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Metadata as Knowledge

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Résumé de l'article

Introduction to "Metadata as Knowledge," a special issue of KULA: Knowledge Creation, Dissemination, and Preservation Studies that takes up the critical relationship between metadata and knowledge. The issue includes articles and project reports that address metadata, hidden knowledge, and labour; standards versus expression; knowledge sharing and reuse of metadata; forays into open and shared knowledge; linked data, metadata translation, and discovery; and machine learning and knowledge graphs. Although rarely an object of notice or scrutiny by its users, metadata governs the circulation of information and has the power to name, broadcast, normalize, oppress, and exclude. As the contributions to this issue demonstrate, metadata is knowledge, and metadata creators, systems, and practices must contend with how metadata means.

KULA KNOWLEDGE CREATION, DISSEMINATION, AND PRESERVATION STUDIES

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INTRODUCTION

Metadata as Knowledge

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Introduction to "Metadata as Knowledge," a special issue of *KULA: Knowledge Creation, Dissemination, and Preservation Studies* that takes up the critical relationship between metadata and knowledge. The issue includes articles and project reports that address metadata, hidden knowledge, and labour; standards versus expression; knowledge sharing and reuse of metadata; forays into open and shared knowledge; linked data, metadata translation, and discovery; and machine learning and knowledge graphs. Although rarely an object of notice or scrutiny by its users, metadata governs the circulation of information and has the power to name, broadcast, normalize, oppress, and exclude. As the contributions to this issue demonstrate, metadata *is* knowledge, and metadata creators, systems, and practices must contend with how metadata *means*.

Keywords: metadata; linked data; knowledge organization; cataloguing

Choose anything and try to describe it. It could be an object, resource, data, or even a person. During this descriptive act you will make choices. What are the most important aspects to highlight? What are my intentions? Who is my audience and what do they need? Are there standards or existing practices with which I need to comply? What language and terminology do I use? Do the people or machines on the receiving end of this description understand that language and terminology in the same way? Whose voices am I representing or amplifying? Whose voices am I silencing? Working through these types of questions surfaces the reality that metadata dictates how information circulates—it has the power to name, broadcast, normalize, oppress, and exclude. It does more than describe—it *is* knowledge.

This special issue of *KULA* takes up the critical and complex relationship between metadata and knowledge. The articles and reports in this issue present critical reflections on topics such as ethics, bias in metadata systems, the implications of working with and within open knowledge projects, challenges in what is and what is not recorded within metadata, labour and metadata work, and how we consider the history of the Semantic Web against new conceptualizations of knowledge graphs.

The practice of describing collections in libraries, archives, museums, and other information spaces has typically been viewed as a utility meant to act as an intermediary between a human end-user and an object or piece of information. Cultural metadata is created within formal and informal systems to describe and provide access to collections or information. Metadata is typically a stand-in or surrogate for the "real" object of attention and is a means to an end rather than an object of consideration or knowledge itself. Metadata, in the practice of cultural documentation, is a mediator. Thesauri, vocabularies, and ontologies point to "something else" in the world and tend to be noticed only when something is amiss, the description is off, the term is offensive, the search does not return the expected results, the data will not function to fit the desired use. Yet, metadata, as the intermediary, the "go-between," communicates in and of itself. Metadata as mediator develops its own meaning, modes of communication, and power to control how and what we know, situating, stabilizing, and setting down the paths that can be travelled. In its role as comment or surrogate it carries substantial weight, depth, and power.

The articles and reports in this issue focus on different forms of mediation and meaning in metadata and the protocols, context, and environments in which metadata interacts. Contemporary practice in cultural metadata creation is moving the conversation from metadata as an invisible mediator to considerations of how metadata creates and enforces meaning and ethical, inclusive, and just practice. Metadata creators and the systems and practices used must now contend with how metadata *means*.

Metadata, Hidden Knowledge, and Labour

The labour, and especially affective labour, involved in cataloguing work is invisible to those outside cataloguing and metadata departments. Belantara and Drabinski make the labour of cataloguing work visible as they explore the process of metadata creation as seen through the eyes of working cataloguers. Through recorded interviews, we see what decisions cataloguers face in describing material objects and the struggle between a cataloguer's ability to express content accurately and faithfully (and ethically) and translating this expression within the constraints of standards and controlled vocabularies. Exposing the often-fraught experience of using one's "cataloguer's judgement" also brings recognition to human involvement in metadata creation.

Standards vs. Expression

Standards used by metadata creators offer useful guidelines and allow data to be shared and to interact with other data. However, they also constrain, misrepresent, and amplify bias. Subject representation within metadata work has long been pointed to as a locus of inequity. Theorists and practitioners from Sandy Berman (1993) to Hope Olsen (2002) have made clear that subject and classification standards are rife with problems. However, even in the study of issues of representation, inequities are present in who is represented. Gooding points to the lack of attention on the Circum-Caribbean region, suggesting "very little academic work addresses the importance of decolonising and reconciling with collection materials pertaining to the Circum-Caribbean despite the cataclysmic colonisation that dominated the region for centuries." To address this issue, Gooding offers an in-depth analysis of how standardized vocabularies have failed in her study on the representation of the Circum-Caribbean region in the Getty Thesaurus of Geographic Names.

Naming within metadata systems is particularly powerful in demonstrating inequity, but there is also power in reclaiming, restoring, and reimagining metadata within systems of knowledge organization. Karim Tharani (2020, 221) states that "even with an unwavering conviction of librarians for social justice, the practicality of making library systems socially and cognitively just for marginalized knowledge materials remains daunting" but suggests that finding a middle ground for working within existing systems is an important and necessary corrective path. Berg, Bains, and Suri explore issues in trying to describe materials in the South Asian Canadian Digital Archive. Their solution, a locally created thesaurus to support the South Asian Canadian Digital Archive, represents both a means of addressing the lack of appropriate headings and the trend toward greater openness to using domain-specific vocabularies and thesauri within metadata systems.

Knowledge Sharing and Reuse of Metadata

Metadata is a vital element of resource description but is increasingly utilized to support activities related to exchange, reuse, and remixing of data, including into new or alternate platforms and systems. However, such activities, even in the case of standardized metadata, represent a real challenge and expose the brittle and limited nature of standards, especially in relation to meaning and context. Börjesson, Sköld, Friberg, Löwenborg, Pálsson, and Huvila offer insight into attempts to understand, interpret, and make meaning from archaeological data. Their attempts to reuse existing data show the difficulties faced when there is a lack of standards or agreed-upon processes in a discipline. Canning, Brown, Roger, and Martin showcase the LINCS (Linked Infrastructure for Networked Cultural Scholarship) project's ambition to allow humanities researchers' linked open data (LOD) datasets to be machine-processable and interconnected. The authors use the project work to discuss the practical and conceptual challenges of traversing datasets from diverse perspectives within the humanities, making connections to the challenges of situated knowledges. Finally, Lieu and Campagnolo point to the difficulties in sharing information and knowledge related to conservation of cultural materials to be shared within an institution over time and between people and make the case for a linked data standard.

Forays into Open and Shared Knowledge

Wikidata, an open knowledge base hosted and maintained by the Wikimedia Foundation and Wikimedia Deutschland, presents a new opportunity for libraries, archives, and other holders of metadata-related cultural materials both to push data out into the open web and to take advantage of the potential richness of such data through integration into other knowledge bases and platforms. This issue includes discussions and reports on the ways that traditionally created metadata mix with Wikidata as well as discussions of new services and opportunities integrating Wikidata into metadata workflows. Lemus-Rojas, Odell, Brys, and Ramirez Rojas discuss the opportunity Wikidata presents to provide new academic library services centred on the creation of scholarly profiles for faculty members and the opportunities provided in this process to address information inequities. Topham, Chambliss, Wigard, and Huff discuss the flow between traditional library metadata for a comics collection and knowledge in Wikidata and how each can inform, correct, clarify, and otherwise interact with the other. Lindsey, Kuriger Suiter, and Hanselman examine the interaction between the Program for Cooperative Cataloguing (PCC), linked data, and Wikidata through the lens of ethical contribution of gender information to these platforms.

Linked Data, Metadata Translation, and Discovery

Opening collections metadata through the use of linked data offers the advantage of greater access to collections of different kinds. However, traversing domain-specific practices in libraries and archives into more generalized systems can mean a number of decisions need to be made about what is gained versus what is lost. Ansovini, Babcock, Franco, Jung, Suurtamm, and Wong discuss knowledge about archival collections—what is lost by placing descriptions in an unmediated archival management space, what is the evolving role of the archivist's knowledge of collections in discovery, and how might archives leverage open knowledge platforms to lead researchers to their archival collections? Khan, DeMarco, Fernsebner Eslao, Folsom, Kovari, Warner, Worrall, and Usong describe the practical working through of mixing open knowledge platform data with metadata about local collections in order to enhance discovery and exploration of library collections by library users.

Machine Learning, Knowledge Graphs, and Meaning

Contemporary linked data practices are rooted in earlier theories and practices of expert systems. Looking at the history and aims of such systems helps to plot the shift toward knowledge graphs and understand the potential implications for how metadata relates to knowledge. Provo explores the history of artificial intelligence (AI) and expert systems to look at the interaction between cultural heritage institutions and the Semantic Web. As GLAM institutions become more involved in open knowledge platforms, she suggests it is important to know this history—especially as it relates to the conceptualization of the encyclopaedia. Huck offers another view of the relationship between expert systems, AI, and linked data with an in-depth analysis of knowledge graphs as created and understood by metadata practitioners and a comparison to the mathematical ontology of philosopher Alain Badiou.

Conclusion

Throughout this issue, the authors have consistently demonstrated the richness and depth of metadata creation and consumption. Metadata's utility to aid search, discovery, retrieval, and interoperability means it is often neglected as textual in and of itself; its utilitarian nature obscures its tacit power. However, metadata's practical nature also gives this latent power excitement and vitality. Knowing the complexity, we still must bring it to bear in application: a decision must be made, things must be described, information must be shared. This special issue of *KULA* on "Metadata as Knowledge" ultimately shows how complex and powerful metadata is, how it functions as knowledge, and how open knowledge platforms create new opportunities for metadata to interact and flow as knowledge.

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