

The Fowler Museum's Digital Collections: A Metadata Strategy for Facilitating Research and
Repatriation

Savannah Lake
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Professor Jonathan Furner
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The Fowler Museum at the University of California, Los Angeles is a global arts and cultures museum, specializing in art from Africa, Asia, Indigenous North and South Americas, and the Pacific. Their collections span over two millennia, and include over 120,000 art and ethnographic objects as well as 600,000 archaeological objects, 20,000 textiles, and 400 silver works.¹ The diversity and extent of their holdings could attract a lot of users from across the globe, given the holdings' origins. Despite this, the Fowler's digital collections are quite minimal, comprising of just 2,007 objects and lacking encoded, consistent, and robust metadata.² A more strategic approach to metadata could enable the Fowler to better serve its users and the community at large—particularly in the domains of research and repatriation. The following comprehensive metadata strategy will address both of these use cases, offering recommendations on metadata schemata, vocabularies, rights metadata, and logistics to best optimize the digital collections' metadata.

The Fowler Museum's Current Metadata Practices

While the Fowler's website is attractive and robust, complete with resources like school curricula, audio guided tours, and collection-related videos, the digital collections themselves are somewhat lacking. Of their over 740,000 objects, only 2,007 are online. Additionally, approximately 650 objects are on view at the museum.³ Given the large overlap between the digital collections and the objects on view at the museum, a substantial portion of the Fowler's holdings are not discoverable. In addition to the minimal representation of the collection online, the use of metadata is not built to promote discovery, context, aggregation, or reuse.

Metadata Issues

Both the quality of the Fowler's collections metadata and its technical implementation impact the usability and efficacy of their digital collections. With regard to metadata quality, the collection faces problems with consistency and detail. While most entries include the object name, place of origin, cultural group, materials used, dimensions, credit line, and accession

¹ "Collections Overview," Fowler Museum, <https://www.fowler.ucla.edu/collections/home/>. (Accessed May 31, 2019).

² "Products Archive," Fowler Museum, <https://www.fowler.ucla.edu/collections/>. (Accessed May 31, 2019).

³ Suzanne Muchnic, 2013, "UCLA's Fowler Museum Turns 50 in Worldly Fashion," *Los Angeles Times*, <https://www.latimes.com/entertainment/arts/la-xpm-2013-sep-28-la-et-cm-ucla-fowler-museum-50-20130929-story.html>.

number,⁴ other entries include date and artist.⁵ Some omit cultural group,⁶ while others share information as to whether the piece is currently on display in the museum.⁷ This lack of consistency compromises the collection's searchability as well as the object descriptions, making it harder to fully access and understand the collection.

Further, some of the items are given further description and context through supplemental pages, including the Andean ceramics and the Lega figures,⁸ for example. However, these pages are not linked back to individual object catalog records. Accordingly, if you were not browsing the site at large, you would not necessarily gain this contextual information. Valuable metadata, like dates, that are present in these supplemental pages are at times missing from individual object pages, as seen with the Lega figure overview⁹ and a spoon from the collection.¹⁰

Further impeding access, discovery, and retrieval of these items is the fact that item metadata are not encoded in the back-end with tags corresponding to a certain schema. This suggests that a standardized schema is not being employed. Instead, object metadata are denoted in the HTML through simple paragraph breaks. While current search engines prioritize page text and linking patterns within their algorithms, the lack of metadata HTML tags does represent a loss in retrieval and access.¹¹ Further, the lack of a standardized and encoded schema hinders the collection's ability to be aggregated or integrated into other repositories or works. A researcher, for example, would not be able to run a script and scrape the metadata as easily, preventing reuse of the collection.

Finally, reuse of the collection would be contingent on understanding the permission rights surrounding these items. Especially as the Fowler's digital collections include skulls and Indigenous art, clear provisions are needing for marking what can be used in what capacity and

⁴ "X2007.21.90 Lega Spoon," Fowler Museum, <https://www.fowler.ucla.edu/product/x2007-21-90-lega-spoon/>. (Accessed May 31, 2019).

⁵ "X92.311 Lambayeque Vessel," Fowler Museum, <https://www.fowler.ucla.edu/product/x92-311-lambayeque-vessel/>. (Accessed May 31, 2019).

⁶ "X95.38.207a,b Betel Mortar," Fowler Museum, <https://www.fowler.ucla.edu/product/x95-38-207ab-betel-mortar/>. (Accessed May 31, 2019).

⁷ "X91.410 Drinking Horn," Fowler Museum, <https://www.fowler.ucla.edu/product/x91-410-drinking-horn/>. (Accessed May 31, 2019).

⁸ "Lega Figures," Fowler Museum, <https://www.fowler.ucla.edu/collections/lega-figures/>. (Accessed May 31, 2019).

⁹ "Lega Figures," Fowler Museum.

¹⁰ "X2007.21.90 Lega Spoon," Fowler Museum.

¹¹ Jenn Riley, 2010, "Glossary of Metadata Standards," http://jennriley.com/metadatamap/seeingstandards_glossary_pamphlet.pdf, 4.

context. Administrative and rights metadata would facilitate user interaction with and understanding of the collection.

Open Graph

While the Fowler’s digital collections do not utilize encoded metadata to promote discovery, access, aggregation, and reuse, they do encode Open Graph tags to promote sharing over social media. Open Graph is a protocol that “enables any web page to become a rich object in a social graph” so that web pages enjoy the same functionality as other objects on social media.¹² Essentially, the protocol offers a set of tags that allow website developers to control what is displayed on social media platforms when users link to these web pages. Originally created by Facebook and now maintained by the Open Web Foundation, the protocol works on major social networks, including Facebook, Twitter, and LinkedIn.

While Open Graph is not intended to optimize a site for search engines, search algorithms likely account for Open Graph data, given the prominence of social networks within the Internet ecosystem.¹³ Nevertheless, Open Graph is not a sufficient substitute for a metadata standard. On the Fowler’s website, for example, Open Graph tags are limited to the URL, site name, image dimensions, site locale, title, and description—the latter of which serves as an unstructured, catch-all category for the object’s descriptive metadata. This set-up fails to provide sufficient context for the discovery and understanding of records, favoring social media presence and sharing over resource description and retrieval.

This oversight is perhaps because the Fowler’s website was created by Citrus Studios, a branding and digital agency. When marketing its web development services, Citrus Studios calls attention to their abilities in responsive web design, user experience, and branding—as opposed to metadata or searching functionalities.¹⁴ Accordingly, it is possible they are not information specialists with a strong understanding of information management and stewardship.

Potential Users of the Fowler’s Digital Collections Metadata

¹² “Open Graph Protocol,” <http://ogp.me/>. (Accessed May 31, 2019).

¹³ “Open Graph and Its Impact on SEO,” Yakaferci, <http://www.yakaferci.io/open-graph/>. (Accessed May 31, 2019).

¹⁴ “Responsive Web Design and Development Services,” Citrus Studios, <https://www.citrusstudios.com/online-marketing-services/responsive-web-design-development/>. (Accessed June 1, 2019).

The Fowler's collections are particularly apt for two use cases that this proposed metadata strategy will cover: research and repatriation. With regard to research, the Fowler was founded in 1963 to complement the archaeology, anthropology, and ethnography programs on campus. The collection reflects its interdisciplinary beginnings, encompassing fields such as art history, architecture, anthropology, and archaeology in a way that many other museums do not. Currently, the museum is affiliated with the UCLA School of Arts and Architecture, with departmental classes like "World Arts and Cultures 24: World Arts, Local Lives" focused entirely on researching and understanding the Fowler's collections.¹⁵ Given this, a strong user base of the collection materials are researchers from various fields.

The second user base that would benefit from the proposed metadata strategy would be those interested and involved in repatriation. The Fowler contains many Indigenous artworks, religious pieces, and even human remains as part of its archaeology efforts—all of which are contenders for repatriation. Currently, the Fowler has made several efforts to repatriate funerary objects and remains, complying with the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990. These regulations require federally funded institutions to return cultural items such as human remains, funerary objects, sacred objects, and objects of cultural patrimony to Native American and Native Hawaiian organizations.¹⁶ Per the *Federal Register*, the Fowler has submitted 13 notices of repatriation in accordance with NAGPRA, primarily for funerary objects and remains.¹⁷ There remain Indigenous sacred objects and objects of cultural patrimony in their collection, where the Fowler's repatriation efforts might extend.

Metadata could support such repatriation efforts, particularly with regard to digital repatriation. Currently the Fowler is physically repatriating items. A more robust metadata and digital strategy could allow for digital repatriation or a post-custodial model for some items. Digital repatriation has certain attributes that require careful consideration before implementing. While it does allow for low-cost surrogates of materials to be returned to communities—or in a post-custodial model, to be retained by a memory institution—the "ease with which [digital resources] can be copied, distributed, and revised; their ability to exist in multiple locations at

¹⁵ "World Arts and Cultures Courses," UCLA General Catalog 2018-19, <https://catalog.registrar.ucla.edu/ucla-catalog18-19-1398.html>. (Accessed June 3, 2019).

¹⁶ "Archaeology," Fowler Museum, <https://www.fowler.ucla.edu/archaeology/>. (Accessed June 1, 2019).

¹⁷ "Document Search Results for "Notice of Intent To Repatriate Cultural Items" Fowler," Federal Register, <https://www.federalregister.gov/documents/search?conditions%5Bterm%5D=%22Notice+of+Intent+To+Repatriate+Cultural+Items%22+fowler>. (Accessed June 2, 2019).

once; and their ephemeral nature” requires robust metadata in order to ensure the long-term care and preservation of materials.¹⁸

Proposed Metadata Schema

While the library and archival worlds have developed and used metadata schemata like MARC, Encoded Archival Description (EAD), Describing Archives: A Content Standard (DACS), and Metadata Encoding and Transmission Standard (METS) since the 1970s, the museum world was slower to catch on to standardized metadata schemata. Fundamentally, the orientation of museums is to attract visitors through unique holdings, which means they are less agreeable to consensus and collaboration with “competitor” institutions. This has changed, however, since the late 1990s. Given the benefits of shared cataloging, particularly in the digital space, museums have begun to implement standardized metadata schemata, including Categories for the Description of Works of Art (CDWA), Visual Resources Association Core (VRA Core), Cataloging Cultural Objects (CCO), and Dublin Core.¹⁹

A Survey of Metadata Schema Options

While all of these schemata have strengths, some are less suited to the Fowler’s collection and institutional practices. Currently, given the minimal number of objects posted online and the lack of robust metadata practices, there seem to be financial constraints preventing the Fowler from creating a more accessible, usable digital collection. Adopting CDWA as a metadata schema, then, would not be an apt fit: while thorough, CDWA’s 540 categories and subcategories for description as well as their correlating authority files would require a substantial investment in time, labor, and maintenance that does not align with the Fowler’s limited capacity for information management.²⁰

VRA Core represents an interesting opportunity for the Fowler, as its strength come from its ability to describe both an object and its digital surrogate. Creating and clearly documenting

¹⁸ Kimberly Christen, 2011, “Opening Archives: Respectful Repatriation,” *The American Archivist* 74 (Spring/Summer 2011), 187.

¹⁹ Anne Gilliland, 2016. “Setting the Stage” In *Introduction to Metadata*, by Murtha Baca. <http://www.getty.edu/publications/intrometadata>.

²⁰ “Categories for the Description of Works of Art (CDWA),” Getty Research Institute, http://www.getty.edu/research/publications/electronic_publications/cdwa/introduction.html#general. (Accessed June 2, 2019).

this boundary could prove helpful, especially in thinking about digital repatriation. However, VRA Core is chiefly intended to capture work records that can be affiliated with multiple image records.²¹ That is not necessarily the case with the Fowler’s collections, which primarily have one image for each work. Further, similar to CDWA, there is a level of complexity intrinsic to VRA Core that would require the Fowler to make a strong investment in information management. Not only does VRA Core require description for works and their digital surrogates, it also requires descriptions of collections—and creating relationships between all three of these elements. While these features allow for a more robust information experience, it may be outside the financial means and scope of the Fowler.

CCO is similarly robust. In addition to a metadata element set that can map onto VRA Core, CDWA, Dublin Core, and MARC, CCO provides extensive guidelines on formatting data, authorities, and controlled vocabularies.²² While several of their required categories are a great fit for the Fowler’s collections—including “current location,” within the context of repatriation—some make less sense. Requiring an authority for the “controlled creator” field, for example, does not necessarily make sense for the Fowler, given the unknown or ambiguous creator for many of their objects, as well as the inadequacy of many vocabularies in representing non-Western artists. While use of controlled vocabularies is encouraged and will be detailed later on in this report, metadata schemata should have some flexibility, and understand that not all objects will be represented within a controlled vocabulary. Further, CCO requires a controlled vocabulary for the “controlled subjects” field. This would involve a substantial financial investment from the Fowler, as topical, subject metadata are wholly missing from the current online collection.²³

Ultimately, the key is making the Fowler’s collections searchable, findable, contextualized, and shareable—all while respecting the reality of the Fowler’s budgetary and staffing limitations. Dublin Core, then, is the best fit, as it is a simple, low-cost metadata standard for digital objects. The schema has fifteen core metadata fields, all of which are both optional and repeatable. Accordingly, Dublin Core is meant to be “extremely simple, flexible,

²¹ “VRA Core 4.0 Introduction.” 2014. http://www.loc.gov/standards/vracore/VRA_Core4_Intro.pdf.

²² Baca et. al., 2006, “Cataloging Cultural Objects: A Guide to Describing Cultural Works and Their Images,” American Library Association, http://cco.vrafoundation.org/index.php/toolkit/cco_pdf_version/, 1.

²³ Baca et. al., “Cataloging Cultural Objects,” 44-45.

and extensible” in order to encourage wide adoption online.²⁴ Despite this simplicity, Dublin Core provides enough fields to support description, retrieval, and preservation of digital collections.

Dublin Core and the Research User Base: Improving Access, Search, and Reuse

Researchers using the digital collections are served by the choice of Dublin Core as a metadata schema for the collection in terms of access. From a logistical standpoint, of all the schemata Dublin Core encourages the fastest upload of records as possible given the simplicity and straightforwardness of the schema. This is especially important as the vast majority of the Fowler’s holdings are not available online or physically on view at the museum. Adding these records would open up research opportunities for scholars from a number of fields.

Utilizing Dublin Core as a metadata schema, as opposed to the collection’s current homegrown schema, also allows for easier integration with image repositories like Artstor and the Online Archive of California.^{25, 26} Dublin Core is the baseline format required for resources shared via the Open Archives Initiative Protocol for Metadata Harvesting, a technology that automates metadata sharing to enable cross-repository discovery.²⁷ Given the museum world’s relatively late adoption of standardized metadata schemas, these cross-repository initiatives have had limited success, sometimes suffering from incomplete metadata records.²⁸ All the same, it is a resource that scholars can turn to—and a resource that will only improve with the continued commitment to responsible information management practices and contributions from museums.

The “rights” field is perhaps Dublin Core’s strongest addition to the current Fowler record. For researchers, this field could include a rights statement (or a URL directing users to a rights statement) regarding the reuse of images. Rights metadata—for objects and their digital surrogates—ensure compliance with intellectual property laws, give researchers clarity and

²⁴ Stephen J. Miller, 2011, *Metadata for Digital Collections: A How-to-Do-It Manual*, London, United Kingdom: Facet Publishing, 51.

²⁵ “Technical Overview,” Online Archive of California (OAC) / Calisphere Contributor Help Center, <https://help.oac.cdlib.org/support/solutions/articles/9000081989-technical-overview>. (Accessed June 4, 2019).

²⁶ “Metadata Policy,” Artstor, <https://www.artstor.org/contribute/metadata-policy/>. (Accessed June 4, 2019).

²⁷ Riley, “Glossary of Metadata Standards,” 11.

²⁸ Gilliland, “Setting the Stage” In *Introduction to Metadata*.

security about reuse, and set the foundation for the collection as a whole to be easily integrated into repositories like Artstor.²⁹

Dublin Core and Repatriation: Enabling Collaboration and Metadata Justice

Dublin Core can serve repatriation efforts, as it facilitates digital technologies that “harness the collaborative potential between collecting institutions and indigenous communities.”³⁰ One platform utilizing metadata to facilitate respectful digital repatriation is the Mukurtu content management system. Mukurtu is an open-source software that allows Indigenous communities to create and manage online collections of cultural heritage. Initially created through a collaboration with the Warumungu peoples of Australia and archivist Kimberly Christen of Washington State University (WSU), the platform introduces metadata that expresses Warumungu knowledge sets missing from Dublin Core through fields like “cultural narrative” and “traditional knowledge.”³¹ Accordingly, within Mukurtu each object can have multiple records, featuring the Mukurtu metadata that respects Indigenous knowledge while also maintaining institutional records and all of the history they bear. The Plateau Peoples’ Web Portal, for example, uses Mukurtu. Many of their items are housed at WSU, which uses Dublin Core. Accordingly, for an object entry, Dublin Core records from WSU are shown as “institutional catalogue records” alongside records created by the community shown as “tribal catalogue records.”³² This juxtaposition gives both records equal footing, correcting the centuries’ long bias and imposition of Western knowledge organization on Indigenous cultural materials. It also allows users to see the differences, additions, and corrections the tribal records have regarding the institutional record, revealing how “history is indeed made, unmade, and negotiated over time” and calling into question the primacy and orientation of institutional records.³³

This approach to metadata also acknowledges that Western institutions do not have the knowledge, authority, or proficiency to catalog their items with Indigenous metadata schemata.

²⁹ Maureen Whalen, 2016, “Rights Metadata Made Simple” In *Introduction to Metadata*, by Murtha Baca, <http://www.getty.edu/publications/intrometadata>.

³⁰ Christen, “Opening Archives: Respectful Repatriation,” 208-9.

³¹ “Digital Heritage Metadata Fields,” Mukurtu CMS, http://support.mukurtu.org/customer/en/portal/articles/2558813-digital-heritage-metadata-fields?b_id=633. (Accessed May 31, 2019).

³² Christen, “Opening Archives: Respectful Repatriation,” 201.

³³ Ibid.

Unless they hired catalogers and registrars from each community represented in their collection, the Fowler would not be able or skilled enough to apply Indigenous metadata schemata to their collections. Integrating their Western, Dublin Core metadata records alongside records created by communities “maintains the integrity of both institutional metadata and tribal community metadata while simultaneously showing the sharing of knowledge in multiple directions.”³⁴

Should the Fowler choose to use their Dublin Core records to repatriate items and collaborate with Indigenous communities through a platform like Mukurtu, there could be a reciprocal positive effect on both record sets. That is, incomplete Fowler records could be greatly improved by being placed alongside community records, which have the “local expertise, interpretation, and recollection” of communities.³⁵ In this way, digital repatriation, collaboration, and respectful community engagement benefit both institutions and Indigenous communities.

Further, Dublin Core’s field for “rights” serves as administrative metadata that could document repatriation, a necessary logistical step in facilitating and building these collaborations.³⁶ This field could also be used to stipulate any specific access right restrictions. Some Indigenous communities understand private and public access differently than Western notions, as access is based “on a dynamic system of accountability where one’s age, gender, ritual status, family, and place-based relationships all combine (and recombine as affiliations shift over a lifetime) to produce a continuum of access to materials within the community.”³⁷ Should the Fowler wish to honor the Indigenous cultural practices of these items, they could document and implement access restrictions through the “rights” metadata field. Conceivably the record, then, would be accompanied by a blank photo, available for viewing on clearance.

In addition to applying access restrictions to their own digital collections, these restrictions would also apply to any sharing with digital repositories like Artstor and the Online Archive of California. Consistent and accurate use of this “rights” metadata field would thus be necessary for ensuring the responsible and respectful stewardship of these materials.

Adopting a standardized and highly interoperable metadata schema like Dublin Core also sets the stage for a post-custodial model, should the Fowler choose that mode of stewardship.

³⁴ Kimberly Christen, Alex Merrill, and Michael Wynne, 2017, “A Community of Relations: Mukurtu Hubs and Spokes,” *D-Lib Magazine* 23 (5/6), <https://doi.org/10.1045/may2017-christen>.

³⁵ Peter Toner, 2004, “History, Memory and Music: The Repatriation of Digital Audio to Yolngu Communities, or, Memory as Metadata,” Open Conference Systems: Sydney, Australia, 15.

³⁶ Gilliland, “Setting the Stage” In *Introduction to Metadata*.

³⁷ Christen, “Opening Archives: Respectful Repatriation,” 189.

Through robust metadata records for objects, the Fowler could facilitate research and learning while still allowing for the physical objects to remain with their communities of origin. While a post-custodial model may be unlikely given the museum's financial stake in their holdings, establishing more thorough, consistent metadata practices at least allows for this option.

Proposed Controlled Vocabularies

There are several controlled vocabularies that the Fowler could utilize to standardize their metadata records, to ultimately make them more retrievable for users and interoperable with external repositories. The Getty Vocabularies, in particular, offer strong support for describing art, architecture, locations, artists, and museums. The Getty Vocabularies are multilingual and represent nearly 40 years of development and investment. Their broad scope and depth make them sustainable, reliable options for use for the Fowler's collections. For the Fowler, the Art & Architecture Thesaurus (AAT) could be used for the "format" field, when describing materials used, as well as in the "description" field, when describing the culture and style of a piece. The Getty Thesaurus of Geographic Names (TGN) could be used in the "coverage" field, to describe the spatial location of the object. The Union List of Artist Names (ULAN) could be used in the "publisher" field to describe the Fowler, as well as when applicable in the "creator" field.

In addition to the Getty Vocabularies, the DCMI Type Vocabulary should be used in the "type" field to ensure optimum integration and compatibility for searching aggregated records.³⁸ The "language" field, too, should use the recommended standards for Dublin Core: RFC 3066 and ISO 39, which define primary language tags and subtags.³⁹ For the "date" field, while the broader date ranges for most of the Fowler's materials do not lend themselves for easy adoption of Dublin Core's recommended SO 8601 standard, it is possible to use AAT's specification between types of date (alternative, inclusive, and coverage) where applicable.⁴⁰ At the very least, dates should be formatted consistently, even when a controlled vocabulary is not applicable.

Controlled vocabularies would primarily benefit the researcher user base. Resources like Artstor, the Google Cultural Institute, and the Online Archive of California aggregate digital collections from different museums in order to facilitate cross-repository searching. Ideally, this

³⁸ "Using Dublin Core," Dublin Core Metadata Initiative, <http://www.dublincore.org/specifications/dublin-core/usageguide/elements/>. (Accessed June 3, 2019).

³⁹ "Using Dublin Core," Dublin Core Metadata Initiative.

⁴⁰ Ibid.

would mean that researchers could more efficiently and more broadly locate relevant materials. In practice, however, keyword searching in these large repositories can be “woefully inadequate” due to the varied metadata practices of contributing institutions.⁴¹ Utilizing the Getty Vocabularies within the Fowler’s metadata records would improve the retrieval of their items within these repositories; Artstor, for example, uses ULAN and TGN.⁴²

There are a few drawbacks to the Getty Vocabularies to consider with regard to the Fowler’s collections. Some museum professionals have found AAT to have a steep learning curve, particularly when navigating its hierarchical structure to identify relevant terms.⁴³ Especially given the Fowler’s financial and staffing constraints, this could present a real issue. Accordingly, this metadata strategy proposal limits AAT’s required usage to “format,” as materials terms are more straightforward than topical and conceptual terms. While this proposal suggests integrating topical and conceptual AAT terms alongside the label text in “description,” this is optional. Additionally, this proposal is not requiring the “subject” Dublin Core field, which would utilize these more complex AAT terms, given the Fowler’s financial and staffing constraints.

Further, the Getty Vocabularies can be biased toward Western art and architecture—a problem for the Fowler, as the majority of their collection is non-Western. This particularly can be felt with ULAN.⁴⁴ Similarly, these thesauri privilege art and architectural concepts, and may be less relevant to some of the Fowler’s users, such as anthropologists, who would understand the Fowler’s collections within a different framework. While these biases are not ideal, the Getty Vocabularies are the most robust thesauri available for collections of cultural artifacts. Some of the bias of ULAN can be circumvented, as many of the artists within the Fowler’s collections are unknown. Ultimately, the potential benefits with regard to aggregated search, retrievability, and accessibility make using the Getty Vocabularies a fruitful strategy.

Finally, on a more practical level, in order to encourage users of the Fowler’s digital collections to enjoy the full benefits of the controlled vocabulary, it is advised that the Fowler includes a section on their website linking to the Getty Vocabularies and explaining how they

⁴¹ Murtha Baca and Melissa Gill, 2015, “Encoding Multilingual Knowledge Systems in the Digital Age: The Getty Vocabularies,” *Knowledge Organization* 42 (4), 232.

⁴² “Metadata Policy,” Artstor.

⁴³ Alison Gilchrest, 2003, “Factors Affecting Controlled Vocabulary Usage in Art Museum Information Systems,” *Art Documentation: Journal of the Art Libraries Society of North America* 22 (1), 15.

⁴⁴ *Ibid.*

were applied to the digital collections. This would empower users to create more effective and targeted searches.

Sample Record

The following figure shows a transformation of a current record⁴⁵ at the Fowler, utilizing the proposed metadata schema and controlled vocabulary described above.

CURRENT RECORD	TRANSFORMED RECORD
Object Name: Lambayeque vessel	Title: Lambayeque vessel
Artist: Unknown	Creator: unknown Lambayeque [°]
Cultural Group: Lambayeque	Date: 900 – 1300 C.E.
Place of Origin: Peru, north coast	Format: Ceramic (material)* H: 13.50 cm, L: 14.50 cm, W: 12.00 cm
Date: 900 – 1300 C.E.	Description: [Label text; whether or not item is on view]. Originated from the Lambayeque peoples* of the north coast of Peru.
Materials Used: Ceramic	Coverage: Lambayeque [□] Peru [□]
Dimensions: H: 13.50 cm, L: 14.50 cm, W: 12.00 cm	Identifier: Accession number X92.311
Credit line and Accession Number: Fowler Museum at UCLA. Gift of Dr. Harry and Claire Steinberg. X92.311	Publisher: Fowler Museum of Cultural History [°]
TAG: Andean Ceramics	Type: PhysicalObject [∩]
	Rights: Credit line: Fowler Museum at UCLA. Gift of Dr. Harry and Claire Steinberg. [Access rights; repatriation records as applicable].
	TAG: Andean Ceramics

Vocabulary Key:
[°] = ULAN
^{*} = AAT
[□] = TGN
[∩] = DCMI Type

As shown in the above figure, the Fowler’s current metadata makes a fairly easy transition to a Dublin Core record. One of the more detailed object records was chosen to show the full potential of the transformed record. For records with less detail—such as those missing dates—some research will be required, as indicated in this record by the brackets. If the Fowler prefers the front-end to use different terms than Dublin Core’s (such as preferring “place of

⁴⁵ “X92.311 Lambayeque Vessel,” Fowler Museum.

origin” to “coverage”), they can always choose to encode the Dublin Core schema into the back-end, and have the front-end display the preferred term.

While most fields mapped on clearly, a few are a bit more involved. The “description” field, for example, has been inconsistent across the current records, with some including curatorial label text and others specifying within the record more generally if it is currently on view in the museum. In addition to these two elements, this new strategy proposes integrating AAT controlled terms where possible to increase searchability, especially as the field represents a “potentially rich source of indexable terms.”⁴⁶ Since the “description” field utilizes full sentences to present more in-depth information to the user, elements that are lost through the implementation of controlled vocabularies in other fields can be incorporated here. For example, the place of origin was initially described as “Peru, northern coast;” however, “coverage” does not include the coastal detail as “Peru, northern coast” was not the preferred term for the region in TGN. This information can still be saved and presented to the user, under “description.”

The “rights” field is a particularly valuable addition to the collection record. In addition to the credit line, this would be a useful field for supporting repatriation efforts, detailing the object’s repatriation history as well as any information as to whether the source can be viewed or accessed by the general public. On the research side, once the Fowler determines the rights status for their items, they could evaluate the premade, standardized rights statements provided by Rightsstatements.org, and determine which is applicable to the object. Then, within the “rights” field, the Fowler could link directly to the Rightsstatements.org statement. Developed in part by the Digital Public Library of America and Europeana, these rights statements use clear, standardized language to promote engagement with materials and repository aggregation.⁴⁷

The fields in the above transformed record are all required as part of the proposed metadata strategy, aside from the “TAG” field. Tagging within the collection is currently limited and decentralized, and thus not exceptionally usable as a mode of information discovery. It appears that only a select number of items were tagged—the Andean ceramics, Andean textiles, and “Fowler at Fifty.” While it would be useful if all of the items online could be tagged to facilitate discovery and search, that would require significant planning and research on user

⁴⁶ “Using Dublin Core,” Dublin Core Metadata Initiative.

⁴⁷ International Rights Statements Working Group, 2017. “Recommendations for Standardized International Rights Statements,” White Paper Version 1.2, 4.

search patterns. Thus, a simpler approach to searching and browsing would be to rely instead on the collection filters on the left navigation bar of the digital collections, which currently include geographic region, culture, date/era, and medium—all of which are already detailed in the metadata. These filters are preferable to the tags, which currently are not consistent nor comprehensive enough to provide valuable and thoughtful points for discovery and access.

The “relation” and “source” fields from Dublin Core are also optional, as they are largely not applicable to most pieces, and instead reflect Dublin Core’s strength in describing digitized bibliographic materials. The “contributor” field is optional as well, seeing as it is not applicable to most of the Fowler’s holdings. As described above, the “subject” field is optional as it would require more time and money; for a limited approach, the “description” field will offer enough context to make the resources usable. The “language” field is also optional, as it is not relevant to many of the materials. While some do have writing on them, others do not, with some coming from cultures that did not have a written language.

Metadata Creation Logistics

Implementing this metadata strategy will require the work of information or collections professionals. While Dublin Core is the most basic schema for digital materials, it still may feel foreign to the layperson, especially when integrating various vocabularies with it. Additionally, as research will be required to complete some of these records, either within internal systems or externally, it would be best for a museum or information professional to do this work. That said, this work does not require a senior professional, and could be completed by a more junior professional within the field. Perhaps given the Fowler’s physical location on campus, this would be an apt opportunity for graduate students in Information Studies. Hiring student workers would also be an economical option for the Fowler, while providing students with valuable experience.

It also may be worth looking into the functionality of the Fowler’s collections management system, to discover how much of this metadata could be automatically extracted from this system. Automating metadata creation by exporting metadata from the Fowler’s collections management system as a CSV file, for example, could save significant time and money. If their collections management system allows for this, the metadata the Fowler has already created within that system could be exported, cleaned and standardized within OpenRefine, and then imported into the digital collections’ content management system as

structured metadata fields. While cleanup would still be involved, this would prevent duplicating some of the metadata entry already done on one of the Fowler's systems.

A potential drawback to using graduate students for description would be the high turnover that necessarily comes with a two-year master's program. This could result in inconsistencies, such as uneven application of vocabularies or simple errors that come during training periods, which would happen more frequently as new people cycle in and out. These problems with inconsistency would be exacerbated by the fact that the museum currently does not have anyone on staff with an MLIS degree. Strong training documentation would be necessary, then, complete with workflow diagrams, example records, and robust resources and reference materials. Additionally, internal records could be maintained as to which vocabulary terms the Fowler is using within the Getty Vocabularies. Some content management systems like Drupal even allow for integration of vocabularies within the system to facilitate this tracking and encourage consistent implementation.⁴⁸ All training and reference materials should be constantly updated and improved upon, as any institutional knowledge will likely be temporary.

Conclusion

Digital collections for museums represent a real opportunity to further access, discovery, and engagement with materials. For the Fowler, this opportunity is magnified due to the nature of their collections. On the research side, not just art historians are interested in the Fowler's materials—scholars from anthropology, archaeology, ethnography, and architecture could all utilize the Fowler's collections to further their research. On the public side, Indigenous and marginalized communities could be reunited with items of cultural heritage through repatriation, as the Fowler's holdings include materials from other countries, including spiritual and cultural materials from Indigenous communities. Metadata could play a key role in serving both of these user bases. While the objectives of these two user bases may seem at odds with one another—with researchers needing more access and aggregation, and repatriation at times involving access restrictions—metadata can play a critical part in answering the needs of both communities, simultaneously facilitating more meaningful search and access of the collection at large, while also ensuring the safety and cultural repatriation of select materials.

⁴⁸ "Web Taxonomy Plugin for Getty Vocabularies," 2014, Drupal.Org, https://www.drupal.org/project/wt_getty.

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