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Metadata Standards for Cultural Heritage Materials

Library and information professions are constantly wrapped up in metadata – how it is structured, how it will be used, who creates it and what it really means. Metadata defines much of the world around us and is, therefore, a continual topic of examination. The significance of metadata for an information professional has a lot to do with where it concludes and who it will affect. Our current metadata standards impact various communities in different ways depending on the effectiveness of its structure. Metadata standards, such as the Dublin Core, have proven to contain biases that undermine based on cultural and linguistic systems. The following discussion will critically examine how metadata operates, how it functions to regard cultural data differently, and more specifically how Dublin Core's structure has failed to serve Indigenous communities.

Defining metadata may begin at the most basic level as "data about data." However, metadata and its functions are far more complex. Just in dissecting the simple phrase, we must further define what is meant by "data" and what is meant by "about." Data is the ubiquitous "stuff" all around us; as Jeffrey Pomerantz explains, it is unprocessed *potential* information.[1] However, as information scientists continue to define data, we can be sure that data is a

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[1] Jeffrey Pomerantz, *Metadata*. (Cambridge: MIT Press, 2015), 21.

complicated and tenuous concept. In regard to exploring what metadata is, the "aboutness"

becomes arguably more relevant and important. The practice of describing an object's aboutness,

as simple as it initially sounds, is what cataloguers and metadata specialists must consistently

grapple with. The description that is produced becomes metadata, which Pomerantz concludes is

"a statement about a potentially informative object."[2]

  There are different types of metadata, and within those types, varying standards and uses.

Metadata in general functions to discover resources, control intellectual property rights, and

among other purposes, to manage, certify the authenticity, identify versions, indicate status, and

mark the content structure of documents.[3] Typical types of metadata are descriptive,

administrative, structural, and other types serve for preservation, meta-metadata, and more. Out

of these, descriptive metadata is the most standardized and used type, as it is used in the

traditional library catalog and is accepted as the optimal one for the role of resource discovery.

The value standards and controlled vocabularies of descriptive metadata include the Library of

Congress Subject Headings and the Library of Congress Name Authority File, among others.

These controlled vocabularies are utilized for data structures and element formats, which for

descriptive metadata include standards such as MARC 21 (an international standard syntax),

Metadata Object Description Schema and Metadata Authority Description Schema (XML

standards that uses language-based tags), and the data structure which will be the focus of the

following discussion, Dublin Core. Other types of metadata, such as administrative or structural

metadata, will provide information to help manage a document and its preservation by describing

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[2] Pomerantz, 26.

[3] Hillman, D., Guenther, R., and Hayes, A., "Metadata Standards & Applications Trainee
 Manual," Library of Congress Workshop Course Materials, last modified August 2008,
 https://www.loc.gov/catworkshop/courses/metadatastandards/pdf/MSTraineeManual.pdf, 18.

its technical characteristics, access rights and restrictions, its digital provenance, authenticity, preservation activity, and environmental requirements.[4] It is necessary to consider the type of metadata because it will generate different modes of description which will affect how it is retrieved in the future.

An exploration of metadata standards, how they compare and what their flaws are, increases literacy and understanding of description data and their impact on access. Metadata standards can be defined as "the set of fields, words, elements and/or principles for describing resources that are considered to be common to all resources of a particular type – they are inherently universalist and homogenic."[5] Standards are intended to organize the vast and infinite bank of human knowledge, and therefore assume a high level of universality. This is a key discrepancy in the reality of knowledge organization; for instance, such as the case when we consider standards for classifying Indigenous and non-Western sources. Standards are widely accepted rules for producing data about objects, and as these rules create units of information, they work to permeate across distances and different modes of description.[6] "In defining 'standard,' most scholars within the information studies field emphasize the importance of values standards promote, such as compatibility and interoperability, along with what makes information and metadata shareable, searchable, filterable, and retrievable."[7] Due to the effort for interoperability, the means to access information across varying computerized systems for exchange, the standards are created in a manner that cannot be altered easily. Montenegro

[4] Hillman, D., Guenther, R., Hayes, A., 105.
[5] María Montenegro, "Subverting the Universality of Metadata Standards." *Journal of Documentation* 75, no. 4 (2019): 735.
[6] Geoffrey Bowker and Susan Star, *Sorting Things Out: Classification and Its Consequences* (Cambridge: MIT Press, 1999).
[7] Montenegro, 735.

proposes the question that frames this issue, "how tensions between a western desire for more

universal access through interoperability can be balanced against the needs of Indigenous

communities for localized and culturally responsive documentation and description tools?"

Bowker and Star further point out the problematic fact that every standard which becomes

successful is wrapped up in the values of the institution that created it. The theoretical neutrality

of standards, in fact, develops an intersection of social organization, moral directive, and

mechanical cement. Melissa Adler calls this concept, "fixed subjectification," as standards

become instruments of dominance that establish what cultural names, titles, categories are

validated.[8] Standards are used as a device to reinforce the idea that the creator (or, more likely in

some cases, creators) of the information being documented cannot describe their data through the

lens of their specific values and beliefs. This creates a disconnect from the metadata and the raw

data itself. The following will discuss how the Dublin Core as a metadata structure introduces

and perpetuates the "fixed subjectification" of Indigenous knowledge through the assumptions

underlying its operation that are connected with cultural and linguistic systems.

      The Dublin Core is one of the most widely used metadata schemas. It involves fifteen

main elements that are designed to supposedly be able to describe any digital resource.[9] The key

feature of the Dublin Core is the way it deliberately functions on the lowest common

denominator level. The primary objective of the fifteen-element set is to generate terms that are

wide and vague enough to optimize accessing, searching, locating, and retrieving a range of

resources that span across knowledge organization systems. Since the establishment of these core

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[8] Melissa Adler, *Cruising the Library: Perversities in the Organization of Knowledge* (New York: Fordham University Press, 2017).
[9] The fifteen elements are: contributor, coverage, creator, date, description, format, identifier, language, publisher, relation, rights, source, subject, title, and type.

elements in 1995, there have been additions to extend its mechanism by the use of a set of terms (for instance, *modified*, *hasPart*, *isPartOf*, *audience*, and many others), the inclusion of qualifiers that allow for a narrower refinement of the element, and certain encoding schemes to facilitate the interpretation of an element value.[10] Nonetheless, it is known for its simplification and flexibility for the purpose of discovering. Specific controlled vocabularies are recommended when entering elements, although not required. The intent was to create simple, low-cost, and easy to use schema in order for its wide acceptance and use. Due to the theoretical ability to describe anything on the digital platform, the Dublin Core shapes various types of information. Not everything being described will offer a value for each of the fifteen elements, in fact, it is mostly the case that some elements will be left blank in the record. The object being described will guide how well the Dublin Core performs, based on the level that it optimizes the fifteen elements, though that is not to minimize the accountability placed on the structure. A major downfall of the Dublin Core is its generalization of data. It does not allow for an adequate level of specificity. The idea of specificity in the field of information relates to Manulani Aluli Meyer's claim that "specificity leads to universality."[11] Marisa Duarte and Miranda Belarde-Lewis expand off this concept in their work "Imagining: Creating Spaces for Indigenous Ontologies" by explaining how knowledge organization work has been heavily impacted by colonialism by historically prioritizing the opposite, that is, generalization and simplification lead to universality. Their proposed theory of imagining is an effort for building Indigenous

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[10] Pomerantz, 65-84.

[11] Manulani Aluli Meyer, "Indigenous and Authentic: Hawaiian Epistemology and the Triangulation of Meaning," in *Handbook of Critical and Indigenous Methodologies*, ed. Norman K. Denzin, Yvonna S. Lincoln, Linda Tuhiwai Smith (Los Angeles: Sage, 2008), 217–232, quoted in Marisa Duarte and Miranda Lewis, "Imagining: Creating Spaces for Indigenous Ontologies" *Cataloging & Classification Quarterly* 53, no. 5 (2015): 678.

knowledge systems with the pursuit of decolonization as a driving factor. Imagining is a pertinent theory in the discussion of Dublin Core because of the way the data structure works to undermine Indigenous knowledge and discounts its proper organization.

Within some of the fifteen elements, the Dublin Core certainly holds assumptions and biases that relate to cultural systems. This is demonstrated by Dublin Core's definition of the elements and how they are intended for use. In the research of María Montenegro, *Subverting the Universality of Metadata Standards*, it is emphasized how problematic Dublin Core's Creator field and the Rights field are with organizing Indigenous knowledge. Under the Rights field, which is defined as "encompassing Intellectual Property Rights, Copyright and various Property Rights," there is the extended value of the RightsHolder, which is explained as "a person or organization owning or managing rights over the resource." This clearly emphasizes the western concept of ownership and singularity. The Creator field is defined as "an entity primarily responsible for making the content of the resource." These definitions maintain colonial ways of organizing and practices of exclusion by ignoring the various possible systems of ownership and creation. The fields, which are supposedly adaptable to literally any resource, disagree with Indigenous values and belief systems, as Montenegro explains, "the definition provided by Dublin Core for the rights element presumes that IP laws are universal, however, legal regimes of IP and copyright are culturally specific and the types of rights they specify, by definition, exclude all types of Indigenous traditional knowledge."[12] The assumptions regarding IP laws are particular to newly created so-called "original" material created by individual authors. This diverges from Indigenous values as their cultural information is not always new, but rather draws upon previous knowledge from ancestral and cultural traditions. Moreover, the concept of a

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[12] Montenegro, 737.

distinct creator (one person, one organization, one service) assumed by the Dublin Core is not aligned with all practices of creating by Indigenous communities, since the work is not necessarily attributed to a single entity but involves collective credit. "One of the fundamental differences between dominant Western and Indigenous knowledge is that the dominant paradigm is based upon the central belief that knowledge is a discrete entity that can be gained and owned by an individual."[13]Additionally, western IP laws and the Dublin Core's creator field maintain the assertion that the creator of the information is the person who was responsible for its documentation.

> "For instance, a film of a traditional ceremony recorded by an ethnographer makes the filmmaker the "author," while the subjects of these colonial documentation practices are rarely given that status. As the "subjects" of these materials instead of the legal copyright owners, Indigenous communities have often no control over the life of their belongings, including in which repository they end up and how they are documented, shared, accessed and used. Furthermore, ironically, they must secure permission from the "author" in order to reuse the materials that document their own lives, customs, and cultural practices."[14]

Therefore, by the lack of attention to cultural specificity and regard for true collective authorship and creation, Indigenous communities are often found without the rights over their production of knowledge. The Dublin Core is only one of the various pathways of this injustice, however, the elements and definitions of those elements they uphold are responsible. While the problematic

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[13] Lala Hajibayova and Wayne Buente, "Representation of Indigenous Cultures: Considering the Hawaiian Hula", *Journal of Documentation* 73, no 6 (2017): 1139.
[14] Montenegro, 738.

fields relating to property and ownership disenfranchise Indigenous communities, the ability to describe their information in their linguistic terms further marginalizes them and disassociates the metadata record with the truth.

How Dublin Core, as a classification and data structuring system, operates also relates to issues of linguistic systems. In description practices, language shapes how knowledge is represented and thus is organized. Representation is, therefore, a product of language, D.C. Blair claims "the process of representing documents for retrieval is fundamentally a linguistic process."[15] The relationship between the chosen word and the object, event, or action is a subjective associative bond, as linguist Ferdinand Saussure simply states when discussing his principle of the Arbitrary Nature of the Sign, "the bond between the signifier and the signified is arbitrary."[16] In creating the metadata for Indigenous knowledge work, this becomes a key concern, as Hope Olson explains the significance of representation is a process of naming. "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 built on past meanings in our own experience."[17] In the case of classifying Indigenous sources of knowledge, typically they are managed using national languages, such as English, and thereby molded by the major language, as opposed to the localized language it was originally produced in. This has a major

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[15] D.C. Blair, *Language and Representation in Information Retrieval*. New York: Elsevier Science Publishers, 1990. quoted in Hajibayova, L. and Wayne Buente, 1140.
[16] Ferdinand Saussure, *Course in General Linguistics*, trans. Wade Baskin (New York: Philosophical Library, 1959), 67.
[17] Hope Olson, *The Power to Name: Locating the Limits of Subject Representation in Libraries*. Dordrecht: Kluwer Academic Publishers, 2002. quoted in Hajibayova, L. and Wayne Buente, 1140.

consequence, when Indigenous information is translated and managed "according to western and universalist documentation and classification systems, ignoring and disavowing Indigenous ontologies, epistemologies and local language ideologies."[18] Not only is the language terms lost in translation, but the culturally specific values and beliefs which were extended from it.

The Dublin Core holds underlying assumptions of data based on Western constructions of organization and access. This is furthermore displayed by the static nature of the classification system. Although this may not be particular to Dublin Core, but also applied to other metadata standards, the simple practice of inserting cultural knowledge into a data structure freezes the information from a single time. There is no possibility to place the data into an adaptable or temporal space, and in the case of Dublin Core, it requires inputting by reducing the information into fifteen values to define it. These metadata values, therefore, sentence the data to an unchangeable and therefore inconsistent record. "These practices are often only conducted once by a museum, archives, and library specialists, disregarding the fact that Indigenous knowledge — like any other knowledge — is dynamic and in a constant state of change, depending on the social and cultural flexibility and sustainability of each Indigenous community."[19] The possibility of a living archive may be better suited to account for knowledge which continues to be altered and updated, however any likelihood for a value-free standard continues to be contested.

The possibility of a neutral metadata standard remains unlikely. Our present systems, like Dublin Core, among others, have become well adopted largely due to their simplification

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[18] Montenegro, 734.
[19] Montenegro, 734.

methods. And in the case where a standardized system does account and include localized forms of meaning within its data, the risk of losing interoperability is a major concern by institutions. Yet, Montenegro proposes another possibility, perhaps the harsh and unfortunate reality that it is based on the apprehension of some professionals within the information field. "Making information standards more flexible has more to do with a profound fear around making space for the voices of other, less privileged and marginalized communities that might challenge the authoritativeness of their discourses around information documentation, and undermine their power and authority to identify, describe and interpret others' materials."[20] The likelihood of this reason for the lack of an adequate metadata standard may be argued for or against, the possibility of one may remain outside of a choice. "Each standard and each category valorizes some point of view and silences another. This is not inherently a bad thing—indeed it is inescapable. But it is an ethical choice, as such, it is dangerous—not bad, but dangerous."[21] As Bowker and Star explain it, standards are fundamentally hierarchal, but it is a fact that can be dealt with by making precautious and ethical decisions.

Metadata may be simplified as "data about data," however, as this paper suggests, simplification does not necessarily mean an understanding of. The theory and practice of metadata are some of the key topics within the information field and will continue to be regarded as complex frameworks for how we access the world's knowledge. However, as its practicality has proven, it has a profound impact on how communities can access certain information, even their own. As the possibility for value-free metadata continues to be discussed within the field,

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[20] Montenegro, 738.
[21] Bowker and Star, 5.

the Dublin Core remains as a key example of how metadata elements can define what

information becomes valued on a wider scale.

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