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# Race and Ethnicity in Classification Systems: Teaching Knowledge Organization from a Social Justice Perspective

MELISSA ADLER AND LINDSEY M. HARPER

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## ABSTRACT

Classification and the organization of information are directly connected to issues surrounding social justice, diversity, and inclusion. This paper is written from the standpoint that political and epistemological aspects of knowledge organization are fundamental to research and practice and suggests ways to integrate social justice and diversity issues into courses on the organization of information.

## INTRODUCTION

Literature from the subfield of knowledge organization (KO) in library and information studies (LIS) tends to remain outside of some of the wider conversations about race and ethnicity in libraries, and discussions regarding teaching diversity and social justice generally focus on public service and workplace issues within LIS. Todd Honma, however, convincingly argued in 2005 that ontologies predicated on whiteness across LIS frame the field's discourses about race and ethnicity. We contend that critical and historical study and teaching of the classifications that organize information about racialized subjects in library catalogs, databases, and commercial search engines offer insights into the "racialized structure of the field of LIS" that Honma identifies (2005, 21). Many KO scholars study the ways in which systems organize racialized subjects, and there remains an ongoing need to address the relationship between the classification of information, ontology, and epistemology across LIS. The aim of this paper is twofold: 1) it will argue that classification is intrinsically tied to matters of race and ethnicity across LIS and beyond; and 2) it will suggest that KO curricula can provide opportunities for understanding the politics of classification and how it affects access to and circulation of information.

We begin by way of example to illustrate how categories and classification are connected to other areas of research in LIS. The Library of Congress catalog records (consulted in July 2018) for recently published books on social justice and race in librarianship provide some clues about where the field of LIS stands with regard to these issues. These examples show possibilities and limitations of subject standards in providing access, and they provide windows into an intersectional analysis of subjects.

First, the catalog record for *Where Are All the Librarians of Color?: The Experiences of People of Color in Academia*, edited by Rebecca Hankins and Miguel Juárez (2016), reveals some particularly interesting insights. The record stands in contrast to the book description, which reads:

This edited volume addresses the shared experiences of academic librarians of color, i.e. Hispanic Americans, African Americans, Native Americans and Asian Americans. These experiences are very similar and offer a narrative that explains the lack of librarians of color in academia, especially those librarians that have experienced the daunting academic tenure process. (See the publisher's website: <http://libraryjuicepress.com/librariansofcolor.php>)

The catalog record provides shelf classifications using the Dewey Decimal Classification (DDC) and the Library of Congress Classification (LCC). The LCC location is Z682.4.M56 (Libraries—Library science. Information science—Personnel—Special groups, A-Z—Minorities), and the Dewey class is 027.7092 (College and university libraries—Biographies). Four subject headings are provided in the record:

Minority librarians—United States.  
 Academic librarians—United States.  
 Minorities in higher education—United States.  
 Diversity in the workplace—United States.

The second example is the catalog record for *Teaching for Justice: Implementing Social Justice in the LIS Classroom*, edited by Nicole A. Cooke and Miriam E. Sweeney (2017). This book is part of the Litwin Books/Library Juice Press series on Critical Race Studies and Multiculturalism in LIS, and the description reads, “Borne of a professional development workshop, *Teaching for Justice* highlights the commitment and efforts of LIS faculty and instructors who feature social justice theory and strategies in their courses and classroom practices” (<http://libraryjuicepress.com/teaching-for-justice.php>).

The book is classed with general works on library and information science education in both Dewey (020.711) and LCC (Z668). There are six subject headings in the record for this book:

Library education—Social aspects.  
 Library education—Social aspects—United States.

Social justice—Study and teaching (Graduate)

Social justice—Study and teaching (Graduate)—United States.

Library schools—Curricula.

Library schools—Curricula—United States.

These examples provide information about the state of diversity and inclusion in LIS. For example, the records do not clearly address race or ethnicity, despite the fact that both books are concerned with these topics. Indeed, there are Library of Congress headings for subjects such as African American librarians, Asian American library employees, as well as African American academic libraries and Indian tribal libraries (though there is a lack of headings for many racial and ethnic categories within LIS), but these are not entered into the records above. The use of “minority librarians” in place of “librarians of color,” and “social aspects” to represent the subtopic of social justice demonstrate some of the tensions that derive from using controlled vocabularies that privilege standardization and uniformity over diversity for the purpose of access (see Olson 2002). The LCC hierarchy that places “Minorities” as a “Special group” within “Personnel” both spatially and linguistically separates this book from works pertaining to assumed “general” personnel. Additionally, the division of topics into discreet categories in subject headings and on the shelves limits intersectional treatment of these works and not only reveals some of the assumptions upon which KO standards are created and applied, but may also impede access. These systems were created in the late nineteenth and early twentieth centuries and have long lineages that carry farther into history, and so continued study and teaching is required to understand the implications of structures that have racist and colonial histories.

A knowledge organization curriculum that brings these and other tensions into view may add complexity and understanding to diversity and inclusion in classification and metadata standards, as well as the wider LIS field. Arguably, KO courses in LIS programs present uniquely fundamental opportunities to discuss the ways in which classifications organize knowledge, how classifying information very often reproduces dominant norms, and how that affects the circulation of information about race and ethnicity. Some of the most pressing social issues, policies, events, and conditions inhere problems of classification, and the systems that order and organize knowledge mirror and support the divisions that sort and rank members of society. This paper argues that KO is integral to all areas of information practice, and that issues related to social justice, diversity, and inclusion are inherently KO issues. Coursework can address the epistemological assumptions about race and ethnicity that organize the systems by which access to information is facilitated and obtained. For LIS departments working toward addressing diversity and inclusion across the curriculum, courses at all levels of information organization curricula—but especially the core courses—can be spaces in which to introduce students

to ethical, practical, and theoretical questions around the role of categories and infrastructures facilitating access to information.

The following pages include a review of the literature most relevant to diversity and social justice as they relate to KO curricula. The paper then provides examples that illustrate the importance of teaching political aspects of the organization of information, including Library of Congress Subject Headings (LCSH), shelf classifications, hashtags in social media, and algorithms that drive commercial search engines. Each example includes a section on pedagogical approaches, including suggested readings, discussions, and course activities. An appendix features a coauthor's narrative of an exploration of the Library of Congress Classification. Harper was a second-year student in a master of library science program.

This is by no means an exhaustive treatment, but rather, a beginning, to suggest some ways to add lessons on diversity and social justice into different areas of KO curricula. It is not meant to be prescriptive, but is offered to stimulate discussion, and we do not suggest a complete overhaul that completely changes the focus of KO courses. One or two lessons in an introductory course may provide a sufficient entry into some of the issues raised here. Our focus is on categories, classification, and hierarchies, but standards for other forms of description, information architecture, and encoding also present opportunities for discussion of diversity and inclusion.

## LITERATURE REVIEW

### *Defining Knowledge Organization*

In a 2008 issue of *Knowledge Organization*, Hjørland and Tennis provided complementary definitions that together convey what KO practice is and does. Hjørland (2008) offers narrow and broad definitions of the concept:

In the narrow meaning, Knowledge Organization (KO) is about activities such as document description, indexing and classification performed in libraries, bibliographical databases, archives and other kinds of “memory intuitions” by librarians, archivists, information specialists, subject specialists, as well as by computer algorithms and laymen. . . . In the broader meaning, KO is about the social division of mental labor, i.e. the organization of universities and other institutions for research and higher education, the structure of disciplines and professions, the social organization of media, the production and dissemination of “knowledge” etc. (86)

Hjørland then indicates that the essential distinction between the narrow and broad senses of KO resides in the differences between the “social organization of knowledge” involved in the broad definition and “the intellectual or cognitive organization of knowledge” associated with the narrower conceptualization (86). He asserts that the narrow understanding

of KO cannot be understood in isolation from social conditions in broader perspective.

Tennis (2008) provides a concise definition: “KO is the field of scholarship concerned with the design, study, and critique of the processes of organizing and representing documents that societies see as worthy of preserving” (103). The notion that societies determine what is worth preserving underscores the ways in which KO techniques are inherently social and cultural practices. These definitions move beyond the conceptualizations of information organization that treat information as data or things. Both Hjørland (2008) and Tennis (2008) insist on grounding KO research and practice in principles and theories of epistemology, or *how we know*. They recognize the ways in which the acts of organizing, naming, and standardizing are socially and culturally situated, may carry political consequences, and affect the circulation and reception of knowledge. Indeed, such practices are not neutral or external to the resources being organized but should be understood as technologies and techniques that constitute and create knowledge. In Tennis’s words, “we create knowledge, and our epistemic stance dictates what kind of knowledge that is” (103).

These definitions are foundational to KO education and practice, and we suggest that such conceptualizations require grounding core courses on the organization of information in theories of epistemology. This opens up possibilities for understanding social and political dimensions of the KO standards and technologies.

### *Diversity and Social Justice in LIS Education*

A few models for integrating diversity and inclusion across the LIS curriculum presently exist. Some LIS graduate programs offer a required or elective course that speaks directly to diversity and social justice issues within the library setting. For example, Nicole Cooke, among others at the University of Illinois, has developed courses devoted to social justice, diversity, and inclusion in LIS and has been a leader in advancing conversations about implementing courses and curricula (Cooke and Sweeney 2017; Cooke 2017; Cooke, Sweeney, and Noble 2016). At the same university, Kathryn LaBarre and colleagues offer a seminar on the politics of organizing information. Many programs infuse diversity and inclusion across many courses; very often, however, these provide cursory lessons on diversity or social justice as they relate to a narrow aspect of a course. Instructors incorporate diversity-centered lessons into current pedagogical practices in a range of ways, from required readings, to more substantial projects, like a semester-long assignment that requires students to critically analyze relationships between libraries and underrepresented groups. Indeed, some KO instructors have found very effective ways of integrating readings, assignments, and discussions into introductory courses, and there does seem to be an increased recognition of the importance of critical the-

oretical approaches to teaching KO. In certain contexts, LIS students may actively consider social justice issues while learning about the principles and foundations of KO systems and practice. For example, an instructor might ask students to evaluate the structure and terms in a particular class of the Library of Congress Classification, such as “H” (Social Sciences) and then identify how race is classified in the a specific range. They might explore the related topics, the disciplinary conventions and hierarchies of the classification, the notation, and the types of materials found in those locations.

Most advocates for inclusion of diversity and social justice teaching in LIS curricula frame their arguments in opposition to the traditional ideal of library neutrality (Cooke, Sweeney, and Noble 2016; Jaeger and Sarin 2016; Pagowsky and Wallace 2015). There is now a widespread acknowledgement that, not only is neutrality impossible to uphold, but in many situations, it is an inappropriate ideal to strive for. Librarians who understand libraries as spaces that advance equality and justice often view neutrality as an obstacle to those goals. One area in which the notion of neutrality seems to have particular staying power is in the organization of information. The practices and policies that guide metadata and catalog work require rules, standards, and classifications—all components that take on an appearance of scientific and technical objectivity. The very possibility of the idea of library neutrality exists because of the belief in the objectivity of library science. The cost of such framing is not only an erasure of discordant voices, but perhaps more important, a depoliticization of the library space. KO systems carry this legacy, and although LIS professionals are witnessing a huge growth in the types of metadata schemas, full-text searching, and folksonomies, the foundations upon which these systems are built are all based to some extent in positivist methods and universalizing discourses that privilege certain norms.

KO scholars are increasingly critiquing the positivist assumptions and methodologies upon which classification theory and practice are based. Jens-Erik Mai, for example, suggests that certain ethical dilemmas are inherent to classification and that critique, change, and adaptation must take into account local, cultural, and subject-specific requirements. He writes: “Libraries and librarians should free themselves from senseless notions of neutrality and objectivity and instead seek epistemological and ethical guidance in the practice of the domains” (2010, 249). LIS literature tends to be divided across KO, information literacy, LIS education, collection development, preservation, technology, management, and information seeking, with discussion of race, gender, or sexuality injected into these areas separately. However, classification and retrieval are central to all areas of information practice, and classification theory informs each of the areas of LIS. Interrogating the field as a whole means to take stock of the various ways in which universalized norms are built into the systems or,

perhaps more importantly, how norms and dominant discourses become universalized through the systems that are designed to provide access and utility for all. These norms not only affect systems and their users but also influence the rhetoric and methods of inquiry for education and research in all areas of LIS.

### *Diversity and Social Justice in Knowledge Organization*

Patrick Wilson stated in 1968: “To have bibliographic control over a collection of things is to have a certain power over those things; what things, and what sort of power, it is our business to discover or decide” (6). Although the language of “bibliographic control” has given way to terms like “information architecture,” “metadata creation,” and “linked data,” the message is the same: to have control over the organization of information means to have power, and those of us who make or use tools for organizing knowledge have an ethical responsibility. Wilson could not have anticipated the growth in the type of information resources that require control, but perhaps more relevant to our discussion, he did not directly attend to questions of social justice, race and racism, and diversity. While mid-twentieth-century scholars and practitioners did understand that standardization and uniformity are achieved by removing a diversity of representations, the concerns around social justice were yet to be strongly articulated by Sanford Berman and others. Integrating these issues into the curriculum more explicitly will demonstrate some of the tensions between diversity and standardization.

KO courses may provide a space to think creatively about organizing knowledge by introducing students to a variety of techniques and systems from various perspectives and presenting opportunities to learn ways to use techniques to advance social justice. For example, a group of students and librarians at Dartmouth College petitioned the Library of Congress to change “Illegal aliens” to “Undocumented immigrants,” prompting debate and a legal backlash from the US Congress (Peet 2016). Relatedly, a wave of criticism has been launched at Google and other search engine companies for their retrieval and display of racist and sexist images and misinformation (Allen 2016; Miller 2015; Noble 2013). And hashtags like #BlackLivesMatter and #NoDAPL (No Dakota Access Pipeline) have been instrumental to the formation of protest movements in the United States. LIS professionals increasingly bear responsibility in ensuring patrons find useful and relevant information. Fake news has entered into the daily lives of the people libraries serve, and racist/sexist/anti-immigrant content frequently appears at the tops of result lists for simple Google searches. As access to information is fundamentally made possible via structures, naming, and control, it is important for all workers in information professions to understand how KO techniques influence the circulation of content, whether it is in article databases, on library shelves, or over social media.



The organization of information has a direct bearing on the presentation of information and relevance. Underlying the presentation of information are assumptions about users and their information needs and desires. The relationships among libraries, political economy, access to information, standards, and technologies have everything to do with the organization of information. Arguably, an understanding of organization techniques as tools that frame discourses is a critical foundation upon which the mastery of specific standards and principles takes place.

Nearly all LIS departments require an introductory course in KO (also named Organization of Information, Information Representation and Access, or similar titles). Introductory courses are ever-increasingly packed with topics and include basic lessons on classification, cataloging standards, Dublin Core, XML, the Semantic Web, database design, search engines, and so on. Most students who take foundational KO courses will not necessarily be catalogers or metadata librarians, but the issues around social justice and KO directly affect the work of reference, information literacy, outreach, and digital librarians. One question is whether the politics of classification and description should remain mostly reserved for advanced-level courses and seminars, or whether students should learn the political aspects and epistemological groundings of KO systems when they begin to learn and apply techniques and standards in those introductory-level courses. Although fitting diversity and inclusion-related issues into the curriculum may appear challenging, teaching issues related to social justice and diversity in KO at all levels throughout LIS programs is worth considering.

Much has been said about the ways in which the DDC and LCC relegate minority subjects to the margins. Hope Olson's research (2002) on how these systems construct a limit in which a minority subject is set against a norm is widely known. Nonnormative genders and sexualities are marked against an assumed cis-male, heterosexual norm, and nonwhite subjects are named as exceptions to assumed whiteness. We suggest that the theories underlying the classification systems and controlled vocabularies created in the late nineteenth and early twentieth centuries, combined with the information science and theories driving the systems through which information is retrieved, have produced systems that uphold dominant norms and inhibit nondominant and intersectional approaches to organizing knowledge and information.

A few articles explore existing and potential activities and agendas in KO curricula. For example, Kumasi and Manlove (2015) provide a roadmap to assist LIS faculty in building diversity and inclusion into their courses, suggesting that pedagogical practice should include "diversity levers" or salient topics that provide entries into discussion, essential provocative questions, readings, and classroom activities. They also surveyed LIS faculty to ascertain the extent to which diversity and inclusion are

incorporated into core courses and the ways in which faculty approach these topics. They found that there was limited coverage in core courses on information organization. One survey participant indicated that their course “offers fewer opportunities for integrating diversity and social justice concepts, and practices than most core courses” (437). Kumasi and Manlove attribute this to common faculty perceptions that KO provides few opportunities for diversity and social justice because of the technical nature of the courses. Sanford Berman (1971) brought the biases and limitations of Library of Congress standards regarding race and ethnicity into public view in the 1970s when he published his treatise on LC Subject Headings and petitioned the LC for change. Since then, scholars have observed and used critical theoretical methods to analyze structures and naming practices, and some have created or studied alternatives to LCSH (Littletree and Metoyer 2015; Olson 2002). One of Kumasi and Manlove’s participants mentioned Berman’s activism, but stated that most issues regarding LCSH “have since been addressed,” appearing to suggest that there is no longer significant work to be done in this area. The truth is that there are many unresolved and important issues—Berman certainly raised awareness and effected change, but much remains to be done. Kumasi and Manlove (2015) seem to reject the notion that the technical nature of KO precludes teaching humanistic-oriented topics like diversity and social justice: “The very act of cataloging and classifying knowledge created by humans is innately connected to diversity and social justice issues” (437).

Melodie Fox (2014) is interested in integrating epistemological questions about gender and sexuality into LIS education, arguing that categories, truth, knowledge, and authority are central to LIS practice. Fox provides a list of essential questions that address gender, sexuality, and classification, as well as questions regarding epistemology and what it means to know. Fox’s questions are appropriate for a variety of courses across the curriculum, but they do seem to be most suited to KO. Mehra, Olson, and Ahmad (2011) surveyed existing online courses to take an inventory of approaches to teaching diversity and inclusion in distance education programs. Respondents indicated some general themes that are or could be taught in organization of information courses, including “bias in classification,” “cultural and language issues in indexing and retrieval,” and “diversity in library classification and cataloging, classification theory, and knowledge organization” (45). One of those respondents said that a course project assignment in their metadata course always “involves a culture-rich collection and working with a culture” (45).

## LESSONS ON DIVERSITY AND KNOWLEDGE ORGANIZATION

As Olson (2002) has indicated, library classifications were created with a singular public in mind. This public was viewed to be like the people

designing the systems: white, cis-male, middle class, and Christian. Such epistemological assumptions carry forth beyond library shelves and into article databases, digital libraries, and commercial search engines. Below, examples are provided that illustrate opportunities for engaging with topics of diversity and social justice in the areas of LCSH, shelf classifications, commercial search engines, and social media. Potential questions for discussion are also provided, and a select list of recommended readings appear toward the end of the article.

### *Library of Congress Subject Headings*

One case demonstrates the relationship between LCSH and cultural and state discourses especially well. In 2014 a group of students and librarians at Dartmouth College petitioned the Library of Congress to change the LCSH “Illegal aliens” to “Undocumented immigrants.” They submitted the proposal through the Subject Authorities Cooperative Organization (SACO), a formal process that presents headings to a committee at the Library of Congress for approval. The committee responded by introducing two different subject headings, “Unauthorized immigration” and “Non-citizens,” to replace the existing “Illegal aliens” in March 2016 (Baron and Gross 2016; Peet 2016). Subsequently, on April 13, 2016, Representative Diane Black introduced a bill known as the Stopping Partisan Policy at the Library of Congress Act, directing the Library of Congress to retain “Aliens” and “Illegal Aliens.” And on May 16, 2016, four members of Congress issued a letter to the acting librarian of Congress, requesting a reversal of the change and accusing the Library of Congress of conceding to “political pressure of the moment” (Smith et al. 2016). Although the Library of Congress gathered input from the public, these events have stalled change, effectively determining the terms of access to materials. As of July 2018, the authorized subject heading is still “Illegal aliens.”

*Pedagogy.* This example highlights some of the ways in which KO systems are situated in time and place, how LCSH bridges state and cultural discourses, and that they reflect a particular American-centric point of view regarding immigration and membership in society. It also illustrates the importance of resistance and protest in effecting change and dialogue with regard to library classifications, as well as the limitations of corrective measures to “fix” or correct existing structures when language changes. Understanding not only the structure and application of terms in controlled vocabularies but also the political and social contexts in which they are set is important for librarians in every area of the field. As Emily Drabinski (2013) points out, “from the perspective of user services, the problem of inaccessible KO is one that can be productively addressed at the moment of mediated research: where librarians assist users in dialogic engagement with library access structures” (95). Drabinski views these mo-

ments to be opportunities for critical library instruction, and encourages practitioners to locate responsibility in various roles, rather than solely with catalogers.

We offer a description of a course activity that builds upon one that Hope Olson used in her introductory KO course at the University of Wisconsin–Milwaukee. It begins with asking students to provide key terms or phrases to describe the “aboutness” of different types of resources (images, books, and articles) on a variety of topics before they have had any training in controlled vocabularies. The class talks about the significance of selecting terms that they expect users to search by, and then discusses the importance of genres, forms, topics, names, and geographic locations. The students are discouraged from looking at others’ terms. All of the terms are entered by the instructor into an excel sheet, and tag clouds are generated in Wordle so that students see not only the wide variations in what they consider to be important but also the variation in usage for similar terms—synonyms, plural forms, spelling, acronyms (LGBT v. GLTBQ, LGBTQIA, etc.). Students witness the multiplicity of terms that they collectively provide, and in turn, the need for authority control, how a folksonomy is created and functions, and the challenges of arriving at an agreement on the “aboutness” of information materials. Then the principles behind controlled vocabularies are explained, and students use the LC authorities database to find appropriate headings associated with the terms they applied. The students and instructor look at actual records to see how catalogers and metadata librarians have assigned headings. This series of exercises illustrates the functionality of subject headings in real practice, and the hope is that it provides context for information seeking, literacy, and other areas of the information professions. Where these are particularly challenging is when the students are required to assign terms to resources about race and sexuality, and the exercise leads to fascinating insights and affective responses. Indeed, when it becomes difficult to find appropriate headings, some students first think that they are failing, and most of them express varying degrees of frustration, until the class discussion reveals that their collective inability to find appropriate headings may be a reflection of the limitations of the system. And so, the exercise not only provides practical experience but also opens the class to productive discussions about how the controlled vocabulary and tags function, fairness, diversity of perspectives, and language use.

*Questions for class discussion.* In addition to considering the structure and design of LCSH, with potential discussions about narrow, broad, and related terms, or the function of controlled vocabularies, there are many questions to ask about headings associated with race and ethnicity. In what ways did students identify similar topics/terms? In what ways did they differ? What do those similarities and differences tell us about the diversity

of perspectives? What are the advantages and disadvantages of folksonomies, particularly with regard to identity categories? How do controlled vocabularies account for or diminish difference? How might tensions between universality and diversity, or standardization and local knowledges be resolved? How should categories for racial and ethnic difference be controlled? Who should make those decisions? In what ways can one observe assumed whiteness in LCSH? How are nonwhite subjects marked? What are the consequences of this? Does this affect retrieval in catalogs or digital libraries?

### *Shelf Classification*

A number of critical LIS scholars have identified problems in the systems that organize materials on library shelves—particularly the Dewey Decimal Classification and Library of Congress Classification. As with subject headings, researchers have also observed racism, imperialism, sexism, ableism, and heterosexism in the stacks, and they are beginning to view these classifications as sources of important information regarding the history of categories in political and cultural oppression. Library classifications provide important insights into the processes by which epistemic violence becomes established, as the hierarchies and structures are mostly hidden from the public's view but establish relationships and order among bibliographic works. Scholars have also investigated the ways in which shelf classifications are organized around assumptions of universalized norms, mark minority communities and identities as “other,” and marginalize certain subjects (Furner 2007; Green 2015; Higgins 2016; Idrees 2012; Olson 2002).

*Pedagogy.* One way to facilitate discussion of diversity and social justice is to ask students to browse their library shelves in sections that contain resources about groups of people or to read the classification tables in print or online. The organization of subjects in these systems reveal the norms and assumptions upon which shelf classifications have been constructed, as well as the ways in which organizing information into discreet subjects inhibits intersectionality. There are various ways that exercises might be integrated into courses. When the foundational principles of classification are introduced, examples can include topics related to ethnic and racial minorities. For example, the predominant inclusion of minority subjects as subdivisions and special topics within larger divisions illustrates not only how the technique of subdivision works but also the ways in which assumed whiteness structures the classifications. Instructors may choose a section of the classification to focus on the hierarchies and associations around race and ethnicity. Students might also encounter the spatial and material aspects of classification by walking through the stacks and browsing the shelves, noting the placement of books on racialized subjects in

relation to other subjects (see Appendix). This could be extended to a historical exercise, in which students view earlier versions of the classifications to see how categories for race and ethnicity have changed over time.

*Questions for class discussion.* Reading the classification as primary source material, what evidence does it supply with regard to assumptions about race and ethnicity? Whose assumptions are reflected? Does it reflect societal norms? Does it reflect your point of view? What are the consequences of assuming whiteness and marking race as “other” or “special topic”? If this classification is mostly a hidden infrastructure that most users don’t notice, is concern warranted?

### *Search Engines and Algorithms*

Recent headlines suggest that algorithms designed by Facebook and Google, combined with the manipulation of search engine optimization techniques by content providers, directly affect policy, public opinion, and elections (Cadwalladr 2016). Librarians and archivists interact with, produce, use, and teach the very tools, standards, and techniques by which all types of information is circulated and accessed. Cathy O’Neill (2016) has shown that algorithms used in big data analyses also carry real consequences in a variety of contexts, from credit ratings, access to housing, test scores and college admissions, and criminal justice. These very often reinforce racial inequality and injustice. In writing about her own experience working in the financial system, she reveals that “many of these models encoded human prejudice, misunderstanding, and bias into the software systems that managed our lives” (3). Because algorithms are mostly hidden and proprietary, and because they rely on mathematical formulas that appear to be objective, the impact is difficult to detect or prove.

In early 2016, the racist results of a Google image search went viral. Alarming differences appeared in images retrieved with the terms “three White teenagers” versus “three Black teenagers.” In the former, search results pulled up stock images of smiling faces doing various activities, like sports or play. In the latter, however, images of mugshots prevailed (see Noble 2018; Allen 2016; Guarino 2016). Indeed, the language that is used to classify and search for groups of people can drastically affect the way groups are perceived by people looking for and finding information. More recently, Safiya Noble (2017) attributed Dylan Roof’s hateful attitudes and beliefs in part to Google search results, suggesting that the 2015 killings of nine African-Americans at Emanuel A.M.E. Church in Charleston, South Carolina, should be understood as linked to information that Roof found using Google. Noble (2017) writes: “Roof typed ‘black on White crime’ in a Google search; he says the results confirmed (a patently false notion) that black violence on white Americans is a crisis” (n.p.), and the source of

his information was the Council of Conservative Citizens, which the Southern Poverty Law Center has identified as a white supremacist organization.

Commercial search engine technologies rely upon the commodification of information and knowledge. In the case of Google, links that appear in results lists may or may not lead to information most appropriate to the reader's interests but, rather, they appear based on counting citations and backlinks to a page to determine its relevance (Brin and Page 1998). Companies, news sources, and other organizations embed metadata in images and webpages to make their content more likely to appear at the top of a search results list (Allen 2016). Google's search engine algorithm changes with use, and so a search engine is prone to human biases, attitudes, and prejudices, as the search results are a reflection of what information is being asked of it (Miller 2015). People hold public and private attitudes about others belonging to both majority and underrepresented groups. Sometimes these attitudes are explicit or known to the individual, and sometimes these attitudes are implicit or unknown to the individual (Devine et al. 2002). While Google has adjusted its algorithms, and Facebook has acknowledged some responsibility in circulating misinformation, there are ongoing debates about the role and responsibility of commercial providers and the extent to which social media feeds and search engine results reflect user behaviors. In this environment librarians play an important role in assisting patrons in their searches for information (see Cooke 2018).

*Pedagogy.* In 2017 we entered "Black Lives Matter is" into a Google search box, and the auto-complete function suggested, "Black Lives Matter is a hate group" and "Black Lives Matter is over." In 2018, the same query did not bring up ". . . hate group," but it did suggest, "Black Lives Matter is a revolutionary peace movement," "Black Lives Matter is democracy in action," along with "Black Lives Matter is over." While it may be impossible to explain what caused this dramatic change, this serves as example of an important pedagogical exercise. Students can perform searches like this one and observe results in different search engines. They might try searching via an array of different phrases and terms, paying attention to the terms that the auto-complete features provide and the results lists, and discussing some of the ways in which this affects the circulation and reception of information. We also suggest performing searches that reveal other dominant narratives that populate search results. For example, typing "thanksgiving" into nearly any search engine will most likely retrieve a set of links to pages on recipes, Pilgrims, and turkeys. The fact that Google's algorithm relies on user behavior goes part of the way in explaining the predominance of a singular perspective, but it may not go far enough. Throughout the information universe, classifications are

largely structured around assumed whiteness, with nonwhiteness marked as an exception to a norm. To find information about Native American perspectives on Thanksgiving, users must type something like “thanksgiving native americans” or “thanksgiving indigenous.” Those terms retrieve links to pages on Thanksgiving as a day of mourning and historical accounts that dramatically challenge the dominant narrative about the “first Thanksgiving.”

*Questions for class discussion.* What do the results lists tell us about assumptions about holidays, whiteness, social movements, and Indigeneity? How can we explain the auto-complete function for “Black Lives Matter”? How do assumptions of whiteness affect the circulation of knowledge? What responsibility do information professionals bear in this context? How can the “thanksgiving” example be explained in terms of Indigenous erasure? Can this be connected to the circulation of information (or lack of) about the North Dakota Access Pipeline or other current problems?

### *Hashtags*

The “thanksgiving” example above illustrates one reason why the hashtag #NoDAPL is so significant. It reorganizes a dominant narrative while drawing attention to a protest movement that the media had mostly been ignoring. The social media platform Twitter allows the propagation of hashtags that can link collective interests. Incorporating this platform into the classroom can facilitate real-world learning with real-world implications (Journell, Ayers, and Beeson 2014). These hashtags facilitate the flow of information about a social movement to its audience and create a connection by helping to “coordinate action and achieve goals” (Wang, Lui, and Gao 2016, 850). This personalized collective action has the ability to influence a social movement’s attainment of symbolic power and disseminate key values, potentially creating a viral movement. And rather than relying on news sources to shed the light on social movements, the collective entity can create the news themselves: “With a deliberate absence of formal leadership, the strategic use of hashtags helps to construct the information-sharing network and bridge diverse social groups with a common interest” (Wang, Lui, and Gao 2016, 853). Whereas mainstream media coverage of the protest at Standing Rock was sparse, the hashtag #NoDAPL drew attention to the injustice and ongoing protest.

At the same time, it is important to recognize the ways that these hashtags are sometimes reappropriated for purposes that counter or shift the initial aims. And certainly, hashtags can be used to circulate ideas antagonistic to social justice movements. For the purposes of KO instruction, hashtags may offer opportunities for students to learn about the ways in which controlled terms emerge and facilitate communication in social media.



*Pedagogy.* Twitter is a free social media platform that can connect users from all over the world. Each user has a handle, which is unique to each person, indicated by the @ sign (i.e., @username). Users can tweet, which serves as a status update, and can include images and links so as long as it does not exceed 280 characters. The hashtag is indicated by the pound sign, and can be used as a means to classify information about the same topic (Journell, Ayers, and Beeson 2014). Hashtags are searched for and used deliberately, or users are incidentally exposed to them due to the hashtags' ability to trend or go viral (Wang, Lui, and Gao 2016).

Instructors using Twitter as an instructional tool can have students follow each other, news organizations, libraries and other LIS professionals, and social justice organizations as a means to gain access to information from relevant sources. They can create a specific hashtag for their class so students can engage with one another on a local level. Instructors may also instruct students to engage with others on a more global level by also adding a widely used hashtag, such as #NoDAPL to their tweets when relevant. In this way, students can engage both with their class and globally about these important issues, and the class can discuss the merits and drawbacks of using social media as a platform for activism.<sup>1</sup> Most relevant to the conversation about diversity and KO, however, would be a discussion of the nature of the hashtag and its power and limitations in organizing knowledge about a specific event, groups of people, social justice issues, or political movements.

*Questions for class discussion.* How do hashtags organize information? How do they differ from other controlled vocabularies or keyword searches? How useful are they for organizing minority or underrepresented groups? What are the limitations of hashtags? What unintended consequences may result? What role have #NoDAPL and #BlackLivesMatter played in protest movements?

## CONCLUSION

The examples presented above counter the notion that KO courses are not conducive to or appropriate venues for discussions of diversity, inclusion, and social justice. Metadata, classification, and cataloging present critically important opportunities to introduce epistemological questions regarding social and political categories, standards, and hierarchies; the ways that categories and standards organize information; and how the organization of information affects its circulation, reception, and interpretation. Not only do lessons on politics and diversity bring such issues to light, but they also allow students to understand the epistemological and ontological foundations upon which KO systems are based and how they function.

## APPENDIX

Lindsey performed this exercise when we first started working on this paper and quickly observed ways in which assumptions of heterocentrism, Christianity, and whiteness organize the Library of Congress Classification. She was a student in a master of library science program and found that the classification prompted a variety of questions. Her observations are below:

Because of my background, familiarity, and interest in the social sciences, I decided I would take a closer look at the LOC classification category “H” sections. Although I spent a number of years in the HT-HV sections for my previous degrees, I had not looked at what surrounded my information resources that I needed before this exercise. I first began by looking at the Library of Congress (n.d.) Classification Outline on the Class H Social Sciences section. Once I saw the patterns, which I will outline below, I then went to the stacks and saw these subtle transitions into new categories. This exercise allowed me to look at the way the LOC classified groups of people, seeing some alarming connections that should be noted.

*HT and HV Subclasses*

I took a walk through the stacks with the intent at noticing the way the books were classified. This was different from when I had used the stacks throughout my many times conducting research, in which I would usually have my call number ready and I would ignore the other resources nearby. After taking a closer examination of the information resources themselves, I noted that the “Class” classification (HT 601-1445) begins by including information resources organized in a way that closely resembles class structures in today’s society, by beginning with the upper class. This section begins with an explanation of social classes, but the first class that is mentioned begins with “royalty,” and the final class mentioned is “slavery.” Whether this was implicitly classified based on its importance at the time this system was created, or explicitly classified for general flow of the next classification category, “Race,” seems uncertain. The next classification category is “Races” (HT1501-1595), and is defined as “a social group and race relations in general” (Library of Congress, n.d.). This section classifies race in an archaic way, often including White or Anglo groups first, and Black or African American groups after. It also lumps together all other races that are less prevalent in the United States. This erasure of other races could imply that these perspectives are less important, as these groups are just classified as “Other.” This otherness creates further division rather than inclusivity.

The category titled “Special Classes by Race or Ethnic Group” (HV 3176-3199) is a subsection of “Protection, Assistance, and Relief” (HV697-4959). The “Special Classes” division is followed by categories such

as “immigrants,” “poor in cities—slums,” “mendicancy, vagabondism, tramps—homelessness,” and it speaks to the LOC classifiers’ perception of non-White racial and ethnic groups, particularly since this classification system was almost likely created by White individuals in the early twentieth century. Seeing this transition reflected in the stacks creates an unpleasant and uncomfortable feeling; were people belonging to an underrepresented group perceived more negatively? In looking at the stacks, it certainly appears this way.

The classification heading that follows “Races” is “Pathology and Welfare” (HV1–HV9960). After looking at books that reflected race, I came across books that were about not-so-positive subjects. Again, is this an implicit or explicit view on what the LOC thought people needing materials on Races would also need? Does this imply anything about the classification group that precedes it? What message does this send to White library patrons? More importantly, how does this make the library patrons belonging to underrepresented groups feel about their presence in the library? I’m curious whether it structurally makes sense, or if including “Pathology and Welfare” would be more appropriate in the psychology section (BF). And finally, following the pathology and welfare classification heading are information resources about “Refugee Problems.” Although the information resources in this section at any given library may differ, they may not necessarily reflect the word “problems” as much as “resources.” Is using the heading “Problems” when paired with refugees a way to subtly (or not so-subtly) take a stance on refugees who need to use the library and its services?

### *Subclasses HQ and HV*

Because of my background in women’s studies courses, I was particularly interested in looking at classification categories that pertained to women. Looking at the Library of Congress (n.d.) classification outline again, I noticed a classification heading of “Women in Charity” (HV 541), which poses a more “traditional family” lifestyle where a woman stays at home with kids and contributes via other means and where “volunteering” is something that should be done. In a more modern era, there would not need to be a specific classification heading for this. Additionally, having a classification category of “shop women, clerks, etc.” (HV3165-3173) further elaborates upon entering a new era where women were just entering the workforce. Seeing this reflected in the stacks was alarming, in that there are still recent information resources being categorized here, despite the classification categories needing to be updated.

Also a subheading titled “Special Classes” (HV697-3024) appears under the “Protection, Assistance, and Relief” subject heading. Examining this section indicates further “otherness” to groups of people who are otherwise classified as outside the norm by those who created these headings.

This subheading, similar to the “Race” heading, organizes resources in a way that implicitly shows “importance” by the way these materials are organized in the stacks (where the traditional “Families” are represented first and “People with Disabilities” are represented last). The LGBTQIA+ (Lesbian, Gay, Bisexual, Transgender/Transsexual, Queer, Intersex, and Asexual) community is also poorly represented through the LOC classification system. “Gay men” and “lesbian women” are classified under the same classification category (HV 1449), despite there being major differences between the two. These subheadings do not take into consideration that individuals from “Special Classes” can be members of multiple classes. This black and white thinking erases people within their own communities and again creates a sense of “otherness” for those who may fit outside what has been deemed as the standard or norm by those classifying materials.

When the LGBT community is referenced individually, it is listed under the LOC heading “Sexual Life” (HQ12-449). When looking in the stacks I noticed that it was surrounded by information resources about sexual paraphilia and other atypical sexual lifestyles such as BDSM, fetishes, and prostitution. Comparing those in the LGBTQ+ community to these things can be perceived as the classification system indirectly making a stance about the community as “sexual deviants.”

## NOTE

1. Limitations to working in a more informal setting like Twitter may lead to students being less diplomatic in sharing their thoughts, feelings, or ideas. This could be considered offensive or create marginalized feelings for classmates who hold opposing views. There is also a potential for students to be trolled, or to interact with people who respond for the sole purpose to bully, especially when engaged with the global hashtag (#NoDAPL or #BlackLivesMatter). If professors do indeed choose to use this platform, they need to prepare students for these disadvantages and instruct students on how to handle them appropriately (Journell, Ayers, and Beeson 2014).
2. We first submitted this article in 2016, just after the U.S. presidential election. At that time scholars, journalists, and citizens predicted that the Trump administration would enact racist and xenophobic policies that would deepen social and political divisions and reduce access to rights and resources for racial and ethnic minorities. Since then, we have witnessed these predictions come to pass in multitudes. While we recognize this historical political moment as specific to a time and space, we believe that libraries are part of a network of institutions that circulate state and cultural discourses. It is in moments like those in the present that the necessity of interrogating library classifications that organize knowledge on the basis of universalized whiteness becomes vital. We also wish to note that there appears to be increased attention to these issues in knowledge organization courses and at conferences, such as the 2017 Politics of Classification symposium in UCLA, which have facilitated dialogue about teaching.

## SELECT LIST OF SUGGESTED READINGS

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### *Social Media and Hashtags*

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