective at UBC, a Resource Group for gender and sexual diversity, which enabled the library to partner with the Resource Groups on campus. This partnership takes the form of the library jointly housing various materials from the Resource Groups alongside their own collections in exchange for the physical space itself. During the re-shelving and implementation portion of the classification project, these materials from the Resource Groups (which are not catalogued and non-circulating) were also re-shelved to facilitate a clearer separation between circulating and non-circulating materials. It should be noted that although the library is located on UBC’s campus, and has collaborated with university initiatives and departments, it is not officially affiliated with the university or the university libraries. As we note below in the context of an environmental scan of classification systems for LGBT2QIA+ collections, many such libraries find themselves in similarly tenuous relationships of stewardship, location, and independence among academic institutions and local activist and community groups (e.g., Keim 2008). We especially note the centrality of student labour and student activism to the initial impetus and ongoing support of such institutions. Two of the authors of this paper were graduate student volunteers at OOTS who began working with the library just after its move to the new location. They led the work of the classification and cataloguing projects detailed below in their roles as volunteer staff.

In the following two sections we outline the two key KO projects for OOTS: a classification project to redesign labelling and shelf order and a subject headings project to revise subject cataloguing procedures. These two projects addressed sets of overlapping challenges in representing LGBT2QIA+ collections. In some regards, correcting bias or distortion in one system required compensating actions in the other to avoid creating new silences.

3.0 Classification project

The classification project began by reviewing previously documented queer issues in KO. The research clarified several goals for changes to the classification system: that it be updated to reflect current language, be logically ordered and arranged, function as a living system, and create a historical record of the system’s evolution. It is important to note that much of the existing research on KO for LGBT2QIA+ subjects features critiques of existing systems (Adler 2017), or focuses on subject cataloguing (Drucker 2017) and archival representations (Latimer 2013), and was, therefore, only tangentially related to the actual process of building a new classification system in a queer context.

Major concerns with the previous labelling and shelf order system for OOTS were features that reflected harmful and outdated assumptions. By naming separate classes for “lesbian interest,” “bisexual interest,” and “transgender,” the previous system implied that gay, cisgender, male interest was the default. Furthermore, by not naming or creating space for identities such as two-spirit and asexual, among others, the previous classification system was complicit in the erasure of these identities. Arranged alphabetically by class for simplicity and discoverability, OOTS’s previous classification system also hindered the collocation of similar topics, therefore missing opportunities to create meaningful relationships and serendipity in browsing and discovery. There was no explicit hierarchical structure. Classes like “queer culture” and “coming out” or “international LGBT” and “lesbian interest” could not achieve mutual exclusivity and created ambiguities for cataloguing and retrieval. Furthermore, several other classification codes and spine labels had haphazardly fallen out of use due to inconsistent application. Several of these issues understandably stemmed from the library’s history, built up by community donations over decades and run by volunteers often with no formal background or exposure to KO for libraries. Previously located under a parent organization, OOTS and its volunteer staff lacked the ability to make radical changes to the system before the library gained independent status.

After summarizing the status of the pre-existing system and noting its various shortcomings, we began the research phase of the process. Consisting primarily of readings in the realm of queer theory and KO, this research helped to formulate a proposal for a new classification system that was then put forward for review by the volunteer staff at OOTS. Volunteers were notified of the project via Basecamp, the library’s internal communications system, as well as by email. They were asked to provide feedback on all aspects of the project at this formative stage. Responses were shared in online document commenting, which allowed for conversational engagement over multiple weeks. General feedback was positive as volunteers and community members who re-
responded showed excitement that the project was moving forward. Comments on specific aspects, such as how multiple and complex identities or intersectionalities could be adequately represented and without being reductive or essentialist, were concerns that echoed questions that we had been considering. We took this to be a positive sign as it showed the volunteers cared about the same issues we were hoping to address. Additional feedback included enthusiasm for the creation of wayfinding devices and openly accessible versions of the new classification system that would both aid navigation and help ensure transparency.

After incorporating this feedback from the volunteers, we continued the research process with an eye towards more concrete examples of modified or independently created classification systems in queer contexts. Generally, despite there being interest in, and acknowledgment of, the need for more flexible structures within specialized domains and marginalized communities, the time and funding simply has not existed in most cases to create those concrete structures. As previously mentioned, most existing research is only tangentially related to the actual process of building a new classification system in a queer library. Therefore, we also sought alternative approaches. Within the North American context, there are several other small, independent, public libraries centred on queer content and LGBT2QIA+ communities that we looked to for context and guidance, which we document in Figure 1. The most relevant include Quatrefoil Library in Minneapolis, The Lavender Library, Archives, and Cultural Exchange (LLACE) in Sacramento, and La Bibliothèque à Livres Ouvert in Montréal. Among these three libraries, Quatrefoil used a slightly adjusted LCC and La Bibliothèque à Livres Ouvert used a more substantially modified version of Dewey Decimal Classification (DDC), “Classification décimale Dewey adaptée aux réalités LGBT” or “Dewey decimal classification adapted to LGBT realities.” LLACE used a third, entirely different alphanumeric system. Although it was encouraging to see the various ways these other libraries were able to adapt these systems to their own needs, they were all still too large and complex for OOTS’s needs. As we were hoping to build a local, contextual system, we also reached out to two local, alternative bookstores (Little Sister’s Book and Art Emporium and Spartacus Books) to get a sense of how their shelving systems were constructed and how they evolved over time.

After sketching several preliminary options for the basic structure of the new system, we picked two to explore more thoroughly: a subject-based system and an identity-based system. First, the subject-based system granted the most flexibility and even distribution in terms of what and how materials could be represented. There was nothing, however, in this perspective that explicitly spoke to and valued
LGBT2QIA+ lives and experiences but still plenty that could help perpetuate unwelcome societal norms. Endorsing a perspective that would not privilege the community of the library felt like a failure to engage with the central purpose of this project. The second system was quite the reverse: an identity-based system that took the acronym “LGBT2QIA” as its primary level of division. However, this perspective quickly revealed itself to be equally if not more flawed than the first. Its primary shortcoming was the impossibility of maintaining mutual exclusivity while representing intersectional identities with any degree of accuracy, which, therefore, made this system untenable despite its value in centring queerness.

After considering these contradictions and discarding all other possible options, a compromise was reached by melding the two systems together. “Identity” became a new class within the subject-based system, which had since undergone several revisions. An overview of the entire system is diagrammed in Figure 2. The merger of these two approaches, combined with clear, comprehensive class definitions and cataloguing instructions had the potential to richly represent the range of materials and subjects in the collection without minimizing the visibility and centrality of LGBT2QIA+ content. To address the impossibility of mutual exclusivity among gender and sexual identities, we limited the identity class to items overwhelmingly about a single facet of identity, as we detail in cataloguing instructions for the new system:

Only place items within an “ID” subclass if they are overwhelmingly about ONE of the subcategories ...

For example, if a book on asexual lesbians was also about how people at this intersection of identities navigate the dating scene it would be classed as “LIV-RRS.” Furthermore, although collections of essays about coming out as bisexual would be placed under “ID-B,” an anthology of fictional short stories with bisexual themes or by bisexual authors would simply be labeled “FIC.”

We return to this concept of identity in Section 5.0 below.

With an awareness that we had chosen to privilege a queer perspective at the expense of others, we chose at this point to transform the library’s use of spine labels away from gatekeeping and towards enabling discovery. The two classes of materials that had been identified with spine labels
in the past were the erotica and youth collections, which aside from allowing these items to be recognizable from a distance, the authors found to be a profoundly useless identification as both erotica and youth fiction already had and would maintain in the new system their own classes and, therefore, their own shelf locations. The spine labels did not, therefore, create new or valuable experiences for any library user but had the potential to dissuade circulation of materials with such a prominent marker of stigmatized genres. Far more productive (and disruptive) was to identify a perspective that, by the nature of hierarchical classification systems, had been dispersed throughout the collection. We chose to use spine labels to identify #OwnVoices content, aligning the library’s system with an ongoing movement to recognize works written by unrepresented persons related to their own identities, in contrast to books written on marginalized subjects from outside those experiences (Duyvis, n.d.). In our implementation of this system, we created spine labels to identify works by Indigenous authors and people of colour. This is a subversion within the hierarchical system that greatly increases the visibility of these otherwise dispersed items—an effect that did not exist with the previous application of spine labels.

As previously stated, there were four primary goals for the new system: that it be updated to reflect current language, logically ordered and arranged, function as a living system, and that it creates a historical record of the system’s evolution. The first goal was partially accomplished by adding categories such as “queer” and “intersex,” as well as altering pre-existing categories such as “bisexual” and “transgender” to be more inclusive by naming them, “bi and pansexual” and “trans and genderqueer,” respectively. To improve the logical order and arrangement of the collection, subjects such as “visual art” and “performance art” that had previously been shelved at opposite sides of the library were now collocated under the same broader heading “arts and entertainment.” Another deliberate decision was to place “biographies” in between “identity” and “history” in order to make a clear connection between history as an abstract concept, and the real people (and well-known labels) of today. We felt that biographies, as stories of real people throughout history identifying across the entire spectrum of gender, sexuality, and human experience, were hopeful connections to make, and especially meaningful due to the nature of the queer community where representation has often been hard to find, history lost or destroyed, and generational inheritance of culture has been disrupted.

With regards to the third and fourth goals, we created a document that tracks the creation of the new system and lists clear instructions for how to make and record future modifications. This document is freely accessible to all OOTS volunteers. We hope that by recording updates to the classification system volunteers and community members, now and in the future, will be able to understand how and why the system came to be the way it is. A transparent and historical record is meant to empower future volunteers and community members to continue to make changes that reflect changing needs and perspectives.

We created an implementation process intended to take place over four sessions during the fall of 2018. These re-cataloguing, re-classification, and re-shelving sessions gathered a group of volunteers for at least five hours on weekends to complete a set number of categories each session. This process was successful and was completed on-time with all materials re-catalogued and re-shelved by mid-December 2018. As many library volunteers contributed to this process, they were able to give additional feedback as they interacted with the new system for the first time. This led to the first modifications to the system: a Spanish language class for materials that had been previously misidentified as French and a new section of “critical essays.”

The intent of this project was to build a practical system that was more reflective of the mission and values of Out on the Shelves Library; imperfect, but intended to be as inclusive and transparent as possible while incorporating clear pathways for future modifications. It is expected to create a welcoming and accessible browsing experience, enhanced by its deliberate consideration of the physical space in its design and which explicitly privileges queer perspectives. Outside of the initial time and labour required to implement the classification system, we do not expect its ongoing maintenance to place any additional burdens on the volunteer staff as we made specific efforts to keep the system at a small and manageable scale.

### 4.0 Subject headings project

A second, complementary project to address subject access outside the classification system focused on subjects in the catalogue records. The OOTS online public access catalogue (OPAC) displayed subject headings from each item’s bibliographic record alongside any user tags that were generated for the item by patrons. Even with only forty-eight tags, the user tagging system was already experiencing problems common to open folksonomies (Munk and Mørk 2007; Noruzi 2006), the most prominent of which were inconsistencies related to typos and grammar. One item in the collection was tagged “lebian,” while a few others were tagged “lesbian.” “Trans” and “transgender” were applied to various books, as were both “YA” and “youth.” The tag “best_cover” used an underscore, while other tags used spaces between words.

The library’s practice of copy cataloguing also raised major concerns regarding issues of inconsistency, bias, and inaccuracy; imported records often contained outdated and/or offensive terminology or no subject headings at all. Many of the changes made to LGBT2QIA+ and queer-related LCSH terms have been made relatively recently. An imported record
could have been made and/or imported at any time and may have included terms that are no longer in use. While items related to gender identity typically received a heading incorporating the terminology of “transgender,” “transvestite,” or “transsexual,” the terms themselves had no internal consistency within the system, revealing the impact of categorizer subjectivity and bias within OOTS and throughout the LCSH. Practically, these kinds of inconsistencies damaged both the precision and recall capabilities of retrieval by subject and keyword search. These problems were also ethically troublesome for OOTS and its mission. The inadequacies of the system limited the library’s ability to provide access and representation for LGBT2QIA+ community members.

The cataloguing project began with a review of criticism, analysis, and alternative uses of bibliographic subject access, particularly from LGBT2QIA+ perspectives (Campbell 2000; Drabinski 2013) and especially in relation to online applications (Adler 2013; Keilty 2012). This review established a foundational understanding that despite traditional claims of objectivity, all systems will reflect the perspectives and biases of those who develop them. Instead of assuming or attempting to work from a neutral position, the project intentionally centred OOTS’ community, collection, and mission in all decisions. In an iterative process of discussion and feedback with library volunteers (parallel to the feedback cycle for the classification project, above), the review phase of the cataloguing project helped establish the priorities for a new system: retrieval, non-offensive terminology, inclusivity and plurality, and adaptability.

The goal of retrieval focused on a balance between precision and recall within the context of LGBT2QIA+ subjectivity, wherein description and access to information are both closely tied to personal identity and belonging. Non-offensive terminology as a goal conceptualized the library’s digital platforms as an extension of the library’s mission “to foster a free, accessible, and safe space for LGBT2QIA+ people and their allies to discover and share stories and resources centring on LGBT2QIA+ experiences.” This value grounded our interventions in a principle of harm reduction for a user base that has typically faced marginalization and exposure to trauma within information access frameworks, considering an ethic of care over objective fairness (Held 2006; Fox and Reece 2012). Inclusivity and plurality also centred the library’s core values, recognizing that a commitment to inclusion of all members of the community mandates a pluralistic approach that embraces diverse experiences and opinions.

Mai’s (2011) exploration of shifts in the priorities of KO approach that embraces diverse experiences and opinions. Mai argued (2011, 116) that “in situations where a plurality of viewpoints is celebrated, consistency would not be an appropriate measure of quality.” A successful pluralistic system would be welcoming and flexible for all users. Adaptability as a goal aimed to address the longevity of our interventions. As Drabinski (2013, 100) noted, corrections to subject heading terminology to make it more appropriate “are always contingent and never final, shifting in response to discursive and political and social change.” Premised on this critique, we chose to emphasize adaptability as a necessary component in order to continue meeting our other goals as well.

Four possible solutions were developed along a spectrum of comprehensiveness, each comprised of a subject heading solution and a social tagging solution to be employed in tandem to balance control and inclusivity. Details of these options are outlined in Table 1.

<table>
<thead>
<tr>
<th>Subject Headings</th>
<th>Tagging</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Option 1:</strong> “Simple”</td>
<td>Import bibliographic records only from approved institutions with shared missions.</td>
</tr>
<tr>
<td><strong>Option 2:</strong> “Reasonable”</td>
<td>Using LCSH and imported records, establish guidelines to make sure headings related to LGBT2QIA+ topics are up to date and consistent. Re-catalogue existing records.</td>
</tr>
<tr>
<td><strong>Option 3:</strong> “Complex”</td>
<td>Creation of local subject headings for LGBT2QIA+ topics. Re-catalogue existing records.</td>
</tr>
<tr>
<td><strong>Option 4:</strong> “Ambitious”</td>
<td>Creation of local subject headings for LGBT2QIA+ topics based on terminology in the OOTS tagging system.</td>
</tr>
</tbody>
</table>

Table 1. Options as outlined in “Out on the Shelves: Online Catalogue Classification Review/Proposal.”
We presented these options in a report on the project thus far and solicited feedback from library volunteers. Responses were shared in online document commenting, which allowed for conversational engagement over multiple weeks. Feedback focused on option preferences and achievability. In addition to this feedback, regular updates were also shared at organizational meetings and met with general support.

Option three, the creation of local subject headings for LGBT2QIA+ topics, re-cataloguing existing records, and leaving open tagging with minimal volunteer tag intervention for control of grammar and spelling, was unanimously chosen as the ideal solution. One volunteer’s feedback on the document characterized the support behind this option: “I feel like we need our own terminology & thesaurus to really take the next step as an organization.” Volunteers recognized that option two, using LCSH and imported records, establishing guidelines to make sure headings related to LGBT2QIA+ topics are up to date and consistent, re-cataloguing existing records, and requiring volunteer approval of all new tags, was also acceptable and more realistic. Another volunteer suggested merging the subject heading solution from option three with the tagging solution option two; this would in effect create more work, but the volunteer felt motivated to avoid abusive and harmful tags that could arise without moderation. Option four, the creation of local subject headings for LGBT2QIA+ topics based on terminology in the OOTS tagging system, was seen as too ambitious but volunteers supported keeping it in mind for future development. All of the volunteers who provided feedback recognized that the proposed solutions would each require some added work, expanding the scope of both training and volunteer shifts. Volunteers were generally open to expanding their labour, especially if it would be incorporated into existing committed time.

Following feedback from library volunteers we then produced a set of guidelines and approved subject headings for enhancement of copy-cataloguing records, as well as guidelines for moderating user tags and opportunities for expanding the tagging system in the future. With this new system, the cataloguing process includes reviewing subject headings and ensuring that gender and sexuality are addressed critically and appropriately. The guidelines highlight currently “approved” tags along with alternatives to questionable terminology, which should help volunteers (many of whom do not have any library experience) gain familiarity with basic principles of subject access and how they can be applied equitably. We based the development of these guidelines, including examples and priorities, on analysis of the current subject headings applied to items in our collection.

As an example of how the new cataloguing guidelines address existing headings and copy cataloguing, we identified a significant issue with subject headings containing the terminology “homosexuals” and “gays.” Each of these terms had been applied inconsistently to denote either gay men specifically or all homosexual people in general. This ambiguity resulted in a conflation of gay male identity with the queer community as a whole, similar to the phenomenon found in shelf labelling and order before re-classification. As a solution, the guidelines ask volunteers to replace general headings with headings for specific identities when an item is predominantly talking about those groups and experiences. More general headings are acceptable in some situations; we do not want users to doubt why an item is included in the collection. Therefore, headings should match the level of specificity in the item itself. A post-coordination approach was chosen to address our finding that many pre-coordinated headings were ambiguous when applied in the system and to account for inconsistencies in LCSH syntax familiarity among volunteers. In the new guidelines, for example, books on the history of gay men participating in theatre should have two headings: “gay men” and “drama,” while specifying that books of plays about gay men should have one: “gay men–drama.”

Some guidelines were developed specifically to supplement the changes made to the classification system, particularly to ensure that the catalogue record indicate subjects and genres no longer explicit in the classification scheme. The guidelines present the heading “coming out” (a simplification of the LCSH “Coming out (Sexual orientation)”) for relevant titles. This unites items under a subject that had been removed from our classification system and incorporated into other, broader classes. The guidelines also ask volunteers to use headings to differentiate between biographies and autobiographies, which were shelved in the same section in the new system. Other headings require critical judgement from the volunteer on an item-to-item basis. For example, “sexual behaviour” is frequently applied to items due to the sexualization of queer identity, not because sex is a prominent part of the item. Our guidelines recommend changing the heading to “sex” in order to avoid overly formal, medicalizing language, and we advise volunteers to consider whether this heading in copy cataloguing is relevant to the item, giving the volunteer discretion to remove it if not.

The cataloguing guidelines also prioritize subjects referring to identity that were not sufficiently addressed in the prior shelf order and labelling system, the new classification, nor the majority of copy cataloguing. The current guidelines suggest that volunteers check for author statements within the item that explicitly name a sexual or gender identity and to consider adding a subject such as “lesbian creator” or “Anishinaabe creator.” This approach to highlighting identity in authorship reflects the #OwnVoices perspective in the spine labels from the new classification system. While a fully local cataloguing system might locate such information in authority records for authors, this ap-
approach recognizes the copy cataloguing environment from the Library of Congress rarely documents these aspects of identity and not in a way that facilitates filtering and retrieval of items. Stretching the boundaries of subject headings to refer to author identity bends the rules in order to respect the community’s concerns and information needs. We detail a further bending of the rules regarding identity in cataloguing in Section 5.2 below.

The development of the guidelines has been an ongoing process of analysis, conceptualization, and consultation. Upon completion, the proposed guidelines will be presented to volunteers for feedback and approval. We anticipate that application of these guidelines will be a gradual process based on volunteer availability and enthusiasm for advanced cataloguing training. Implementation will require volunteers to dedicate a portion of their shifts to editing existing records according to the guidelines; retroactive cataloguing is a viable option due to the small size of our collection, volunteer commitment to the project, and the distributed nature of this work. A committed effort to establish the new subject heading system should further the library’s goals to make our online space helpful and accessible to all our community members. As a result of these changes, the library hopes to improve the overall usability of the OPAC and rework the power dynamics within classification to allow for community self-definition.

5.0 Discussion

These two projects engaged different KOSs while taking parallel approaches to centring LGBT2QIA+ subjects. In the following sections we summarize the common framework of these two projects and the projects’ interdependence with particular focus on the concept of identity. In describing the approaches here, it is worth repeating an important contextual detail about our work at OOTS—as a community-led, independent library staffed by volunteers, radical redesign of KOSs was limited only by the available attention, labour, and expertise of volunteer leads and the consent of the community and remaining volunteer staff. Some elements of our approach, such as a focus on transparency and the accumulation of historical information about process, may be generalizable to other contexts while others, such as the extent of the classification redesign, may be less feasible for libraries embedded in other institutional environments and with a mandate for interoperability with other systems. Though we have presented each project separately in this account, the projects were inherently interdependent of each other and proceeded in coordination. In particular, distinctions among subjects and genres that the new classification system removed from shelf order were intentionally prioritized in subject cataloguing guidelines. The requirements that each project had on staff input and labour were complementary, as the progression from general input to proposal to feedback to implementation proceeded across each project in a regular fashion, giving volunteers a view of the full scope of the changes to the library while asking for incremental attention to particular stages.

Both projects have created extensive documentation designed for transparency to the library’s community for the internal history of OOTS. Public-facing documentation, such as the library space map that orients visitors to the shelving system, list relevant dates of implementation. This provides temporal context to changes as well as leaving traces of the system’s designed nature; we wish to leave a system that matches the community’s needs without allowing the system itself to seem inevitable or outside the processes of human attention and design. Internal guidelines similarly feature dates and include appendices of processes and alternatives considered and not pursued. We hope that by providing the library with candid documentation of the thought and labour that went into the new implemented systems future volunteers will feel empowered to reimagine the library otherwise and to undertake their own exhaustive reconsiderations of KO for the collection. This approach to transparency is in part a matter of personal humility; we do not assert that the newly implemented systems are the only approaches that could work for this collection. However, this transparency is also enacted out of professional humility; following Drabinski (2013) and the characterization of queer subjects and continually undermining the goals of traditional KO, we set up not only new KOIs but an invitation to continually question and undo them. The shifting nature of labels in this community is not a difficulty to be overcome by better KO design but a rejection of any endpoint to design.

These projects use elements of design and construction from established KO to express queer subjectivity; we did not invent new modalities of shelf order or syntax for subject headings but instead found room within familiar logics for decisions that fit this community’s perspective. Ideally, such changes may go as far as to constitute a critical and liberating act among the LGBT2QIA+ community. As designers of KOSs for historically marginalized subjects, we found that bending some rules and assumptions of classification logic and cataloguing standardization was sufficient to reshape the system for representation. In this approach we attempted to enact humility and transparency in design and for ongoing maintenance.
Even this bounded space of a community-led queer library, there remain issues of historical bias, marginalization, and the silencing of gender minorities and Indigenous peoples (Campbell et al. 2017). While the mission of the library and the intent of these two projects was to centre identities and experiences the dominant culture has marginalized, care must be taken not to re-affirm or create injustices with regards to axes of oppression beyond the view of the designers. A motivating problem with the original KOSs at OOTS was the privileging of a cis gay male perspective where those attributes of identity were left as the unmarked default. We also observed how Anglo- and white-centric the KOS had become in implementation; French and First Nations languages were assumed to be “foreign” languages and all perspectives from people of colour were often shelved under “international LGBT” regardless of relevance to the local, Canadian context of those items. Redesigning the classification system around LGBT2QIA+ identities attempted to address the first issue by including each of these aspects of queer identity at the same level of the hierarchy; our rethinking of language classification, spine labels, and cataloguing identities as subjects were intended to address the second issue.

These approaches created a new interplay between the KOS and the collection as absences are more apparent. That the 2-spirit, asexual, and intersex sections take up remarkably little shelf space at the level of the identity hierarchy and that the spine labels for works by Indigenous authors are sparsely visible throughout the library space indicates that the issues of marginalization are not merely KO-deep. The current system, in making these proportions and absences visible, complements existing collection polices that attempt to improve representation in the library. The library, with its lack of financial resources and its reliance on donations, cannot fix these issues quickly but it can refuse to hide them.

6.0 Conclusion

To return to the comparison between LGBT2QIA+ communities and queer perspectives, we see the future of this work along two continuums. In the first, we consider how these projects improve upon the ability of KOSs to responsibly, accurately, and usefully locate LGBT2QIA+ subjects. We would like to see the systems summarized in this paper and instantiated in Out on the Shelves taken up by the KO community as examples of systems accountable to an LGBT2QIA+ community. In this regard, the two projects detailed above exist within a domain space of affiliated libraries, independent libraries, and archives populated by localized versions of DDC, LCC, and LCSH and archives’ individualized approaches.

In the second continuum to which our work applies, beyond the relatively tangible contribution of these particular tools, we invite the KO community to take up the challenge.
of queering our systems. Though KOSs are at their foundations focused on controlling subjects and language, there is a generative tension between this goal and the notion that the referents—especially people—resist control. Centring queer subjectivity suggests new positions toward phenomena such as obsolescence (Buckland 2012), a shift focus from system creation to system revision and system discontinuation, and a shift in valuing technical affordances of malleability, transparency, and playfulness over reliability, ease-of-use, and unambiguity. The changes are not solely conceptual and technical but intersect with issues of labour and authority in information institutions. The queering of KO here asks not to resolve subjects made marginal or miscellaneous but to reexamine the system from the perspective of the margins and continues the work of Star and Bowker (2007) and Drabinski (2013) by taking a queer theory approach that asks “how those identities come discursively and socially into being and the kind of work they do in the world” (Drabinski 2013, 96).

References


Occupational Classes, Information Technologies, and the Wage

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Abstract: Occupational classifications mix epistemic and social notions of class in interesting ways that show not only the descriptive but also the prescriptive uses of documentality. In this paper, I would like to discuss how occupational classes have shifted from being a priori to being a posteriori documentary devices for both describing and prescribing labor. Post-coordinate indexing and algorithmic documentary systems must be viewed within post-Fordist constructions of identity and capitalism's construction of social sense by the wage if we are to have a better understanding of digital labor. In post-Fordist environments, documentation and its information technologies are not simply descriptive tools but are at the center of struggles of capital's prescription and direction of labor. Just like earlier documentary devices but even more prescriptively and socially internalized, information technology is not just a tool for users but rather is a device in the construction of such users and what they use (and are used by) at the level of their very being.

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1.0 Occupational classification genres and their discontents

Perhaps it would be best to start by enumerating several different forms or genres that occupational classes have taken in modernity: genealogical (a person’s occupation is what their parents’ were and what their family is known for—this has largely disappeared); fixed structural (occupational class identity is that of an identity within a table of differences—the structure given to occupations on census forms); dynamically structural (occupations are part of social classes, which are the result of ownership and one’s place in the economy of production); and transient (those who are not identified as having a dominant occupational title, but instead do part-time, low-waged, or non-waged work, which does not neatly fit within formal occupational classes or fits within such by supplementary manners).

I will not discuss genealogical occupational classes, but rather I will start with what I am calling “fixed structural” classes, since this is the beginning of accounting for labor occupations within a wage system. We are concerned not just with distinctly different classes of occupations, but also occupations themselves as a class. Both of these notions have conceptual and practical problems in census forms.

For example, as Michael Katz (1972) argued, the sociological study of occupational classes is the study of two different phenomena: class structure and individual social mobility. While census and other tabular forms address the former, they do a poor job of addressing the latter. As we will discuss, class mobility, multiple occupational roles, and other such existential factors are poorly represented by means of a priori classes.

The conceptual and practical difficulties of describing labor markets by distinct, a priori, occupational classes and tabular data seems to have become apparent since their beginnings in modern census gathering. For example, instructions to U.S. census marshals for the 1820 census acknowledged that it may be difficult to classify persons only by the categories of agriculture, commerce, or manufacturing, but that marshals must do their best to do so ("The discrimina-
tion between persons engaged in agriculture, commerce, and manufactures, will not be without its difficulties” (U.S. Census, 1820)). Similarly, the 1850 U.S. census recorded occupational data at sites of transient work, such as ports and ships, where workers could themselves be transient, but again urging that marshals only report one role as being a person’s chief occupation. And while exactness in imposing one chief occupational class upon a laborer was always demanded of these marshals, as the census evolved the descriptions also had to become more specific or particular as well. Instead of being simply a factory hand, a worker had to be described by what factory he or she was a hand in. Instead of “jeweler” for one who makes watches, the laborer had to be described as a watch maker or watch chain maker. Also, other attributes of life recorded in census forms, such as medical, came to impinge upon the purity of the category of “occupation.” So, for example, in the 1850 census, there is Heading 13, which includes “Deaf and dumb, blind, insane, or idiotic” for slaves, bringing together physical and mental illnesses and slavery (U.S. Census 1850). As we see, occupational classes not only have problematic divisions between occupations, as the census evolved the descriptions also had to become more specific or particular as well. Instead of being simply a factory hand, a worker had to be described by what factory he or she was a hand in. Instead of “jeweler” for one who makes watches, the laborer had to be described as a watch maker or watch chain maker. Also, other attributes of life recorded in census forms, such as medical, came to impinge upon the purity of the category of “occupation.” So, for example, in the 1850 census, there is Heading 13, which includes “Deaf and dumb, blind, insane, or idiotic” for slaves, bringing together physical and mental illnesses and slavery (U.S. Census 1850). As we see, occupational classes not only have problematic divisions between occupations, but also the very class of an “occupational class” is problematic.

What I call above “dynamically structural” accounts, such as Karl Marx’s theory of social classes, attempt to account for occupational classes through social classes that are organized within a dominant political economy (for Marx, capitalism). Occupational classes are important within an economically determined politics, because they describe the current and possibly future specific means of production and ownership. Occupations in modern political economies are not generally part of a “God-given” social order, but rather they describe and predict the social order in the present and to come through documentary, evidential, means. What the empiricism of such forms in modernity may mask, however, is the logic that they serve. For example, modern occupational classifications not only describe but predict and also prescribe the classes of labor within capitalism, that is, the classes of what are considered to be wage determined work. While other, non-wage, occupations might be included, these are supplementary categories, whose epistemic as well as practical value for accounting for waged occupations is largely covered up in any one particular census, requiring historical comparison and historical contexts for viewing differences between labor and work in census activities.

2.0 Women’s labor as an example of the instability of “occupational class”

Historically, women’s labor has been difficult to categorize in modern censuses in many countries (Katz 1972; Jones 1987). It has also been inadequately accounted for in even classical works of political economy, such as Marx’s writings (Fortunati 1981; 1995).

During modernity, the presence of a wage has played a very important role in determining if work is labor or not, and thus, more solidly an occupation rather than not (As we have seen, however, this norm has been violated in the case of slavery and, as we will soon discuss, with household labor). As Jones (1987) has explained, as was the case with Dr. William Farr’s (best known for his work on epidemiological statistics) appendix contribution to the United Kingdom’s census of 1861, society is generally viewed in capitalist economies as being divided into two broad classes, those who produce and those who are unproductive. The difference is not due to work, per se, but rather due to labor and production being understood by the worker’s “exchange value” (Jones 1987, 61) of their work for a wage. “Occupations” thus most properly appear with waged labor, rather than with non-wage work, and they appear mostly with waged work within conditions of stability and continuity in tasks performed, and not precarity, part-time, or piecework.

Even when non-wage occupations appear in censuses, the wage plays a role in dividing categories for the same performed work. For example, the absence or presence of the wage creates the distinction between housewife and housekeeper in earlier censuses, even when the two categories involve the same work. Historically, women’s wages more often than men’s wages have been indirect (e.g., through a husband’s paid labor, for example), and/or earned part-time and/or by piecework, home-based, labor. The labor of women is even more difficult to account for if we include wages deferred until another generation, such as in the case of raising children who then earn a wage as teenagers or adults and take care of the parents and others, or the role of a woman as caregiver to elderly relatives. In early industrial periods, women are also often the “managers” of generations of present (not just future) at-home workers in the family, such as their children and their retired or “retired” parents, who may do piecework. Each of these cases challenge the notion of a woman having a single occupation or even an occupation at all. The accounting difficulties have to do with the multiple sites of labor for some women, how work and labor (i.e., waged work) are sometimes intertwined at the same sites and times, intertwined with multiple labor and work duties and roles, and by the presence of direct and indirect wages. Also, of paramount importance as I will soon examine, are women’s necessary and traditional roles in biological, cultural, and social reproduction.

Women’s labor is important to examine not only in its own right, but because it points to the un- or poorly accounted for work that lies outside of—but also in capitalism is central to—maintaining not only the fact, but the category of, occupational waged labor and the wage and its’ social divisions, as well. If we do not account for non-wage
or partly waged work and the indirect wage, we will then have a very poor account of labor and of occupational activities and thus occupational classes. As I will argue, both theoretically and practically “occupational class” depends upon these transient epistemic and social classes of labor, even if it does so by exclusion or by their marginality within occupational classifications.

In terms of worksites, farm life provides a good example of the difficulties of classifying women’s work according to traditional occupational labor classifications. The role of what was called “the farmer’s wife” is difficult to classify. Is the job that of only being the wife of the farmer? Is this a professional occupation? Is it to include the work of child raising, the work of their education, the work of getting her husband up, the work of milking the cows and tending the hens and keeping account of finances? In addition, at the farm there is no going off to work, for work is largely done at home. The lines between waged and unwaged work blur here considerably, but without this work, there would be no wage possible, and so, no income for the family.

As I have mentioned, home piecework, too, is prevalent at the beginning of industrial periods and was often done and managed by women and their extended family or families (children and the elderly) (As we will later discuss, it has returned in the mode of digital labor). In early industrial periods, this work provided parts and provisions for factory centers and allowed women to tend to children at home.

Leopoldina Fortunati’s now classic book, The Arcane of Reproduction (L’arcano della riproduzione 1981), investigated the problem or “mystery” (l’arcano) of women’s labor within the traditional male dominated wage in families in Italy at the time of its publication and earlier. Fortunati’s book, as other like works from feminist workerism, still has great value in so far as its central themes of non-waged “domestic work,” “housework,” and “reproduction” (which includes the raising of children, their education, and in sum all their biological, cultural, and social reproduction, as well as the maintenance of the family unit) remain as relevant, if not more relevant, today.

Fortunati’s book followed Selma James’ vanguard Wages for Housework campaign in the US and Canada, now taken to the Veneto region of Italy during the 1970s, which centrally inserted women’s unwaged “domestic” work into the previous male dominated struggles of Italian labor (such as Potere Operaio), rather than simply advocating for the abandonment of the home as a site for women’s labor struggles in the mode of much second wave feminism during this time (James in 1972 coauthored with the Italian feminist Mariarosa Dalla Costa, The Power of Women and the Subversion of the Community, which was later seen as a founding text for the movement). The Wages for Housework campaign in Italy shared with emerging Italian autonomist struggles a critique of contemporary society as being a social factory for capitalism. It extended Marx’s analysis of political economy and social classes in the direction of the family and affective labor. As Steve Wright puts it (2020), writing about The Power of Women and the Subversion of Community, “If in Operai e capitale, [Italian workerist theorist Mario] Tronti had put labour at the centre of the capitalist universe, Dalla Costa dethroned labour in turn in favour of ‘the housewife.’ By doing so, she lent substance to a new dimension of class composition analysis, addressing the labor of the unwaged.” This latter point is at the heart of our analysis of occupational classes.

There are several germane points that we can extrapolate from Italian feminist workerism in regard to women’s work and occupational classes. First, Fortunati’s (1981) book not only discusses women’s reproductive work (“domestic labor”) as mediated by men’s wage, but it also discusses women working for a wage alongside of this, and in part-time and non-waged work in the home and elsewhere, as well. Traditional accounts of occupational class can fail to account for this work/labor and additional work/labor of individual women. But second, they not only hide the additional labor of individual women but obscure the role of women within the normative logic and discourse of waged “productive” labor and non-waged reproductive labor, and, in this, they also dissolve the power of women as a class. Third, “women’s labor” and “women’s work” is a heuristic for not necessarily sexualized, but certainly gendered, class assignment, which is based on scales of pay (or the lack of pay), and not only the economic but the social values attached to these scales (For example, women from the upper classes can hire other women to do their work, and conversely, men can be traditionally low paid “care professionals,” thus allowing women to be part of the patriarchy and men to be part of an exploited class of “women’s work” or labor). Fourth, we see from this that what occupational classes presume are not only sexualized but gendered relations of wage labor to low and unpaid work, and this results in series of divisions and hierarchies even among these classes.

“Occupation,” as itself not only being a logical, but a social class, depends not just in theory, but in practice, upon the non-waged work of biological-social-cultural reproduction. For this reason, “women’s labor” and “women’s work” has always proved problematic in, and for, occupational accounting.

The point here is not just to theoretically contest “occupation” as a category that has excluded women. The bigger issue is that of the exclusion of reproduction as the central issue of production more generally, and thus that of engaging in a critique of value toward reclaiming the centrality of these non or low paid work activities of reproduction within the productive maintenance and well-being of both human society and nature. A concern with “women’s work” in reproduction is not just a marginal or supplemen-
tary concern for production but the central concern of all life, of all production. Mariarosa Dalla Costa pointed out the relation of the Italian feminist struggles to this larger picture in an interview with Louise Toupin in 2013 (Toupin 2018, 222):

We discovered the home beside the factory. We discovered that the class was formed not only of waged workers but also of non-waged workers.

Today, taking this into account is fundamental to understanding the ‘capitalist command,’ which from the world of production, is deployed in forms that are ever more ‘strangling’ and lethal in the world of reproduction. It is also fundamental to understanding the relationship between the formal and the informal economy, the relationship between the monetary and non-monetary economy, and the relationship between the first world and the third world (to use a conventional shorthand). Also, to understand the struggles that, arising from the world of global reproduction, tend to break this command, and to affirm other criteria in the relationship with production, with nature, and with life.

3.0 Transient occupations

“Women’s labor” shows us several elements of what I will call the epistemic-social class of “transient” labor, which challenge both fixed and dynamic structural accounts of occupational classes. As I have suggested above, it is the appropriation and ex-appropriation of work to and from waged labor that underlies the traditional notion of occupation. Classes of occupation and the class of occupation itself depends on the concept and fact of the wage as a distinguishing mark between valued and under or unvalued work. Transient labor is labor whose very description poses a problem to setting occupational class boundaries.

I borrow the notion of “transient occupations” from the French philosopher, Chantal Jaquet (2014), who has discussed economic “transclasses” in terms of social “non-reproduction,” in the sense of traditional social classes not being reproduced through individuals’ movements between them. Jaquet refers to migrants and people changing class structures, but I here expand her notion of the “transclass” to work that transcends not just social classes and their reproduction but epistemic notions of occupational classes. It is not only the a priori nature but the conceptual and social boundedness of traditional notions of occupational class that need to be critically examined through the concept of transclass.

Further, in my account here, social reproduction depends upon the transclasses as the surplus value that underlies and allows for occupational values. As I will show in this section, today this very surplus value has now been (under)valorized as being at the heart of the “new economy.” As I will argue, this flexibility in capital-labor relationships is embedded in the very documentary forms of occupational classes in capitalism. The flexibility is both shown and prescribed through mediating human resource information technologies, which advertise and hire through skill and task-based descriptions rather than through traditional occupational ontologies. Such descriptive keywords are indexed to the highly temporal and piecework needs of corporations and changing marketplaces of post-Fordism. Such a “post-coordinate” shift in occupational nomenclature is not only descriptive but prescriptive for labor and lies at the heart of the post-Fordist, digital, labor revolution, which is best characterized by temporary and precarious labor and its wage.

One speaks of the “precariously” employed or “part-time” and “adjunct” labor, which today can take the form of a digitally mediated, piecework “gig economy.” Such labor is constituted by the needs of workers to contort not only their lives but also their identities in two manners: first, skills demonstration and occupational identity, and second, flexibility in terms of availability and the amount and conditions (e.g., benefits, hours, etc.) of a wage that they are being paid.

As to this first, in her book Down and Out in the New Economy, Ilana Gershon (2017) has discussed precarious labor in the new (digitally mediated) economy, in terms of the need for prospective employees to form self-identity labels in order to get past application algorithms and fit within the individual corporate human resource unit’s advertised needs. If occupational classifications once appropriated individuals into classes of occupations, now the demand is for individuals to match their skills and experience with business specific keywords; the individual must construct themselves as keyword level documents of labor capacity. Occupational classes, just like so much of knowledge organization today, now take the form of keyword indexing and graph algorithms.

It may be difficult for individuals to match themselves to the keywords of a new employer or new cultural system. In a Lacanian manner, one needs to know the symbolic order of the other to which one is trying to fit within in order to speak their language and express one’s self. And if there is no way of knowing this, then all one is left with is trial and error or asking someone who might know. Like with all information systems, one is defined as a having a relevant need (e.g., a job qualification) based on what is available and “makes sense” in the information system (Day 2014). Whatever else one is trained in or has occupational experience with, today one must first of all be an “information professional” in order to get a job. Gershon (2017, 78-79) writes
in her anthropological study of digitally-mediated job searching and hiring:

Career transitions were not the only moments in which people had trouble representing themselves effectively in resumes or LinkedIn profiles. People also had difficult moving between countries. Some of the problems revolved around credentials—regardless of your medical training overseas, in order to be a doctor in the United States, you had to take the US Medical Licensing Examination and, depending on the state and your specialty, be a resident for at least three years. Yet the problem is not just one of credentials but also one of classification. Audrey explained to me that she has just moved back to California after working in South Korea for a number of years for a Korean company. Since moving back to the United States, she had trouble explaining her job effectively on her resume. The range of her job duties doesn’t match the range ascribed to any single job in the American companies. ... For both Susan and Peter, the problem was one of classification—companies or different professions classified the tasks belonging to a job position differently enough that one couldn’t make effective comparisons.

The digital laborer in the new economy must not only adapt to information systems, but many must adapt to their own status as temporary or part-time workers in a digitally mediated workplace. The digitally mediated gig economy, like previous piecework economies, is largely unregulated by labor laws or collective bargaining. Like with previous piecework, one must be “flexible” to the needs of capital; the laborer must not only construct piece objects, but the laborer must also construct his or herself as a piece-subject, and this means being in a transitional occupational class even if this is a class that is identified within occupational ontologies. Identity must be sold as mobile assemblages of wanted capacities corresponding to system recognized keywords and graph relationships, which then can be recomposed in different and changing market conditions.

The old piecework economy, once a supplement to industrial centers has now, in digitally mediated form, been conveniently rebranded with the hip name of the “gig” economy. Mary Gray and her co-authors (Gray et. al. 2016) and Yin and Gray (2016) have discussed the “unofficial” online social support networks that workers have built in order to support their supposedly individual work mode. Gray et. al. have argued that “workers collaborate to address unmet social and technological needs posed by the crowdsourcing platform.” And Yin and Gray have suggested that well connected workers on Mechanical Turk may be able to find more lucrative work sooner than poorly connected workers.

The observation that workers use social networks among peers to gain advantage over other peers in the marketplace, echoing the way that domestic pieceworkers networked in early industrial eras (except now on a vastly expanded geographical scales thanks to the internet), also suggests the unmet economic needs that pit workers against one another in such economies. These unmet economic needs are those that result from a labor market that has been created by the evaporation of standard, full-time, occupational jobs, and also by a lack of labor regulation covering this new piecework economy. Hara et. al. (2018), for example, have calculated that the average Amazon Mechanical Turk worker is paid approximately two dollars an hour, once one calculates “time spent searching for tasks, working on tasks that are rejected, and working on tasks that are ultimately not submitted.” Such a worker socializes not to resist the unregulated market place but rather to compete in it just as people in industrial piecework economies used communicative networks and other social capital to compete with one another. It needs to be stressed that such socialization is not that of the deployment of workers’ social capital in resistance to exploitation but workers’ socialization in support of their mutual exploitation. Viewed collectively, this can drive the wage even lower not only because of the competition of workers with one another but because of the time necessary to socialize toward competing, as the wage must be calculated, as Hara (2017) suggests, by the overall costs of time and effort spent gaining, as well as doing, work.

In addition to studying the experiential accounts of individual workers, it is necessary to view digital labor as structural issue, including in terms of occupations. Accounting for occupational labor is no more simply empirical than it is simply descriptive. Occupational classes and work descriptions are robustly ideological and prescriptive and result in important practical outcomes, such as career choices, employment, and wages.

4.0 Conclusion

Like in most areas of the post-Fordist revolution introduced by information technologies, where workers have moved out of assigned positions in an assembly line only to be co-opted as managed “team players” and “entrepreneurs,” the form of occupational descriptors has shifted from that of being universal a priori classes that capture workers collectively to being particular names to which particular workers attempt to correspond in terms of their a posteriori experience and skills. Information technology has become embedded in not only worker identification, but self-identification, through real-time networks that also connect different labor and machine processes. Potential workers and current workers must identify themselves as nodes in changing net-
works rather than cogs in standardized factories. The digitally mediated social factory is one of algorithmic nominalization where “innovation” applies not just to object production but subject production.

What we see in the “new economy” is the appropriation of work through documentary mediation of a certain type: one based on the demand that individual social sensibilities be shaped to needed tasks within shifting systems of production. Newer documentation systems function by indexing and ranking social sensibility through analytic graphs, social graphs, and predictive learning graphs (Thomas 2018). The overall social sensibility of digital labor is precarity, celebrated by capital as freedom of employment opportunity on the one hand and corporate flexibility on the other. Post-coordinate information technologies do not just bridge these two sides, but they create their possibilities in terms of the “new economy.”

Occupational classes are being reshaped by information technologies as inclusive of more and more precarious and supplementary social classes. Professions have been transformed into sites for piecework, inside and outside the home, while the site and time of work has greatly expanded.

References

Centering Relationality:
A Conceptual Model to Advance Indigenous Knowledge Organization Practices

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Abstract: Scholars and practitioners have exposed the limitations of traditional Euro-American approaches to knowledge organization (KO) when it comes to Indigenous topics. To develop more effective KO practices, there is a need for KO practitioners to understand Indigenous perspectives at an epistemological level. A theoretically-informed model of Indigenous systems of knowledge serves as a pedagogical tool to support the labor of boundary-spanning and code-switching between Euro-American KO practices and Indigenous KO practices.

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From observing the world around them, they could see orderly processes that marked the way organic life behaved. From the obvious motions of the sun and moon to the effects of periodic winds, rains, and snows, the regularity of nature suggested some greater power that guaranteed enough stability to be reliable and within which lives had meaning.

—Vine Deloria, Jr., Standing Rock Sioux

1.0 Introduction

For generations, Native American and Indigenous peoples have sought to exert command over the use and misuse of the products of their ways of knowing by non-Indigenous people’s intent on settlement of Indigenous lands, waters, bodies, and ways of life. Thinking deeply about how colonialism has shaped informatic practices and professions—from library science to data science and knowledge organization (KO)—gives advocates for Indigenous peoples the rationale by which to rethink the fundamental ontological differences between western-oriented systems of knowledge and Indigenous ways of knowing. By focusing on the heart of Indigenous ways of knowing, that is, the concept of relationality, we can work to: a) decolonize the western mentalities shaping contemporary KO practices; b) teach practitioners with little to no experience working with Native and Indigenous peoples; and, c) speak to the philosophical foundations of the field. This research asks: what are frequently used definitions for the knowledge created by Indigenous peoples? How do these definitions relate to the field of knowledge organization and the emerging field of Indigenous knowledge organization (IKO)? What does a conceptual model of Indigenous systems of knowledge reveal about KO practices and principles? Through reviewing the colonial history of KO in light of efforts by Indigenous peoples to pass on their ways of knowing through both western and tribally based practices, this research establishes a theoretically informed framework for Indigenous systems of knowledge. A conceptual model contains integral components of the philosophical basis of IKO. This model can be applied as a pedagogical tool to help practitioners bridge the epistemological schism between Euro-American ways of organizing knowledge and Native ways of knowing.

2.0 Background: the colonial entanglements of KO

Colonialism, in its many aspects, is a cyclical and regenerative ideology that, through the intentional subjugation of a class of people by another elite class, results in a widespread terraforming or settlement of Indigenous lands, eradication of Indigenous philosophies and languages, and the physical and social death of Indigenous peoples. Living in its midst is like existing in the eye of a hurricane; it seems to be something happening far away in a distant foreign country, but actually, it unfolds through myriad mundane acts. Indeed, the ideology is in the will of the obedient settler: the citizen who fulfills the promise of the nation-state by normally and systematically denying Indigenous peoples’ existence, experiences, and rights to representation. Though this paper cannot provide an extensive historiography of the colonial beginnings of KO, here we can briefly contextualize the colonial entanglements surrounding the disciplines and acts of statecraft that support KO as we now know it. Considering these entanglements contours the mind for the introduction of the Indigenous conceptualization of relationality, a principle that is fundamental to IKO.

We begin with a telling historical anecdote. In 1904 Melvil Dewey, creator of the Dewey Decimal Classification, was the New York State Librarian and Secretary of the New York State Board of Regents. As part of his duties, he was also the curator of several collections of Indian objects, including some Haudenosee wampum belts, objects which, according to Haudenosee ways of documentation, represent legal agreements, or treaties, of the Onondaga Nation. Late in life, the largest donor of these objects, Harriett Maxwell Converse, requested that an up-and-coming Seneca/English intellectual named Arthur C. Parker be charged with curating these collections. Converse recognized the intellectual value of a knowledgeable American Indian in such a position (Bruchac 2018). Dewey appointed New York Commissioner of Education Andrew Draper to create a job for Parker. Dewey outlines the job description for Parker in a 1904 letter, which reads as follows (quoted in Bruchac 2018, 60):

Gathering information from the New York Indian reservations concerning the ceremonies, festivals, rituals, religious thoughts, songs, speeches, etc. of the tribes ... [and] relics in the way of implements, dress, ornaments or manuscripts which would help to retain for future generations the best information as to the characteristics and customs of the Iroquois ... You must bear in mind your statement to me that your motive is to preserve information of your ancestors, and work earnestly to that end ... If you do so, it will be a real service to the history of the State.

In time, Parker would become a foremost Indigenous intellectual of the 19th century, with his work influencing generations of American Indians who survived the violence of the Indian boarding schools, schools that were designed, as Captain Richard Pratt clearly advised, to “kill the Indian in him and save the man” (Porter 2001; Pratt 1973). Over a century later, Native and Indigenous individuals educated
in western institutions of higher education are often still thrust into positions of representation, taking up the labor of evaluating Native “information”—implements, dress, ornaments, and manuscripts—naming it, preserving it, and creating aids to access that information across epistemological and ontological differences, and often not toward the benefit of their Indigenous peoples, but in service to the nation-state.

The idea that the state disciplines knowledge is not new. In his definition of the Leviathan, or the mechanics of an emerging sovereign power, English philosopher and social contract theorist Thomas Hobbes (1904) depicts a tree of the scholarly disciplines up to that point in western European history, noting how the sovereign must locate his right duties within this disciplinary framework and, in doing so, propagate knowledge through rule. Referring to the binary between the citizen/subject and the barbarian, the rule of the sovereign is, in part, to distinguish who has rights within the commonwealth and who does not. In the settlement of the Americas, western European intellectuals applied Hobbesian logic to rationalize what they saw as a just war against Indians of the New World (Moloney 2011). For them, Indians represented an unrepentant barbarism.

Two centuries later, in his philosophy of right, German philosopher Georg Wilhelm Friedr ich Hegel (1991) studies the dynamics of revolution, and notes how the state must recognize the relationship between philosophy and law, since to have sanction over the law is to have sanction over what is ethically right, and, therefore, to be able to discern the pursuit of the philosopher, which is to structure free thought with what is universally valid in step with and ahead of the natural and social sciences. Notably, in 1820, the Indian Wars were already a century in motion and would go on for another century in North America, particularly as Congress began illegally acquiring Indian land and selling it at a reduced price to Euro-American settlers moving westward. In the midst of such violent settlement of the Americas, Hegel also references the medieval tree of knowledge, which by the time of his writing is refined through the European Enlightenment into a more robust and nuanced array of fields and disciplines.

Over a century later, French non-conformist Michel Foucault (1982) turns the idea of the tree of knowledge on its head and questions its truth-value. Foucault (1995) notes the disciplinary function of the state when it comes to the definition of knowledge and the practice of philosophy, and, in turn, how the state utilizes the distinction between kinds of knowledge and forms of inquiry in combination with institutional apparatus such as schools, hospitals, the military, and prisons to discipline—to penalize, order, and conform—its denizens into obedient subjects.

Boarding school survivor and Yankton Dakota Sioux writer, Zitkala-Sa (1921), writes about this brutal disciplining. When she was still a child, before entering boarding schools, she had the experiences of learning from her people: hearing the recounting of legends through the oral tradition, internalizing Sioux ways of knowing through deep listening and belonging. Recounting her time in Indian boarding schools, she writes about the slow deadening of Indigenous wit that occurs through a routine of conformity, punishment, and terror in the boarding schools, where the routine practices of Euro-Americans—such as wearing hard shoes, stiff clothing, and cutting hair—are used to suffocate and subjugate the Sioux sense of self, and to physically and metaphysically cut off Indian children from their ways of knowing. Through the nineteenth century and early twentieth century, while the US wars against Indigenous peoples, beneficent US citizens also equip mixed-bloods like Arthur Parker and so-called assimilated Indians like Charles Eastman (Ohiyesa) and Gertrude Bonnin (Zitkala-Sa) with the western intellectual habits of mind needed for them to document their own disappearance as tribal peoples while also preserving the products of their ways of knowing.

By the time Vine Deloria, Jr., Gregory Cajete, Donald Fixaco, and other prominent twentieth and twenty-first century Native scholars have come into their own, they have at once both internalized the historical trauma of their blood ancestors and their intellectual forefathers and foremothers such that they have a record of both how US institutions erase American Indian philosophies, and how American Indians hold tight to their philosophies and customary practices in spite of pernicious and ubiquitous colonial ideology. Indeed, contemporary Native and Indigenous scholars now publish books and articles to advance meta-physical knowledge of the colonizer in light of their Indigenous experience and epistemology. Since the 1920s, when Congress granted American Indians with rights to citizenship, including rights to vote among others, these kinds of works are generally protected in the US (and in other western countries) under a right of free expression. American Indians are no longer viewed as the “merciless Indian savages” defined in the US constitution, and as intellectuals are not overly penalized for speaking their languages or practicing their religions (Wunder 2000). Instead, Native and Indigenous intellectuals are now subjugated in subtle ways, most often by being told by institutional gatekeepers that their ways of knowing are incommensurate with the western European canon and an ill fit within the western bibliographic universe, which has largely come into existence through the philosophical and technicized labor of classificationists and practitioners of KO in concert with writers and publishers.

Indigenous peoples are also told that unless their ways of knowing can be codified as a form of property—with private property and the commons being the operational standard of nearly all laws under modern nation-state forms of sovereignty—they cannot be protected by authorized leg-
islative and judicial bodies. For this reason, elaborate forms of protection of Indigenous Knowledge (IK) are forwarded through the World Trade Organization and the World Intellectual Property Organization, where IK is most often defined in a form that German philosopher Karl Marx (2016) would recognize as the primitive accumulation of capital, the raw material needed for industrialists to develop a marketable product through a capitalist means of production. Yet, contemporary Indigenous thinkers do not consider IK to be primitive capital, nor is it wholly a product, or even really “information” as Draper refers to in his 1904 letter to Parker. Indeed, Māori methodologist Smith (1999, 2012) considers IK to consist of Indigenous ways of knowing including Indigenous peoples’ knowledges of their colonizers. In light of the Indian Wars and broken treaties, Standing Rock Sioux scholar Vine Deloria, Jr. (1978) finds that American Indians have a right to know the cause of their oppressed status, and that the purpose of library services to American Indians is not necessarily to be “of service to the history of the State” as Draper (1904) expects, but most of all is to benefit American Indians in their pursuit of self-determination and, ultimately, liberation.

Thus, to understand IKO—that is, the methodologies and means by which Native and Indigenous peoples create protocols to cohere, name, articulate, collate, and make accessible objects that indicate Indigenous knowledge—requires that practitioners of KO appreciate the colonial history of KO. Furthermore, it requires that KO practitioners recognize that the work of IKO is fundamentally a practice of liberation, and, therefore, is far less about attempting to reform or revise existing tools and methods, and far more about finding ways to discern and advance Indigenous systems of knowledge. This means that IKO may be paradigmatically distinct from the canon of KO that is tied to the project of US national expansion. To speak of IKO is to signify what French actor-network theorist Bruno Latour (2012) refers to as another chain of reference; one that appears to use similar vocabulary, but that derives from another world of meaning. This world is largely unknown and in some aspects unknowable to those who do not have the lived experience to recognize its internal logic, a logic that is grounded in, as Deloria (2006, xxv) writes, “some greater power that guaranteed enough stability to be reliable and within which lives had meaning.” With this paper, like the more recent works of Indigenous theorists who attempt to create boundary-spanning interventions between Indigenous thought and practice and western philosophies such as Martin Nakata (2007; 2008) and Manulani Aluli Meyer (2008), we thus offer an ontological tool to help unsettle the colonial mentalities shaping contemporary KO practices. To borrow the discourse of western philosophies of science, we offer an epistemological intervention where knowledge is not an artifact, relic, object, document, product or information, and where Indigenous peoples are not disappearing through the inevitable march of progress, nor are they or their ways of knowing sources of primitive capital to be patented or mined. Instead we focus on relationality as the core organizing principle when it comes to the identification, discernment, creation, and continuation of Indigenous systems of knowledge.

3.0 Defining terms of the field

To be able to enter into this space of epistemological and ontological boundary-spanning, we provide clarification on terms commonly used in the fields of KO, intellectual property law and policy, and Native and Indigenous studies, including the subfield of Indigenous librarianship.

We first define KO as a broad field of study focused on the practice, quality, and critique of the way information professionals describe, index, organize, classify and organize materials in information institutions such as libraries and archives, as well as in digital environments (Hjørland 2008). According to Tennis (2008), KO is concerned with documents that are deemed valuable by societies, and thus must reflect values of the society that uses a knowledge organization system (KOS). For reasons that will be explained in this paper, IKO is an emerging field of study focused on the protocols and methods of describing, naming, co-locating, and providing access to objects and materials that are of importance to Indigenous ways of knowing. IKO centers on Indigenous experience and thought, and is concerned with Indigenous rights and title, self-determination, Indigenous interests, sovereignty, and ethical access to knowledge. IKO practices reflect the diversity of Indigenous communities, their information needs, as well as the colonial infrastructures that may house the knowledge (Doyle 2013).

To be clear, there are multiple terms for the knowledge that Indigenous peoples create. Different institutions define terms to meet their policy needs, and scholars select definitive phrases that most accurately reflect the lived realities of Indigenous peoples. One of the most commonly used terms is Indigenous knowledge (IK). IK emerges out of policy work between various programs within the United Nations (UN), the World Intellectual Property Organization (WIPO), and the World Trade Organization (WTO). The UN Convention on Biological Diversity (1997) defines IK as traditional knowledge (TK), meaning the “knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity.” WIPO and the WTO rely on this definition to protect IK across boundaries, including political borders. Their protection of IK is on the basis of establishing a supranational and international common economic interest, equity, food security, cultural continuity, environmental sustainability, develop-
ment, coherence of national and international law, and just and fair use of TK. Many researchers and policymakers use the related term, traditional ecological knowledge (TEK), interchangeably with TK and IK. WIPO also relies on a related term, traditional cultural expressions (TCE) to signify the tangible and intangible expressions of traditional culture and knowledge that may be subject to cultural property and intellectual property protections for the benefit of Indigenous peoples and communities (WIPO 2010). In 2009, the American Library Association (ALA) attempted to adopt a policy statement regarding the role of TCEs in libraries. The policy statement failed to pass ALA’s governing body, as ALA members expressed concerns about the conflicting values of the library profession and protocols for protecting Indigenous knowledge.

In this paper, we shift away from the terms defined for the purpose of policy-making and capital accumulation and instead rely on White Earth Chippewa and Choctaw scholar Clara Sue Kidwell’s (1993) description of expressions of Indigenous knowledge. Expressions of Indigenous knowledge are the discernable manifestations of knowledge—the nouns that are created when we exercise our relationships with the land, water, ceremonies, people, stories, teachings, and observations (Kidwell 1993). These are the tangible and intangible objects, belongings, art, songs, words, and thoughts that may become part of the collections of information institutions. We note here that though the policy term for TCEs seems to be similar to “expressions of Indigenous knowledge,” the two are epistemically situated in diverging bodies of thought and practice. TCE is a term of policy designed to bridge the governmental definitions of cultural property and intellectual property, and exemplifies the democratic and acculturative goals of the ALA. Furthermore, we rely on Kidwell’s 1993 definition, because it is the outcome of Indigenous ways of knowing: the actions—the verbs—that describe how Indigenous peoples deliberately engage with the world, people, places, and ideas, resulting in an enduring intergenerational way of life. In her work on the triangulation of meaning, Kanaka Maoli scholar Manulani Aluli Meyer (2008) explains that Indigenous ways of knowing differ from IK in that IK renders ways of knowing static and unchanging, a product for transaction, rather than a means of creating relationships.

Indeed, in this paper we also depend on Cree scholar Shawn Wilson’s (2008) conceptualization of relationality, or the acknowledgement that we all exist in relationship to each other, the natural world, ideas, the cosmos, objects, ancestors, and future generations, and furthermore, that we are accountable to those relationships. Wilson’s (2008) definition theoretically complements Dei’s (2000, 114) definition of Indigenous systems of knowledge (ISK):

the epistemic saliency of cultural traditions, values, belief systems and world views in any Indigenous society that are imparted to the younger generation by community elders. Such knowledge constitutes an ‘Indigenous informed epistemology’. It is a worldview that shapes the community’s relations with surrounding environments. It is the product of the direct experience of nature and its relationship with the social world. It is the knowledge that is crucial for the survival of society. It is knowledge that is based on cognitive understandings and interpretations of the social, physical and spiritual worlds. It includes concepts beliefs and perceptions, and experiences of local peoples and their natural and human-build environments.

Additionally, from this vantage point, we are able to note divergent uses of the concept of ontology, where in the western philosophy of science, ontology refers to metaphysical claims about the nature of reality, through either subjective or objective means, and where in the field of KO, ontology is a term referring to the representation of concepts through categories and relations. Indigenous scholars have begun indigenizing ontology as it is used in the philosophical sense, to initiate lines of inquiry as to the nature of reality and claims to truth from an Indigenous paradigm, and to compare and contrast Indigenous metaphysical inquiry with metaphysics informed by scholastic traditions emerging out of the western European Enlightenment. In this research, we use ontology in the latter sense.

In sum, the terms developed by Indigenous scholars more accurately and precisely reflect the experiences of Indigenous peoples, yet in seeing how these terms emerge institutionally, we are able to locate where and how Indigenous peoples and allies must code-switch in their labor as intellectuals and advocates.

4.0 Upholding colonialism

Before we embark on a discussion of IKO, we must contextualize the inherent colonialism in western information institutions that have created barriers to Indigenous knowledge. We must acknowledge the fact that mainstream KOs uphold colonialism. This might be uncomfortable for some readers, especially those who have yet to engage with the fields of critical librarianship (Accardi et al 2010; Cope 2017; Drabinski 2019; Nicholson and Seale 2018), critical theory, and Native and Indigenous studies. For decades, scholars and practitioners have exposed how knowledge organization systems have upheld colonialism for Indigenous topics and for Indigenous users (Berman 1995; Green 2015; Lawson 2004; Webster and Doyle 2008; Young and Doolittle 1994; Lee 2011; Moorcroft 1993). Indeed, as Svenonius (2000, 2) asserts, “to be so condemned would not be all bad, since reinventing what has been done in different time and circumstances reinvigorates a disci-
pline, rid it of routinized procedures and ways of thinking, and energizes it by the influx of new ideas and new terminology.” Critiques have included use of biased terminology in classification systems (Berman 1995 and 1971; Olson and Schlegl 2001), stereotyping (Young and Doolittle 1994) the silencing of Indigenous peoples (Moorcroft 1993), and historicizing Native people (Webster and Doyle 2008), among other problems. Scholars and practitioners have introduced critiques and modifications to existing mainstream systems, such as the Dewey Decimal Classification and the Library of Congress Subject Headings (Green 2015; Furner 2007; Lee 2011; Olson 1998; Pacey 1989). At the same time, others have developed new systems meant to embrace local Indigenous KO priorities, such as the Brian Deer Classification System (Chester 2006; Cherry and Mukunda 2015; MacDonell et al 2003; Swanson 2015), the Australian and Torres Strait Islander thesaurus (Moorcroft 1994, 1997), the Māori Subject Headings (Simpson 2005; Szekely 1997), and the Mashantucket Pequot Thesaurus of American Indian Terminology (Littletree and Metoyer 2015).

KO scholar Hope Olson’s work calls for creative ways to see classification differently, and to create changes so that marginalized perspectives can be legitimized (1998). Olson suggests that new techniques need to be developed to make space for marginalized perspectives in our information structures, by making “holes” in the structure to allow other voices to be heard. By doing so, the power shifts to the “other”: “power of voice, power of construction, power of definition” (Olson 2002, 227). However, Olson (1999) re-inforces the otherness of Indigenous ways of knowing by engaging in a discussion of what ISK lack compared to “our standard practices of classification” (101). Such misunderstanding shapes the contributions of allies who work in the space of ISK, and reveals their epistemic blind spots, specifically, an intellectual, social, and political underestimation of the effect of colonialism and its ongoing habits in the lives of settlers who are working through their relationships with Indigenous peoples while occupying Indigenous lands. Thus, what is needed more than ever at this time is scholarship that centers Indigenous ways of knowing, specifically drawing from a scholarship grounded in Indigenous librarianship.

5.0 The ethos of Indigenous systems of knowledge: living a good life

When we think deeply about Indigenous librarianship as praxis, that is, as a way of knowing that is realized through deliberate action, we are able to discern its distinctiveness in the broader field of library and information science. Where the field of KO is often structured around principles of controlled vocabulary, specificity, literary warrant, coherence and standardization, and moving from the general to the specific in subject categorization, principles of Indigenous librarianship are grounded in a more community-based approach, namely, a relational approach. Relationality and the relational approach must not be confused with the KO practice of finding linkages, or relationships, among concepts in order to build semantic webs or ontologies. For Indigenous librarianship, the relational approach is at once both ontological and axiological, meaning it is oriented toward a way of making sense of the world as well as the definition of a right way to live a good life, according to Indigenous ways.

Broadly, Indigenous librarianship is a practice of librarianship that honors Indigenous ways of knowing, relationality, and relational accountability, while privileging Indigenous people and communities, including their inherent sovereignty and their rights to control their systems of knowledge (Burns et al 2009). It is a field that has been informed by Indigenous scholars and librarians who have explored the importance of kinship within an Indigenous information literacy framework (Loyer 2017). Indigenous values and relationality in academic library services (Lee 2011), and infusing Indigenous lifeways in LIS curriculum (Roy 2015; 2017), to name a few. It is a field that emerged to counter the effects of colonization through Anglo-American information systems that seek to collect, preserve, catalog, classify, and provide access to IK for the benefit of the modern nation-state, “humankind,” and capitalism.

Those who work with KO systems must understand Indigenous perspectives to create better systems for Indigenous communities and content (Duarte and Belarde-Lewis 2015; Littletree 2019; Littletree and Metoyer 2015; Doyle 2013). Doyle (2013), building on the seminal work of Torres Strait Islander scholar Martin Nakata (2007; 2008, 305), presents a theoretical framework she calls “Indigenous knowledge organization @ Cultural Interface.” It is “comprised of an Indigenous social ontology, a relational Indigenous ethics, and humanistic commitment to more equitable outcomes for Indigenous learners.” Doyle’s focus on naming, claiming, and (re)creating uncovers seven principles of design used by Indigenous designers of KOSs. These seven principles are: Indigenous authority, Indigenous diversity, wholism and interrelatedness, Indigenous continuity, Aboriginal user warrant, designer responsibility, and institutional responsibility. One can infer how different these principles are from previously mentioned western principles informing KO. They are different in that they provide a space for ontological heterogeneity, questions about the right-to-know, and the resiliency and liberatory capacity of Indigenous peoples existing in a state of colonial domination.

Relationality is what distinguishes Indigenous ways of knowing from western knowledge in a fundamental way. Cree-Métis academic librarian and scholar Jessie Loyer
(2017) explains how the nêhiwaw (Cree) and Michif (Métis) law of wâhîkîhtowin (the importance of relationships and relational accountability) can inform an Indigenous information literacy practice. Loyer demonstrates the importance of radical love and being accountable to all our relations, including kin, land, stories, places, patrons, and library materials in the work of Indigenous librarianship. For Indigenous peoples, to live a good life is to be conscientious of the myriad sovereign agreements that allow all beings to co-exist in a continuum of creation (Watts 2013). As Indigenous peoples, through our relationships, we belong to our landscapes, places, languages, histories, ceremonies, peoples, families, nations, and clans. The responsibility of our belonging helps us live a balanced, good life.

Indigenous ways of knowing are, therefore, based on observing and living in an Indigenous way, communicating lessons and insights by telling stories, singing, and teaching—doing what anthropologists call the oral tradition—and by weaving, carving, making pottery, designing and building edifices, making art, fashioning tools and weapons, growing and creating medicine, designing calendars and other measures of time. Through intentional safekeeping and curating, as well as illicit practices of archaeological and anthropological theft and black-market sales, the expressions of Indigenous knowledge end up in libraries, archives and museums as books, documents, recordings, interviews, films, and other collectible objects. To appropriately describe and provide access to these expressions, it is insufficient to care only for the object, which is the material expression of a people’s way of life. Instead, the knowledge itself, including the means of its making, must be treated with respect, with a sense of responsibility toward the restoration of justice for Indigenous peoples in light of the history of colonialism, including the establishment of fair and just reciprocal relationships between the holding institutions and the Indigenous peoples who created the original expressions.

6.0 A conceptual model of Indigenous systems of knowledge

From the vantage point of relationality, we are able to more ethically and precisely evaluate expressions of Indigenous knowledge. Considering the dynamics of belonging inherent to relationality, and how expressions are the outcomes of those dynamics, allows us to forward a conceptual model of ISK. Understanding the working components of ISK helps us as practitioners of KO to acknowledge and legitimize the reasons for Indigenous approaches to KO, particularly as we continue to work through colonial institutions. It also helps us to more deeply understand existing definitions of ISK. To help explain the model, we revisit Dei’s (2000, 114) definition of ISK:

I refer specifically to the epistemological saliency of cultural traditions, values, belief systems and world views in any Indigenous society that are imparted to the younger generation by community elders. Such knowledge constitutes an ‘Indigenous informed epistemology’. It is a worldview that shapes the community’s relations with surrounding environments. It is the product of the direct experience of nature and its relationship with the social world. It is the knowledge that is crucial for the survival of society. It is knowledge that is based on cognitive understandings and interpretations of the social, physical and spiritual worlds. It includes concepts beliefs and perceptions, and experiences of local peoples and their natural and human-build environments.

Dei’s (2000) explanation is comprehensive in that it acknowledges that the survival of Indigenous societies is the function of ISK, and that this survival relies on deliberate connections to the social, physical, and spiritual world. In that sense, ISK can be understood as the philosophies and community practices that for generations have formed the foundation for what Anishinaabe scholar Gerald Vizenor (1998, vii) refers to as Native survivance: “an active sense of presence, the continuance of native stories, not a mere reaction, or a survivable name .... Native survivance stories are renunciations of dominance, tragedy and victimry.” Applied ISK advances the agency of Indigenous peoples in society rather than the value of the products of their knowing according to an Anglo-American society and associated regulations of a bibliographic universe.

Figure 1 depicts a simplified model of ISK, where concepts of relationality/holism, peoplehood, Indigenous ways of knowing, expressions of Indigenous knowledge, institutions, and values of respect, responsibility, and reciprocity are layered in a cyclical and interlaced structure. Rendering the ISK framework as a conceptual model allows us to discern how the components work together to shape our Indigenous ways of deliberating and interacting in the world. The components function to achieve a goal or set of goals, in this case, a right relation among all the beings in a biome, or a good life. The circular ISK framework is inspired by Archibald’s (2008) Holism model in which concentric circles are used to depict wellbeing as related to spiritual, emotional, physical, and intellectual spheres as they surround the circular symbols of oneself, family, community, and nation. At the bottom of the ISK diagram is a shape that contains the words responsibility, respect, and reciprocity, the three Rs. This shape is meant to represent a cradle, indicating that the practices of the three Rs cradle, or support, the entire system. Cradles, specifically, cradleboards, are important in many Indigenous communities as ways to protect our children. The cradle formed by the three Rs also
protects our future generations through the practices of responsibility, respect, and reciprocity.

The layers are individually labeled and numbered, but the layers should not be construed as independent or isolated. Dashed lines are used to indicate that the layers interact and cannot be separated. The goal of the illustration is to depict how the “essence of Native American knowledge is the understanding of how things are interrelated and continuously interacting” (Holm, Pearson, and Chavez 2003, 20). As such, the layers should be seen as overlapping circles, with relationality at the center, energizing each subsequent layer. Moving outward, the layers demonstrate increasingly visible and tangible aspects of ISK, which eventually manifest in multiple ways through the institutions that hold expressions of Indigenous knowledge.

For Indigenous peoples, the ISK framework might seem like nothing extraordinary. It is just the way we live. Indigenous peoples might also sense a danger in going so far as to create a visual model that might inadvertently serve to other Indigenous peoples and their expressions. Indeed, as pointed out by Māori librarian Helen Moewaka-Barnes (2015, 30): “the need to define, discuss or explain its existence in itself serves as a reminder of the power of colonization.” Nevertheless, the persistence of colonialism makes it imperative to examine these systems as Indigenous expressions of knowledge often comprise contested collections in libraries, archives, and museums.

Additionally, the conceptual model presented here may seem overly simplistic to Indigenous partners or those who have deep insight into Indigenous ways of knowing. The
model is not intended to be a complete and closed depiction of Indigenous ways of knowing. Rather, it is meant to serve as a bridge—a boundary-spanner—between the often incommensurable worlds of meaning and practice that shape western and Indigenous practices of KO. It is our hope that the diagram might serve as a tool to support the institutional and interpersonal justification of reciprocal, responsible relationship-building as well as the labor of becoming intelligent about relationality in the context of Indigenous KO efforts. We hope that it can be integrated into LIS and KO curricula and trainings as a visual representation of the broader ISK framework. To this end, we provide two cases—Navajo weaving and the Zuni language practices—to give context to both the conceptual framework of ISK as well as the nested layers of the model. The components of the model are discussed from the center outward or, in an epistemological sense, from their thought-origin to their expression to their institutional location.

6.1 Circle A: centering relationality and holism

Relationality is the key conceptual underpinnings of ISK; it is thus at the center of the model. Everything starts with relationships. Relationships energize the ways we interact with the world and the ways of knowing that emerge from those experiences. The relational way of being is considered by many to be the heart of what it means to be Indigenous (Wilson 2008). Relationality is dynamic. It allows us to actively participate in our world, ensuring that our interactions are compassionate, loving, and caring, as we become accountable to those with whom we relate. Wilson (2008, 80) writes:

Identity for indigenous people is grounded in the relationships with the land, their ancestors who have returned to the land and with future generations who will come into being on the land. Rather than viewing ourselves as being in relationship with other people or things, we are the relationships that we hold and are part of.

Relationality is also informed by holism, an Indigenous philosophical concept referring to the interrelatedness between the intellectual, spiritual, emotional, and physical realms to form a whole, healthy person (Archibald 2008). Often referred to as the philosophy of the four directions, the spiritual in this sense refers to Indigenous metaphysical values and beliefs, including beliefs related to the Creator and acts of co-creation. In this sense, the physical refers to the development and care of the body, including behavior and action as one’s body relates to the bodies of others in a physical terrain. The development of holism extends to and is mutually influenced by one’s family, community, band, nation, homeland, and landscape or waterscape.

It is imperative that KO scholars interested in ISK, or those who may be utilizing Indigenous collections and materials in efforts to map the unmappable, contemplate the origins of the objects in their collections. Before modern nation-state ethnographers, anthropologists, and linguists began documenting what we now refer to as ISK, entire societies lived by their ways of knowing, and expressed their knowing for hundreds and thousands of years. The books, articles, exhibits, and collections that comprise the holdings in our institutions began as relationships. Bruchac (2018) describes with painful clarity how a century of prominent ethnographers suppressed their awareness of their relationships with their Indigenous “informants,” and in so doing left behind a canon of knowledge about Indigenous peoples that was taboo, erroneous, misinterpreted, romanticized, and deadened so that the settler imaginary might live on. To avoid this historical truth by turning away from the need for changes in KO practice is to advance a virulent ignorance about Indigenous peoples and the landscapes in which we live.

To illustrate the importance of relationality in KO, we trace two cases—Diné (Navajo) weaving practices and Shiwi’ma Benawé’, the A:Shiwi (Zuni) language—as examples of Indigenous systems of knowledge that carry their relationality from creation all the way to institutions that name, describe, and categorize the expressions of, respectively, Diné and A:Shiwi knowledge. Relationality, for both Diné and A:Shiwi, is about the deep belonging of the peoples to their homelands, Diné Bikéyah and Shiwi’na. What it means to be Diné or A:Shiwi is not a matter of where someone is born or whether or not they have a citizen’s form of ID. It means that not only are they born to a Diné or A:Shiwi family, but moreover, that family belongs to an ancestral line that has lived in metaphysical harmony with their homeland for thousands of years (both tribes have homelands located in what is now the southwest US). This profound sense of belonging emerges in the myriad mundane agreements that Diné and A:Shiwi peoples make every day in the world around them; it is a way of interacting, which an outsider might recognize as “culture,” but which the peoples themselves recognize as the outward expression of their most profound philosophical and spiritual teachings. For Diné, relationality is often expressed as k’é, an ethic guiding interpersonal and interfamilial compassion and kindness, as well as hózhó, beauty, harmony, peace, and balance. For A:Shiwi, relationality is expressed in the very name of the people and in blessings. Shiwi language advocate Shaun Tsehetsaye explains (personal communication, April 9, 2019) the name of the community as: “A:shiwi is derived from the root word shiwi or priest. So the word a:shiwi means, of priestly, holy and peaceful people.” Similarly, blessings and prayers continuously seek and ask for k’ošabí, for all to be good and well (Curtis Quam personal commu-
nication, April 9, 2019)—in other words, encouraging and praying for the good life for ourselves and all others.

6.2 Circle B: peoplehood

Belonging to a people—a people who claim you as much as you claim them—is an integral aspect of what it means to be Indigenous. Peoplehood is a status distinct from personhood, because it situates an Indigenous person’s sense of self and belonging as the outcome of the peoples’ interrelated command over an (non-European) Indigenous language, a sacred history and accompanying ceremonial cycle, communal conscientiousness of kinship, and continuous pre-European habitation within a place or territory (Holm, Pearson, and Chavis 2003; Thomas 1990). A person is Indigenous because of their relationships within the sphere of activities determined by their people. For some Indigenous individuals, their relationships with these activities might be stronger or weaker. For instance, colonization displaced peoples from their traditional territories, and experiences of removal, kidnapping, and the boarding schools have corroded Indigenous peoples’ relationships with their languages and ceremonial cycles. Despite the effects of colonization, Indigenous peoples continuously interact with the activities defining peoplehood, even if the strongest relationships existed with their ancestors.

Land, language, sacred history and ceremonial cycle, and kinship are embodied in Diné philosophies and practices of weaving. Navajo photographer Monty Roessel (1995, 6) recounts the first time he witnessed his mother weaving:

When I entered the room, she motioned me to sit by her in front of the loom. She did not stop weaving and she did not stop singing. After a few minutes, I asked why she was weaving. She told me that as long as she had her loom, she was home—in Diné Bekaya (Nava-joland). “This is who we are,” she said. “The loom connects me with the sacred mountains, and the song connects me with my mother.”

Diné weavers do their work not as individual artisans, but rather, as members of a people who have vast and deep connections to the land, oral teachings, and ancestral memory.

The activities defining peoplehood are also apparent in the philosophies and practices guiding A:Shiwi language work. Belarde-Lewis (2013) examines the vital role of Shiwi’ma A:wan Bena:we’ in the protection and documentation of A:Shiwi history and sacred ways of knowing through the arts, particularly through the Zuni Map Art Project (ZMAP). The Zuni language is a linguistic isolate (Ferguson and Hart 1985), which makes the history and emergence of the people particularly compelling. The ZMAP consists of thirty-five fine art map paintings documenting the emergence and migration history of the A:Shiwi. When examined through the lens of peoplehood, Belarde-Lewis (2013) found Shiwi’ma Benawen to be a critical element in the perpetuation of A:Shiwi relationship to land and to the continuation of the complex ceremonial calendar, which, in turn, is another method of recounting the emergence and migration history of the Zuni people. Both general and esoteric expressions of Shiwi knowledge are embedded in the map paintings. The unlabeled maps provide opportunities for community members to deepen their own understandings of Zuni history. Non-Zunis have been invited to appreciate and learn about Zuni culture, history, and aesthetics through the public exhibition of the maps in Flagstaff, Albuquerque, Los Angeles, and New York City.

6.3 Circle C: Indigenous ways of knowing

The activities defining peoplehood inform Indigenous ways of knowing, including developing, creating, organizing, sharing, and disseminating knowledge. Tewa scholar Gregory Cajete (2000; 2004) uses the term Native science to describe the community practices and philosophies that connect people to place, language, and ceremony, and that have led to knowledge and innovation based on creative exploration and participation in the natural world. Indigenous ways of knowing are the ways Indigenous peoples have been creating, transmitting, categorizing, and preserving knowledge since the beginning of time. Documented as verbs, they are the active processes such as storywork (Archibald 2008), observing, creating art, relating to elders and children, planting, cooking, dancing, praying, hunting, fishing, listening, running, and dreaming. These are the experiences we have when we exercise our relationships with family, clan, ideas, language, land, ceremonial cycle, and sacred history.

We note here that there is an important distinction between knowledge and knowing. Kanaka Maoli scholar Manulani Aluli Meyer (2008, 221) explains how:

Knowledge [is] the by-product of slow and deliberate dialogue with an idea, with others’ knowing, or with one’s own experience with the world. Knowing [is] in relationship with knowledge, a nested idea that deepened information (knowledge) through direct experience (knowing). The focus is with connection and our capacity to be changed with the exchange.

Knowing stems from direct experiences, such as telling, listening, and using traditional stories and teachings in our lives. Knowing also comes from carefully observing the natural environment and understanding of the effects of forces in the world. Standing Rock Sioux scholar Vine Deloria, Jr. (2006, xxiv-xxv) writes, “From observing the world around
them, they could see orderly processes that marked the way organic life behaved. From the obvious motions of the sun and moon to the effects of periodic winds, rains, and snows, the regularity of nature suggested some greater power that guaranteed enough stability to be reliable and within which lives had meaning."

To weave according to a Diné philosophy and to speak in the Zuni language is to exercise, respectively, a Diné way of knowing and a Zuni way of knowing. Diné weaving technology and practices are customarily passed through matrilineal lines (Lamphere 2007; Teller Ornelas and Teller Pete 2018) and taught through apprenticeships. The designs and colors represent specific geographic regions of Navajo territories (Roessel 1995; Hedlund 2004; Begay 1996) and are aspects of Diné ways of knowing. The ancient weaving tradition is grounded in Diné cosmologies and family history (Hedlund 2004), which accompany stories describing the Navajo beliefs of Spider Woman and how she gifted weaving expertise to the Navajo (Teller Ornelas and Teller Pete 2018). In a similar manner, Shiwi’ma Bena:we permeates every facet of the complex ceremonial calendar maintained by religious leaders and community members in Zuni Pueblo. For these two practices, the ways of knowing include observing, listening, caring for sheep, shearing and carding wool, gathering plants for dyes, setting up a loom and threads, weaving, cooking, praying, cleaning, dancing, preparing ceremonial clothing, caring for visiting relatives, aligning ceremonies with celestial cycles, and speaking the languages to language learners so they can reinvigorate their belonging.

6.4 Circle D: expressions of Indigenous systems of knowledge

Expressions of Indigenous knowledge are the manifestation of Indigenous cultures. The manifestations can be tangible, taking the physical forms of weavings, pottery, buildings, weapons, calendars, and gardens. Intangible manifestations can be songs, prayers, dances, gardening practices, customary food recipes, hunting techniques, and medicinal plant knowledge.

Kidwell (1993) describes Indigenous peoples’ careful and systematic observation of the natural world in which the people developed complex sets of knowledge systems that helped them to understand, interact with, and predict elements in the environment. Innovations such as astronomy, technology and medicine, domesticated plants and animals, and precise calendars were the result of Indigenous peoples’ observations and close interactions with their environments. Kidwell’s description, although based on the philosophies and practices at play in 1492 on the eve of the European invasion of Tawantinsuyu, Abya Yala, and Turtle Island (now known as North America), demonstrates the longevity and the complexity of these expressions of Indigeneous knowledge, as well as how these expressions have survived for many contemporary Native peoples.

In information institutions, this is where much of our attention is given. We hold the objects in our hands, try to come up with the best words to describe them, think about where they fit with regard to similarities and differences from other objects in our collections, and then move on to categorizing the next set of objects. But without understanding these objects as expressions of Indigenous systems of knowledge, we risk mislabeling objects, reducing them to a mere characteristic description, separating them from other expressions needed for their use and interpretation, and evacuating them of their meaning. With regard to Diné weaving, these expressions might be books and papers about weaving practices, rugs, dresses, blankets, looms and other tools, recordings of weavers, photos, and museum catalogues. With regard to the Zuni language, these expressions might be books and papers about the language, books and papers written in the language, art and images that can only be interpreted through knowledge of the language or with assistance of a language speaker, and recordings of individuals speaking the language.

6.5 Circle E: information institutions: libraries, archives and museums

It is important to acknowledge the role that mainstream information institutions play in the collection, cataloging and preservation of the expressions of Indigenous systems of knowledge. These libraries, archives, museums, and institutions of higher education—especially if they are not Indigeneous-run—may not acknowledge the Indigenous ways of knowing and relationality undergirding the creation of Indigenous collections. For these institutions, their approach to Indigenous objects might only address the top two layers of our conceptual model: institutions and, superficially, expressions of Indigenous systems of knowledge. Such an approach is symptomatic of the settler’s epistemic narrow-mindedness, resulting in a perpetuation of ignorance about the essence of the objects: the communal and familial relationality and complex ways of knowing that resulted in their making. If institutions ignore the relationality that infuses the object with meaning, the institutions risk breach of protocol when collecting, describing, organizing, and providing access to materials. Institutions that hold these expressions of Indigenous systems of knowledge in their collections, whether it appears in books, films, primary sources, or journal articles, must acknowledge the importance of relationality when designing KOSs.

Continuing the example of Diné weaving and Ashiwi Bena:we at the institutional level, we find expressions of Indigenous systems of knowledge in university libraries, archival collections, museums, and databases. In the case of
6.6 Cradling the system: reciprocity, responsibility, and ties are all orally transmitted, learned activities, and they in- stances and teachings, and honoring clan member responsibili- ties and mutual respect, reciprocity, and relational accountability.” Un- written protocols govern relational accountability in Indig- enous communities. For example, knowing when to give and receive gifts, understanding seasonal influences on sto- ries and teachings, and honoring clan member responsibilities are all orally transmitted, learned activities, and they in- form Indigenous peoples’ relational way of being.

Institutions that hold IK may implement various methods to incorporate relational accountability in their collections and KOSs. Advocates may apply guidelines, such as the Protocols for Native American Archival Materials (First Archivist Circle 2007) and the Aboriginal and Torres Strait Islander Protocols for Libraries, Archives, and Information (Aboriginal and Torres Strait Islander Library 2012), to develop practices that respect ISK. The ALA’s Librarianship and Traditional Cultural Expressions (American Library Association 2010) has the potential to re-emerge as a useful and powerful document if its users embrace the inherent relationality of expres- sions of Indigenous systems of knowledge, as well as the re- sponsibility, reciprocity, and respect these expressions de- serve.

With regard to Diné weaving, leaders in institutions may realize they need to strengthen their intellectual and emo- tional conscientiousness about Diné protocols of sharing creation stories and as well as their sensitivity about the trauma associated with discussing painful events in history, such as the Long Walk, or Huwédí. Institutional leaders— including directors, administrators, advisory boards, cura- tors, librarians, archivists, and docents—might also con- sider their roles in light of reciprocity, that is, giving back to Diné people by helping them recover Diné intellectual tra- ditions through their collections (Denetdale 2007).

Respect for Zuni knowledge and language is exemplified through the following anecdote. When describing the year- long process leading up to the first commission, former di- rector of the A:shiwi A:wan Museum and Heritage Center Jim Enote recounted (Enote and McLerran 2011, 6) that the first decision of a community-wide advisory group was to “decide what was not going to be mapped.” The community- based decision to withhold active sites of religious activity on the maps reflects the communities’ cautionary stance toward ethnologists of all stripes who have been re- searching and publishing about the people without prior and informed consent since the 1880s (McFeely 2001; Beccar and Srinivasan 2009; Isaac 2007, Belarde-Lewis 2012). We note here a clear controversy regarding the pro- gressive American ideology that requires that public librar- ies and state archives provide public access to all infor- mation in their collections in support of democratic values around free expression. Because of the history of American colonialism, this idea runs counter to the colonial reality of sovereign Native nations, the members of which must exert principles of inherent and government-to-government sov- ereignty to curb the exploitative and assimilationist habitus of taking that has enabled American imperialism. For sov- ereign Native nations governing through colonization, prin- ciples of national security, domestic privacy, cultural revital- ization, and domestic harmony inform their decisions about access more than democratic ideals write large. As Wise and Kostelecky (2018) note, inviting community members in for consultation to discuss their language mate- rials was of paramount importance as the University of New Mexico library system digitized Shiwí language materials. They found that collaboration with community members dramatically improved discoverability of the collection, and helped UNM library staff more deeply consider their role as stewards of the language materials now in their collection. Community consultation was necessary as some of the ma- terials are culturally sensitive. The materials were digitized and available online; however, the description notes in- form the visitor that the still image cannot be translated, and that speakers of the Zuni language will be able to identify information provided by the image. The inclusion of the image, while withholding the exact meaning and translation of the image, is an example of how academic and library in- stitutions can work with Native communities to ensure re- spectful engagement with the communities and their mate- rials.

We conclude this section by including two illustrations: Table 1 summarizes the Diné weaving case and the A:shiwi A:wan Bena:we case, from the core of relationality outward to the institutions that hold the expressions of Diné and A:shiwi systems of knowledge. Obviously, the ways of knowing shaping these two cases are profound and beyond the scope of this paper. By reviewing Table 1, however, we...
hope that readers are more easily able to differentiate the components of the ISK conceptual model as well as to appreciate how they overlap. Indeed, drawing lines around these examples and placing certain examples in one category or another feels counterintuitive. This, perhaps, demonstrates the fundamental challenge of attempting to organize ISK using a categorical approach. As Indigenous thinkers, it retains the epistemic and cognitive tensions inherent to deeply philosophical labor.

Figure 2, below, is the ISK conceptual model with examples for each layer of the model, rendered for further study and critique.

7.0 Summary

This research asks: what are frequently used definitions for the knowledge created by Indigenous peoples? How do these definitions relate to the field of KO and the subfield of IKO? What does a conceptual model of Indigenous systems of knowledge reveal about KO practices and principles? We find that there are similarities and differences between the terms defining the kinds of knowledge created by Indigenous peoples. These similarities and differences can be explained in part by their epistemic inclusion or exclusion of the dynamics of relationality as these are enacted by Indigenous peoples in the context of their peoplehood.

How KO practitioners use these terms—in particular how they are used to guide policy—shapes the capacity of their institutions to engage in practices of reciprocity, responsibility, and respect. Finally, a conceptual model of ISK surfaces transformations in ways of knowing as these move from thought-origin to material expression, and also reveals the relative capacity of existing institutions to address these transformations through alternatively: a) unsettling and de-colonizing the mentalities shaping KO practice; b) shaping changes in existing KO techniques; c) adjusting institutional policy and programming; and, d) rereading KO literature in light of the histories of colonization shaping the ways we perceive and evaluate Indigenous ways of knowing.

8.0 Conclusion

Before addressing the techniques and methods of trying to fix current KOSs for Indigenous communities, it is important to take the time and effort to understand both the history of coloniality in KO, as well as the philosophical basis of Indigenous systems of knowledge. This article provided both. We spent time contextualizing the detrimental effects of colonization with regard to Indigenous knowledge in its various forms. We presented a conceptual model of Indigenous systems of knowledge, focusing on relationality as an integral part of ISK, a concept that should be considered essential to
any IKO project. Centering relationality is a decolonizing technique that allows Indigenous ontologies to emerge in otherwise colonial institutions. We understand that preserving and providing access to Indigenous ways of knowing for the benefit of Indigenous peoples through colonial institutions was never the intended goal. As Indigenous scholars and educators, however, we engage in a form of epistemological code-switching as we bridge often incommensurable knowledge systems. We do this with relational accountability in mind, knowing that we are responsible to our respective Indigenous communities and the field of Indigenous librarianship. At the same time, we are scientists and thinkers who are accountable to the larger fields of KO, information science, and Native and Indigenous studies. We encourage readers to also center relationality in their knowledge organization research and practice.

**References**


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The more scientific data is generated in the impetuous present times, the more ordering energy needs to be expended to control these data in a retrievable fashion. With the abundance of knowledge now available the questions of new solutions to the ordering problem and thus of improved classification systems, methods and procedures have acquired unforeseen significance. For many years now they have been the focus of interest of information scientists the world over.

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