COLLECTION MANAGEMENT: POLICY, PROCESS, AND SUSTAINABLE DEVELOPMENT

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A thesis submitted to the

Graduate School-New Brunswick

Rutgers, The State University of New Jersey

In partial fulfillment of the requirements

For the degree of Master of Arts

Graduate Program in Art History

Written under the direction of Dr. Archer St. Clair Harvey

And approved by

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New Brunswick, New Jersey

October 2014

ABSTRACT OF THE THESIS

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This thesis examines the efficacy of collection management in improving the maintenance of cultural heritage collections. Diligent management of collections of cultural materials is vital to the sustainable development of the institutions housing them. Sustainability, in the context of museum collection management, is characterized by the ability of the collection to perform in such a way that it contributes to the public's understanding and enjoyment of culture. In this project, I focus on three museums with large ethnographic collections in order to explore how approaches and tools used in these institutions facilitate their role in public service and the museum as a public institution. These three case studies are the American Museum of Natural History (AMNH) in New York, the University of Pennsylvania Museum of Archaeology and Anthropology (UPMAA) in Philadelphia, and the Brooklyn Museum in New York. Each case study presents (1) the history of the collections, (2) the current mission of each museum, (3) the collections' maintenance practices, and (4) the ways in which each museum looks to strengthen the public performance of its collections. These case studies provide examples of public-oriented models for the stewardship of cultural heritage, models that dramatically improve access to collection materials and can enable cultural heritage institutions to continue to serve the public for generations to come.

ACKNOWLEDGEMENTS

I would like to thank everyone who has helped me in the process of writing this thesis for all their valuable advice— especially Professors St. Clair-Harvey, Woodhouse-Beyer, and Dalbello, without whose guidance this essay would not have been possible.

Thank you to the curatorial staff of the Brooklyn Museum; during my time with them as an intern, I was able to pursue my passion for cultural heritage and collection management. I would also like to thank Donald Beetham of the Rutgers University Visual Resources Center for contributing so much insight and a wealth of resources for learning more about issues in collection management and digital record keeping.

Finally, I am especially grateful to my family and friends for their support these past two years as I have pursued my master's degree.

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INTRODUCTION

Of the many and diverse organizations devoted to the preservation of cultural heritage, museums comprise an extremely prominent portion of the stewardship mediating public access to cultural heritage materials. According to the definition given by the International Council Of Museums, a museum "includes all collections open to the public, of artistic, technical, scientific, historical or archaeological material".[1] Museums ideally fulfill a number of functions essential to the safekeeping and longevity of these objects: they provide the physical conservation treatments and the optimal storage conditions that help prolong the life of cultural heritage materials, and help facilitate academic research on their holdings and outreach programs to disseminate the historical and cultural information they acquire. But such museums also receive critique over the nature of the collecting culture that formed the core holdings of many major museums. It is an unfortunate truth that some of the holdings in many museums' collections are ill-gotten goods, removed from their original contexts by early collectors, antiquarian archaeologists, and, frequently, looters.

Even in light of the means by which their collections came to be, museums remain major facilitators of public interaction with cultural heritage materials. To this day, there are tens of thousands of museums operational worldwide, which receive

[1] Suzie West, ed., *Understanding Heritage in Practice* (Manchester, UK: Manchester University Press, 2010), 128.

countless visitors per year.[2] According to a study conducted by the American Alliance of Museums, museums in the United States alone receive as many as 850 million visits annually.[3] The 55 million of these visits that are made by school groups further attest to museums' enormous impact on cultural education.[4] Other staple educational endeavors provide interpretation in the forms of lectures, literature, and a number of outreach programs. In a 2011 survey conducted by UNESCO, though, it was found that nearly sixty percent of museums currently do not have measures in place —that is, comprehensive organizational strategies and storage facilities— to protect movable cultural heritage from myriad threats such as theft, looting and damages incurred in wartime, catastrophic weather conditions, and even the natural deterioration of the materials.[5] Furthermore, even at museums in which such practices have been implemented, there is a great need to develop the collections sustainably to ensure that they can continue to benefit the public to their fullest – instead of becoming or remaining inert assemblages of cultural materials.

The sustainability of a collection is a point of increasing concern to the staff of these institutions. A statement published by ICOM clarifies what "sustainability" means for collections of cultural materials: "To be sustainable, museums, through their mission, must be an active and attractive part of the community by adding value to the heritage

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[2] "Frequently Asked Questions," ICOM, Accessed March 2014, http://icom.museum/resources/frequently-asked-questions/.
[3] "Museum Facts," American Alliance of Museums, Accessed November 2013, http://www.aam-us.org/about-museums/museum-facts.
[4] Ibid.
[5] "Stored But Not Safe: Museum Collections Are At Risk Worldwide", UNESCO, Accessed February 25, 2013, http://www.unesco.org/new/en/culture/themes/movable-heritage-and-museums/museums/museum- projects/stored-but-not-safe-museum-collections-are-at-risk-worldwide/.

and social memory".[6] A similar statement by the state government of Oregon further calls attention to the complex interaction between human culture and the surrounding environment in order to explain the need for improved practices:

> Sustainability means using, developing and protecting resources at a rate and in a manner that enables people to meet their current needs and also provides that future generations can meet their own needs. Sustainability requires simultaneously meeting environmental, economic and community needs.[7]

In the context of cultural heritage collection management, sustainability therefore depends on the tools that enable stewards to best care for the collection materials in a way that not only preserves their longevity for future generations but also contributes to the public's breadth and depth of knowledge of their holdings. Maintaining such a staggering number of objects effectively and sustainably, though, demands a more strategic approach to the safeguarding of cultural heritage materials. This thesis will examine some of the obstacles faced by cultural heritage stewards in attempting to improve the maintenance and performance of museum collections for the benefit of future generations, and the approaches taken towards overcoming them. By making public engagement the focus of collection management policies and procedures, stewards can guarantee that these institutions give back to communities in a significant and sustainable way.

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[6] ICOM, "Thematic Panel of the Advisory Committee No. 1," June 2011. Accessed online: http://archives.icom.museum/download/june2011/panels/110602_%20JM_panel1.pdf.
[7] "Defining Sustainability," Museums Association, Accessed August 2014, http://www.museumsassociation.org/campaigns/sustainability/definitions.

CHAPTER I: DEFINING THE ROLE OF MUSEUMS

A Brief History of Museums and Collecting

When examining the care of large collections of cultural heritage materials, museums and their legacy cannot be overlooked: a considerable portion of collections of cultural heritage materials worldwide are held by museums. Museums today stand on the brink of a major paradigm shift with regard to their core missions – one of many since their emergence as major cultural institutions. To understand the significance of this change, it helps to examine the history of museums and other collections of cultural objects. Contemporary museums are descended largely from private collections of works of art and cultural objects of interest to the patrons who assembled them. Consequently, historians of collecting are sometimes careful to distinguish between museums and collections, and especially between different types of collections (that is, research and study collections, teaching collections, etc.). The practice of collecting cultural curiosities and works of art has a long history, dating all the way back to antiquity, as does the model of an institution for displaying works for public perusal – though in the case of the latter, the apparent connection may seem less overt as the offerings of information made available came not in the form of displays of art, but of access to knowledge.[8]

The Renaissance gave birth to "cabinets of curiosity," which, among patrons with sufficient funds to actualize such spectacles, could range from individual pieces of ornate case furniture for housing collectibles to entire suites and wings in private homes devoted

[8] "A Contribution to the History of University Museums and Collections in Europe," Marta C. Lourenço, Accessed March 2014, http://publicus.culture.hu-berlin.de/umac/2002/lourenco.html.

to their display— *stanzinos*, *studiolos*, *gallerias*, and *museos*.[9] The primary audience intended for these collections were the collectors and their more intimate circles, though in practice, this was not always the case. Many collectors' motivation in curating the contents of their private collections was to demonstrate the breadth of their knowledge and tastes. According to Wolfram Koeppe of the Metropolitan Museum of Art's Department of European Sculpture and Decorative Art: "A compilation of remarkable things was attempted as a mirror of contemporary knowledge, regardless of whether those objects were created by the genius of man or the caprice of nature. The rarer an item, the more attractive it appeared.…" [10] The *Kunst-/Wunderkammers* that came about in the sixteenth century continued the tradition, though these took a more educational approach in that many permitted visitors, and some, such as the Kunstkammer in Dresden, were even established explicitly for educational purposes.[11]

Universities were also instrumental in facilitating public access to collections. Following the model established by research facilities of antiquity such as the Museion at the Library of Alexandria, they encouraged public perusal of their collections' holdings – now not only literary materials belonging to their libraries as had their predecessors, but works of art and curiosities as well. The Ashmolean Museum, founded in 1683, was the first of such university museums. Like contemporary museums, the Ashmolean's museum was open to public visitation and even provided teaching and research spaces.[12] Another major early museum was the Musée du Monuments Français in Paris, founded in

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[9] "Collecting for the Kunstkammer," Wolfram Koeppe, Accessed April 2014, http://www.metmuseum.org/toah/hd/kuns/hd_kuns.htm.
[10] Koeppe.
[11] Ibid.
[12] Lourenço.

1795. Made up of objects seized from the private holdings of the wealthy during the revolution, it showcased cultural materials such as sculptures, architectural elements, and decorative art pieces. This course of action, Kaufman explains, was taken to protect the cultural heritage of the French people from "the gravest dangers of depredation and destruction".[13] It is worth noting that even today, there remains a reactionary trend in the preservation of historical materials – preservation initiatives tend to favor heritage in crisis, which has led geographer David Lowenthal to conclude that cultural heritage is most regarded as valuable to a community when it is perceived to be threatened.[14] The Musée du Monuments Français was wildly successful for the brief period during which it operated; 1816 saw its closure and the return of the objects therein.[15]

Although museums and collections eventually shifted in their focus from the indulgence of personal interests to informing a public audience, the history and development of museums remained inextricably intertwined with the construction of imperialist narratives for the century and a half to follow. Michael Brown's "Exhibiting Indigenous Cultural Heritage" outlines some of the reasons for this:

> Critics insist that museums function primarily as theaters of power, deploying their cultural capital and sumptuous architecture to shape attitudes toward everything from artistic taste (thus ratifying the superiority of ruling elites) to the moral standing of the nation-state (thereby mobilizing public sentiment in favor of state power).[16]

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[13]Ned Kaufman, *Place, Race and Story: Essays on the Past and Future of Historic Preservation* (New York: Routledge, 2009), 190.
[14]David Lowenthal, *The Heritage Crusade and the Spoils of History*, (Cambridge: Cambridge University Press, 1998), 26.
[15] Kaufman, 190.
[16] Michael F. Brown, "Exhibiting Indigenous Heritage in the Age of Cultural Property," in James Cuno, ed., *Whose Culture? The Promise of Museums and the Debate over Antiquities*, (Princeton: Princeton University Press, 2009),148.

Brown points out that many early "natural history" museums displaying the artifacts of different cultures and their material heritage in imperialist gestures of classification and study were established in the nineteenth century, coinciding with the growth of major colonial powers. In doing so, museums were not only "theaters of power" in which the superiority of the ruling elite could be asserted, but also institutions complicit in constructing perceptions of other cultures by controlling the gaze of museum visitors. The concept of "gaze" in museum theory generally refers to "the act of involuntary participation in a culturally constructed, visual discourse where there is no unmediated, pure relationship between a Subject and the Object of its view."[17] The result is an inherent trust between audiences consuming cultural heritage and stewards of cultural heritage that has been shaped over time: Curation implies arbitration. Even today, as Tim Benton and Nicola J. Watson explain in a museum-focused chapter in *Understanding Heritage in Practice*, "Museums almost everywhere, whether private or public, are now considered to have essential functions in 'developing' the culture of the local population, promoting a sense of common identity, and attracting tourists to the country."[18]

The Museological Paradigm Shift

The most significant difference between the museums in their earliest forms and the museums of the present day is their respective levels of accessibility to and engagement with the general public. Museums, their collections, and their stewards now operate within a broader context than ever before, both within the communities of their

[17] Valerie Casey, "The Museum Effect: Gazing from Object to Performance in the Contemporary Cultural-History Museum," *Cultural Institutions and Digital Technology*. (2003): 3.

[18] West,129.

situation and on a global scale. In opening to the public, museums have opened themselves to public input – for example, public contribution in the form of monetary support, donations of objects to the collection, and, most recently, public scrutiny. Museums, as public institutions (or at least, as institutions with public interests in mind), interact with, and are accountable to the museum-going public. The rhetoric surrounding the custodianship of cultural heritage has likewise shifted to reflect the change in attitudes towards the role of the gatekeepers of cultural heritage.

Much of this ideological shift within the practice of museum collection management is due to the dramatic cultural changes of the twentieth century – especially the rise of civil rights movements and globalization. The structures of museums with ethnographic content began to move away from the "theaters of power" format devoted to study of the ethnographic "other" that had been established by the museums designed in colonial contexts, and instead started to place more emphasis on the inclusion of more perspectives when exhibiting cultural materials.[19] The dispersion of control over information enables many stakeholders to contribute to the educational component of the life of a museum. As Stephen Weill, Smithsonian Institute scholar emeritus focusing on education and museum studies, wrote in *Making Museums Matter*, museums have gone "from being about something to for someone".[20] Ideally, museums are meant to be for everyone.

In contrast to the more private functions of many early collections, the goal of contemporary cultural collection management is to preserve the human legacy for the general public. Even the terminology currently used in discussing cultural heritage

[19] "Evolving Humanity, Emerging Worlds," 17th World Congress of the IUAES, accessed April 2014, http://www.nomadit.co.uk/iuaes/iuaes2013/panels.php5?PanelID=1462.
[20] Stephen Weill, *Making Museums Matter* (Washington D.C.: Smithsonian Institution, 2002), 28.

management reflects the new roles held, especially in the context of museums: caretakers of the material record are no longer the "owners" of objects, but the "stewards" mediating cultural heritage care and access. Any individual with a connection to or investment in cultural heritage has a relationship with the material is a "stakeholder". UNESCO's definition of a museum also demonstrates this paradigm shift in the goals of cultural heritage institutions: "a museum works for the endogenous development of social communities whose testimonies it conserves while lending a voice to their cultural aspirations".[21] In all capacities, museums work to safeguard cultural heritage so that they can benefit local and global communities.[22]

According to UNESCO, museums now fulfill three major functions. First, they are responsible for the care of movable cultural heritage objects, keeping them in storage conditions that prolong the longevity of each unique item and providing conservation treatments when necessary. The second responsibility that museums bear is that of illustrating the relationship between nature and culture; UNESCO also cites the growing number and increasing importance of natural history museums and museums with scientific content.[23] The third core priority of museums is sharing their knowledge and contributing to public service and cultural development.[24] And just as the experience of cultural heritage has become democratized with time, the interpretation of cultural heritage materials has as well.

Benton and Watson's analysis of the role of the curator in mediating the cultural heritage experience reminds us that, until recently, stewards with intensive academic and

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[21] "Museums," UNESCO, Accessed November 2013, http://portal.unesco.org/culture/en/ev.php-URL_ID=35032&URL_DO=DO_TOPIC&URL_SECTION=201.html.
[22] Ibid.
[23] Ibid.
[24] "Museums".

professional training were (and often still are) regarded as the leading experts in their areas of concentration.[25] Interpretation was typically provided in the form of didactic labels and plaques or literature produced by museum staff (namely, the curators). Though the responsibility of performing research and providing an academic perspective on collection materials falls largely to curators, the handling and interpretation of objects and the dissemination of information have become more evenly distributed across museums' many departments; even direct stakeholders such as indigenous peoples, descendant populations, and others with a relationship to the materials are frequently encouraged to supply their own cultural knowledge or experiences related to museum holdings.

Education and Outreach in the Age of Public Stakeholding

As a result of this paradigm shift, the number and variety of museums has increased almost exponentially in the twenty-first century. There are the large cosmopolitan art museums with an encyclopedic scope such as the Metropolitan Museum of Art in New York City or the British Museum in London, and there are countless small, local or topical museums with much narrower areas of focus as well. Museums such as these operate not only as educational institutions and sources of income for the communities of situation, but also serve as valuable resources for community development. Some examples might be museums detailing local history or featuring

[25] West,130.

community artists; these offer employment and artistic or cultural opportunities for members of the community.[26]

In *Fragments of the World: Uses of Museum Collections*, Suzanne Keene – professor of archaeology at the University College London and museology scholar— acknowledges the diversity of museums and their foci, and by extension, their goals in serving the public. The five main functions fulfilled by museum collections that she discusses are: research, education, memory, creativity and enjoyment.[27] As has been mentioned previously, collections of art and cultural objects have served several of these purposes for nearly as long as they have existed. Cabinets of curiosities and private collections certainly meet the demands of collections meant purely for enjoyment, while later historical museums such as the Musée du Monuments Français were able to perform in educational capacities by opening their doors. Today, the ways in which museums pass on the benefits of their knowledge have increased, and more still continue to emerge as new technology allows and professional conscience develops towards an ever more public-oriented model.

Visitation remains a major part of museums' educational outreach. The statistics cited earlier in this thesis only attest to the continued success museums enjoy. In addition to individuals traveling to museums independently, school groups also comprise a large constituency of museum visitors per year. These and regular gallery tours are also a fixture of many museums' educational programming, and many receive a large number of international audience members per year. Considerable efforts have been made by museums to engage the local community of their situation, too. A 2001 report released by

[26] Suzanne Keene, *Fragments of the World: Uses of Museum Collections* (Oxford: Elsevier Butterworth-Heinemann, 2005), 16.
[27] Keene, 8.

the Smithsonian Institute on improving community outreach noted the relative success of collaboration with community interest groups such as churches and senior centers in order to engage the public more directly.[28] The intended goal of the study was to examine methods for engaging ethnically underrepresented constituencies amongst museum visitors in Washington D.C., though the potential applications of the survey go well beyond the scope of the project. Offering a broader range of cultural programming using the museum as a site also helped draw in wider, more diverse crowds. The success of themed programming and events with open admission also contributed a great deal to increasing museums' audiences.[29]

Museums are valuable contributors to scholarly research as well. At fine arts or ethnographic museums, the collections may receive visits from art historical and anthropological scholars interested in conducting their research with collection materials. The wealth of material to study in any single collection (or using select content from across many collections) is a valuable resource for researchers. Keene provides examples such as the use of the textile collection of the Université National du Benin to re-examine theories on the history of textile production in various regions of Africa. By cross-referencing the contents of the collections with archaeological records and historical accounts, researchers have been able to learn a great deal about the technology used to produce the textiles and create more accurate timelines of the development of this particular aspect of material culture.[30] The literature published with these findings also helps further disseminate the information contained within museum collections.

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[28] Smithsonian Institution Office of Policy and Analysis, "Increasing Museum Visitation by Under Represented Audiences: An Exploratory Study of Art Museum Practices," May 2001, 2.
[29] Ibid, 15.
[30] Keene, 50.

Movable cultural heritage collections benefit the public through more avenues than just yielding information about individual cultural objects and their significance: they can serve as inspiration as well. The ARTLAB+ program run by the Smithsonian Institution at the Hirshhorn Museum, for instance, helps foster creativity by providing teens with the space and resources to produce their own digital media works. Individual video, audio, photography, and design projects are directed by the participants based on their own personal interests, and the projects are supervised and supported by museum staff and experienced artists; according to the ARTLAB+ website, ARTLAB+ projects frequently draw from the museum's rotating programs and exhibitions for inspiration.[31] Lastly, museums can serve the public by making their collections available online. Existing works of art have long served as inspiration for new works. By enabling those interested in exploring art to view the holdings of museums that they would have otherwise been unable to experience due to the expense of travel or other constraints, museums can expand the audience they reach.

The Relevance of Collection Management: Why Is It Necessary?

In 2011, ICOMOS adopted the Paris Declaration on Heritage as a Driver of Development, recognizing the importance of cultural diversity and cultural heritage to the sustainable development of communities.[32] In turn, the careful maintenance and development of a museum collection is essential to a museum's ability to educate the

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[31] Hirshhorn Museum and Sculpture Garden. "About ARTLAB". ARTLAB+ Program. Accessed December 2013, http://www.hirshhorn.si.edu/collection/artlab/#collection=hirshhorn-aerial-view&detail=http%3A//www.hirshhorn.si.edu/bio/about-artlab/.

[32] ICOMOS, "The Paris Declaration on Heritage as a Driver of Development", December 1, 2011, Accessed online April 2014, http://www.international.icomos.org/Paris2011/GA2011_Declaration_de_Paris_EN_20120109.pdf.

public: the more an institution knows about its assets, the better equipped it is to pass on its information, and the more information it possesses to be passed on. Additionally, there is a major ethical component to collection management – without proper care, museum collections are susceptible to damage or theft. Mismanagement by museum staff is a violation of public trust in the museum as a cultural institution.[33] And so in order to meet their responsibilities to the public, museums must be diligent in their management practices. Just as philosophies surrounding who has the right to own and experience cultural heritage have changed over time, so have the ways in which cultural heritage has been cared for and shared. The following sections of this thesis will engage with some of the methods that cultural heritage stewards (mainly those at the forefront of caring for museum collections) employ in order to more effectively and sustainably manage and develop the collections in their care.

[33] "Code of Ethics for Museums", American Alliance of Museums, Accessed July 2014, http://www.aam-us.org/resources/ethics-standards-and-best-practices/code-of-ethics.

CHAPTER II: MANAGING THE COLLECTION

Collection Management: An Overview

Proper management of holdings is absolutely instrumental to the preservation and development of a collection. What constitutes the management of a collection actually encompasses a wide range of stewardship practices that enable the smooth functioning of the entire institution responsible for the collection's care. It has been recognized that having command of the contents of a collection is essential to its effective management; a guide to basic collection management published by the Museums and Galleries of New South Wales, for example, stresses that sufficient knowledge of a museum's collection is fundamental to the smooth functioning of the institution as a whole.[34] Another document – a guide to development of a collection management policy published by the American Alliance of Museums – states: "Because collections are held in trust for the public and are made accessible for the public's benefit, the public expects museums to maintain the highest legal, ethical and professional standards."[35]

One of the greatest values of collection management is the information trail it provides cultural heritage stewards. The information available about the collection keeps cultural heritage stewards informed on the life of an object from its creation on, and the more, the better. This can include the history of the artifact prior to its entry into the museum and storage and treatment procedures undergone while within it. After all, an object is not just a material in a void— it embodies a number of complex human experiences and interactions. This holds true even for an object within a museum: from

[34] Museums and Galleries of New South Wales. Collection Management Manual. Downloaded as PDF, February 2013 from http://mgnsw.org.au, 1.
[35] American Alliance of Museums. "Developing a Collection Management Policy", 2.

donors and lenders of the works in a collection to administrators and registrars responsible for tracking its movements, to curators involved in researching the material, to members of the general public interested in learning more about material cultural heritage, to descendant populations of indigenous communities whose cultural patrimony may be in the collection or on display. These stakeholders are invested in the safety and longevity of collection contents, due to their direct (in the case of donors, researchers, and source communities) and indirect (in the case of people and organizations funding the museums' activities) connections with the material. In the case of indigenous stakeholders, they might also be interested in the return of the materials to their community. The ability to keep track of those with a stake in any particular object is valuable to stewards who may interact with donors, lenders, and stakeholders associated with the various objects so that the stewards can perform their duties with transparency and respect.

There are further benefits to collection management, in that the documentation of an object's history both prior to its time in a collection and within the collection requires cultural heritage stewards' care practices to be made explicit. This also helps keep them accountable for the safety of cultural heritage materials. The Museums and Galleries of New South Wales cite loss or theft of collection materials as examples of the importance of record keeping. Without knowing what their collection ought to contain and where objects are kept, how can stewards possibly know when something has gone wrong?[36] A 2011 project at the Spurlock Museum at the University of Illinois further confirmed the value of these practices:

Over the past two years, we have discovered that all museum departments

[36] Museums and Galleries of New South Wales, 1.

> can benefit from having access to common data records, even though this data may be used in a different fashions [sic] in different departments when shared across the museum's internal boundaries.[37]

Collection management also encompasses the practices a museum can employ in order to sustainably develop their collection; sustainable museum practices will be further detailed in the following chapter of this thesis. Museums (and other collections such as libraries and archives) are non-profit institutions with limited space and resources, and so a museum's staff must carefully select where to allocate what funding is available at any given time. Collection development may include streamlining the focus of the museum's collection. This can help support the museum as a whole by preventing the institution from spreading itself too thin; by narrowing its interests, it can concentrate on increasing the amount of information known about the present collection's contents, improving ease of access to information about collection materials, and preserving the longevity of collection materials. This does mean, however, that collections may occasionally need to make difficult decisions regarding what to keep. Although safeguarding cultural heritage is the goal of museums worldwide, many must balance that goal with the reality of their capabilities. It would be impossible to house, care for, and research every individual object to come through the museum's doors (though ideal). A stated educational goal or collection interest can give cultural heritage stewards valuable guidelines when choosing which objects to accept into the collection, and which they must pass up. Freezing acquisitions to focus on internal development is another option cultural heritage stewards in museums may take. By limiting intake and focusing on gaining a stronger knowledge

[37] Tim Wray and Peter Eklund, "Exploring the Information Space of Cultural Collections Using Formal Concept Analysis," *International Conference on Formal Concept Analysis* 2011, 178.

of the museum's holdings, museum staff can more effectively assess the collection's strengths and weaknesses.

The benefits of a museum's strengthening its understanding of individual objects in its collection are virtually innumerable. Frequently, objects come to a collection through donors who may have obtained the object with little or inaccurate knowledge of the item's function. Donations may come from the findings of well-meaning individuals or from generous private collectors without familiarity with their function or significance within the context of their source cultures. Additionally, early curators and collectors who may have accessioned the items may have had a limited understanding of the cultural context in which they were created, and accession records describing the objects may be erroneous. With the assistance of experts in fields relevant to the collection's material, museum staff can correct outdated or erroneous information, or shed light on items with no available interpretation previously available. For example, during two 2012 surveys at the Brooklyn Museum –one of the Art of the Pacific Islands collection and one of the Japanese textiles collection— curators received new information on countless objects with no prior description, or otherwise misidentified items.[38] The benefits of such projects are obvious; no stewards could possibly know all there is to know about every single object present in the collection.

For museums in which refusing or deaccessioning materials is not an option –such as museums where the collections have been developed through the research of the museum staff and are in part artifacts of the institution's history— there may lie an alternative in making use of digitized collection records. The University of Pennsylvania Museum, for example, like many others, only has the ability to exhibit a small percent of

[38] See appendix images 5-10.

its collection holdings.[39] Digitizing the collection by creating detailed object information files (including images, descriptive information, and object background) allows cultural heritage stewards to make information on collection materials available without sacrificing their valuable exhibition and storage space. Meanwhile, the materials that are not on display can be kept in optimal conditions in remote storage instead. This way, the educational goals of the institution can still be met without resorting to having to discard material. This practice has been successful enough that the Smithsonian Institution and its subsidiary museums have also added over three hundred of these to their repertoire.[40] If lack of space for off-site storage of collection materials or sufficient personnel or money to care for objects are limiting factors, however, digitization cannot mitigate the overwhelming strain on the museum's resources.

Collection management enables not just the logistical management of movable cultural heritage, but also the ethical management of materials as well. For example, several Zuni Ahayu:da figures surfaced in a 1978 exhibition at the Denver Art Museum, prompting requests for their return. Ahayu:da figures are not intended for display: they are created and installed in shrines annually by priests, and the figurines from previous years are meant to deteriorate on their own in situ. That any had come into the museum's possession at all (and, as further investigation revealed, the possession of many other institutions, including the Smithsonian), indicated that they had been wrongfully removed

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[39] Jon Hurdle, "A Museum Full of Antiquities Embraces Modernity," *The New York Times*, December 4, 2010, Accessed August 2014, http://www.nytimes.com/2012/12/05/us/penn-museum-pushes-for-broader-public-appeal.html.

[40] "Search Exhibitions," Smithsonian Institution, Accessed September 2014, http://www.si.edu/Exhibitions/Search/Virtual

from their context.[41] Another high profile example is the circumstances leading up to the 2006 return of the Euphronios Krater to Rome by the Metropolitan Museum. [42] The vessel was purchased for the Metropolitan Museum in 1972 from a Zurich-based dealer; the object's provenance prior to its arrival in Switzerland was not well documented, and many suspected the item had been looted from its original context. It wasn't until 2001 that subsequent investigations yielded more concrete evidence that the krater had been removed illegally. Finally, with enough reason to doubt the legitimacy of the excavation and sale of the krater, it was returned in 2006.[43] In some cases, museum professionals may not even know their collections possess objects that they should not have.

These incidents and others demonstrate the ethical importance of record keeping. Museums must carefully investigate and document the sources of the objects they add to their collections to ensure that nothing accessioned is looted material, a prevalent issue in the collections of many museums. For example, in 2003, roughly 15,000 objects were looted from the collections of the Iraq Museum in Baghdad over the course of four days.[44] To this day, art looted by Nazis during the Second World War continues to surface in museums worldwide as well.[45] Collection records of an object's provenance and publication history can provide stewards with a means of enforcing ethical collecting

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[41] William L. Merril et al., "The Return of the Ahayu:da: Lessons for Repatriation from Zuni Pueblo and the Smithsonian Institution," *Current Anthropology* 34.5 (1993): 525.
[42] Elisabetta Povoledo, "Euphronios Krater Returned: Ancient Vase Comes Home to a Hero's Welcome," *The New York Times*, January 19, 2008, Accessed November 2013, http://www.nytimes.com/2008/01/19/arts/design/19bowl.html?_r=0.
[43] Neil Brodie, "Euphronios (Sarpedon) Krater". Trafficking Culture: Researching the global traffic in looted cultural objects. Accessed December 2013, http://traffickingculture.org/case_note/euphronios-sarpedon-krater/.
[44] Robert M. Poole, "Looting Iraq," *Smithsonian Magazine*, February 2008, Accessed September 2014, http://www.smithsonianmag.com/making-a-difference/looting-iraq-16813540/?no-ist.
[45] Patricia Cohen, "Museums Faulted on Restitution of Nazi-Looted Art," *The New York Times,* June 30, 2013, Accessed September 2014, http://www.nytimes.com/2013/07/01/arts/design/museums-faulted-on-efforts-to-return-art-looted-by-nazis.html?pagewanted=all.

practices, identifying objects that may have not been obtained legally and preparing to repatriate objects when necessary.

Tools of Collection Management

There are as many tools available to cultural heritage stewards as there are philosophies on collection management and approaches one can take. One that can help guide the development of a collection as a whole is a Collection Management Policy – a document outlining the mission of the institution and protocols to follow when caring for the collection. Depending on the needs of each unique collection, the contents of the policy may vary, but the concerns of many cultural heritage stewards are the same. A few topics a thorough policy statement may typically contain are:

(1) A **mission statement**, which summarizes the ideological core of a museum's collection management policy. What exactly that entails may, again, vary from museum to museum, but ideally it should state the museum's goals, especially pertaining to its intended role and relationship with local and global communities. According to the American Alliance of Museums:

"A good mission statement leans toward societal impact rather than simply an explanation of operations, transitioning from being *about* something to being *for* someone." –Stephen Weil (Daedelus, 1999).[46]

(2) **Procedures for accession and deaccession of collection materials.** As a museum's records are a valuable reference for cultural heritage stewards and knowing the contents of a collection is important to its maintenance, information on which objects

[46] AAM, "Developing a Mission Statement," *Alliance Reference Guide*, Downloaded as a PDF November 2013 from http://www.aam-us.org/resources/assessment-programs/core-documents/documents.

have been brought into the collection or removed from it, when, and why must be made available to museum staff. Having a standard procedure for these processes helps avoid confusion between departments and guarantees that all changes to the collection's inventory are documented and up-to-date.

(3) An **institutional documentation system**. Because a museum's inventory is the backbone of the institution, having an organized system for identifying individual objects and their associated information for stewards to access easily is essential. Typically, each object is assigned an identification code that corresponds to its record (either physical or digital). Having an organized system for assigning object codes (such as numbers and letters indicating the date of accession and department to which an object belongs) helps prevent confusion of individual objects. Even objects temporarily on loan for an exhibition must receive one. Again, it is important that these records remain up-to-date for the use of all staff working at an institution.

(4) **Repatriation procedures** are also a component of a policy that should be made explicit. As the international museum community becomes increasingly conscientious of the need to repatriate objects obtained wrongfully, it will prove advantageous to have set guidelines for their return. These procedures may include the parameters for determining the grounds for repatriation, and the steps that must be followed in the event that an object must be returned. Repatriation procedures differ from country to country, and different guidelines govern the return of indigenous materials and other types of art.[47]

[47] National Park Service, "International Repatriation," Accessed September 2014, http://www.nps.gov/nagpra/SPECIAL/International.htm.

(5) **Emergency procedures.** Museums are not immune to the destruction caused by natural disasters and human conflict. To prevent cultural heritage materials from being damaged or stolen during times of crisis, museums may establish protocols for ensuring their safety, such as relocation or emergency storage methods. A number of cultural heritage organizations such as ICOM and the Getty Conservation Institute offer resources on emergency plans and procedures for museums to follow or draw from in creating their own. [48] [49]

Though they are helpful for establishing a set of practices for an institution, management policies are not always easy to implement. Not all museums have developed their practices consistently across departments and throughout the years, and sometimes the process of establishing consistency demands an overhaul that can only be undertaken gradually due to the sheer scale— that is, when time or funding allows. Collection management may, for many museums, involve regular check-ins on the conditions of the storage facilities and their efficacy. A number of federal organizations offer checklists of concerns that may threaten the wellbeing of collection objects— issues to stay on the lookout for regularly.[50]

The responsibilities of collections managers are diverse, and are vital to sustaining the very core of a museum or cultural institution. Consequently, keeping collection management ideologies and tools up to speed is essential to the development of cultural heritage institutions. One tool that perhaps contributes most to efficient collection

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[48] Valerie Dorge and Sharon L. Jones, *Building an Emergency Plan: A Guide for Museums and Other Cultural Institutions,* (Los Angeles: The Getty Conservation Institute, 1999).
[49] Willem Hekman, *Handbook on Emergency Procedures*, (ICOM, 2010).
[50] "Collections Management, Conservation, and Disaster Planning," National Preservation Institute, Accessed September 2014, http://www.npi.org/conservation

management is a comprehensive record of the contents of the museum's collections. As stated in the section prior, a detailed and easily accessible record of a museum's holdings is invaluable to those who care for them. These records keep stewards informed on all aspects of a collection object: where in the museum it is kept when in storage, whether or not it is on loan or on display, by whom it was given to the museum, provenance and publication history prior to its accessioning (when possible) distinguishing characteristics, conservation history, and relevant cultural information on its function within its original context. Prior to the digital age, many museums kept track of their holdings using an inventory book or a card catalogue system similar to those used by libraries.[51] Though these methods helped meet immediate record keeping needs then, museums now face the challenge of bringing their old records up to speed with modern standards of accessibility. For a sample of a digital object record without and with information respectively, see appendix figures 1 and 2.

Since its initial development in the 1960s, collection management database software has helped provide cultural heritage stewards with a more versatile alternative than card catalogues and accession books once did: in any space in a museum set up with either an internet or company intranet system, cultural heritage stewards can access or update collection object records with new information. The number of commercial options for pre-made database interfaces is considerable, each with its own advantages and limitations. The Museum System, for example, is one of the best-known and widely employed databases used by cultural heritage stewards. Other popular collection management programs include PastPerfect and MuseumPlus. In order to make the

[51] Hilary Eriksen and Ingrid Unger, *The Small Museums Cataloguing Manual (Fourth Edition),* (Victoria: Museums Australia, 2009), 30.

technology to manage collections more widely available to cultural heritage stewards, there have been some projects to develop open-source database software. The product of one such effort is CollectiveAccess. According to the program's developers, the aim of the project is to provide cultural heritage stewards with the most flexible cataloging options possible without demanding extensive programming experience to operate (and tailor to individual collection needs).[52] Collections may also opt for more specialized, customizable software. Microsoft Access, for example, requires users to create their own database structure, but in doing so allows them to choose what information they feel is relevant to their archival needs. The needs of the stewards managing the collection are currently two-pronged. There is the back end of the collection record system, which receives input from cultural heritage stewards, and a front end, which is the public face of the collection. The front end presents a certain amount of the record content and may be in a format strictly limited to providing information, or, as is becoming more common with the success of Web 2.0 (that is, social media and other web interfaces facilitating participation), allowing for public input to supplement the institution's internal information base. Stewards then bridge the gap between the two by exporting the raw database content to a digital collection access interface such as Luna Insight imaging software, Open Collection, or the Madison Digital Image Database.

As the market demand for more software options with more diverse applications continues to grow, so does the range of features sought after in collection database technology. The need to develop sustainable management practices has in turn led to a need for technology that allows cultural heritage stewards to target different aspects of their collection; simply documenting a museum's holdings is not enough. Software must

[52] "About CollectiveAccess," Accessed June 2014, http://collectiveaccess.org/about.

also enable caretakers of cultural heritage to make use of the information to illustrate broader anthropological and art historical concepts and patterns. This is also in part due to the current shift towards publication of museum collections online. It is relatively easy to extract the data from object records and make them available to the public on a museum's website with interpretation for each individual object. However, in order to demonstrate the connections between different objects, cultural heritage stewards must be able to link materials to each other or external information sources based on any number of the concepts they wish to illustrate. Information schematics such as timelines or maps help aggregate information to demonstrate patterns.

The Heilbrunn Timeline of Art History featured on the Metropolitan Museum of Art's website, for instance, demonstrates the potential applications of this database technology. The project aims to provide contextual information on over 6,000 of the Metropolitan Museum's collection materials, with three major visualization categories available: maps, timelines, and themes accompanied by essays.[53] This method of object networking based on shared attributes, formal concept analysis (see Appendix, Figure 3a for an example), constructs a complex web of links between associated objects.[54] Objects from source cultures within geographic proximity can be grouped to help identify regional differences, or objects undergoing stylistic change within a single cultural group over time. Making interactive tools a reality for more museums is a growing interest of cultural heritage stewards invested in the side of collection management that deals with their outreach goals. The need for flexible data systems and formal concept analysis

[53] "About the Heilbrunn Timeline of Art History," The Metropolitan Museum of Art, Accessed July 2014, http://www.metmuseum.org/toah/intro/atr/atr.htm.
[54] Wray and Eklund, 252.

across object records has created a new professional intersection between cultural heritage management and information science – museum informatics.

Small museums, on the other hand, remain constrained by their limited resources. The technology and trained personnel needed to manage collections in accordance with contemporary standards are frequently not realistic options for many museums engaging a narrower audience than their cosmopolitan counterparts. Out of necessity, physical accession books and card catalogues may remain their method of choice, or spreadsheets such as those provided by basic computing programs (Microsoft Excel, for instance). Additionally, a museum's choice of catalogue may be influenced by the unique preservation needs of its collection. Though the more widely used database interfaces employ framework for the entry of information that suits the needs of fine arts and ethnographic museums, museum professionals have noted the relative inflexibility of commercial systems when it comes to accommodating diverse media forms.
Oral history collections, for example, and other collections with contents that don't fit into the categories typically provided by generic collection management organizational frameworks, have had to adapt independently.[55] Likewise, the measures museums have had to take in order to put their collections to use depend on the unique nature of the collections; the following chapter will compare and contrast their approaches.

[55] Sara Price, "Collection Management Systems: Tools for Managing Oral History Collections," Accessed November 2013, http://ohda.matrix.msu.edu/2012/06/collection-management-systems/.

CHAPTER III: SUSTAINABILITY - BRIDGING THE GAP BETWEEN HOLDINGS IN STORAGE AND PUBLIC ACCESS

If the challenge museums face in storing and preserving their collections is considerable, then making use of all items within their collections may seem like a virtually insurmountable obstacle. Of all their holdings, many museums are only able to exhibit a small percentage. Part of this is due to the conservation needs of some of the more fragile objects in a collection – some paintings, works on paper, and textiles must spend more time in controlled conditions that would make viewing them extremely difficult (for example, certain objects which would fade from exposure to light must be kept in the dark as much as possible). Other objects, however, remain in storage due to the lack of space available to exhibit them. One approach has been to rotate the contents of exhibitions so that more objects can be seen, which additionally helps mitigate the stress of exposure that exhibition can place on fragile holdings.

Alternative approaches to exhibitions have had some success in increasing the exposure of collection materials. The switch to digital collection record management has made it comparatively simple for cultural heritage stewards to extract information and publish it on museum websites for visitors to view. This has made it easy to create digital exhibitions using works in the collection not currently on display. In addition to enabling stewards to work around the limited space available in the museum galleries, one of the advantages of digital exhibitions of museum holdings is that it also allows them to share contents of the collections that may have otherwise not had a chance to be exhibited in a gallery space. Some of the objects that are too far deteriorated to endure exposure to less-

than-optimal storage conditions can remain safe and still be enjoyed by the public. Digital exhibitions give cultural heritage stewards more flexible options in terms of interpretation of the objects as well. While interpretational materials in a gallery setting may be limited to the space available on the walls for mounting didactic labels, or on the publication of expensive exhibition catalogues containing relevant essays by curators and experts, digital media can provide visitors with the option to pursue a wealth of information. Some institutions have taken advantage of the flexibility of digital media to not only supplement specific gallery shows or create virtual exhibitions, but to chance to call attention to broader themes across installations, too. The "Connections" series of digital exhibits created by the Metropolitan Museum has enlisted staff members throughout the museum to select and discuss objects in the collection related to a theme of their own choosing. Not only curators, but educators, administrators, and more have lent their voices to the interpretation of pieces across exhibitions – including some very personal perspectives.[56]

At other museums, the initiative to put collection holdings to greater use has led collections to open their doors. Visible storage units and study centers allow visitors to experience a larger portion of the collection, without the same cost to museum exhibition space. Large institutions such as the Metropolitan Museum and the Brooklyn Museum have upwards of one million objects in their collections, and couldn't possibly show all of their holdings in formal exhibitions. Some museums have tried showcasing their collection materials in visible storage installations funded by the Henry Luce Foundation: among them are the Metropolitan Museum, the Brooklyn museum, and the Smithsonian

[56] "Connections," The Metropolitan Museum of Art, Accessed May 2014, http://www.metmuseum.org/connections/.

American Art Museum in Washington D.C.[57] The visible storage units are intended to keep their contents in regulated microenvironments while allowing visitors to see into the units. Whereas formal exhibitions and installations would typically have a guiding theme, visible storage shows highlights from the collection as-is. Some information on individual objects may be provided, but the interpretation is not nearly as extensive. A review of the New York Historical Society's visible storage installation compares the project to a museological walk-in closet.[58] As for whether or not these installations can be said to have helped maximize the collections' potential still remains to be seen; visible storage collections have been noted to not receive the same degree of visitation as the main galleries of museums, but receive curious visitors nonetheless.[59]

Taking a more targeted approach to addressing visitor interests can also give cultural heritage stewards guidance regarding what material the public is interested in engaging with and how. Museum professionals and information technology specialists alike are constantly developing and testing new technologies to evaluate visitor experiences at the museum. In a paper presented at the 2010 Museums and the Web conference entitled "Pimp My Website: Reorganization and Usability Tools and Tactics to Reinvigorate Museum Web Sites on a Budget," web developers Layla Masri and Emily Grossman noted the need to make museum collection content available digitally.[60]

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[57] "American Art Program Evaluation Report 2009 – American Art: The State of the Field," The Henry Luce Foundation, Accessed August 2014, http://www.hluce.org/amerartprogeval.aspx.
[58] Celestine Bohlen, "Museums as Walk-In Closets; Visible Storage Opens Troves to the Public," *New York Times Magazine*, May 8 2001, accessed May 2014, http://www.nytimes.com/2001/05/08/arts/museums-as-walk-in-closets-visible-storage-opens-troves-to-the-public.html.
[59] Ibid.
[60] Layla Masri and Emily Grossman, "Pimp My Site Architecture: Reorganization and Usability Tools and Tactics to Reinvigorate Museum Websites on a Budget," Archives & Museum

In making collection contents available, Masri and Grossman suggest taking into account the research interests of their site visitors. Other researchers working with software design companies do in-depth studies of the technology use patterns on museum guests; included in some studies are on-site tests with direct feedback from participants. However, monitoring visitors' use patterns and adapting site structures per their recommendations also demands staff with a background in information technology. Traditionally, the museum staff members directly involved with the care of a collection are trained in anthropology, art history, museum studies, or a related field; only in recent years –as cultural heritage management comes to depend more and more on technological innovations— has the need for a more diversified background become a pressing issue. In a worldwide study conducted by museum software developers, 66% of 551 museums surveyed either offered mobile phone content for visitors or anticipated releasing mobile content within a year.[61] This Smithsonian Institution, for instance, has implemented a wide variety of mobile and social media initiatives to supplement the museum experience at any one of their branch institutions, including mobile exhibition guides, collection search databases, and Augmented Reality apps that allow visitors to interact with exhibition materials.[62]

Some stewards have even made attempts to expand their options beyond the traditional frameworks established by traditional collections records. At some museums,

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Informatics: Museums and the Web 2010, Accessed November 2013, http://www.museumsandtheweb.com/mw2010/papers/masri/masri.html.

[61] Kathi Kaiser and Tanya Treptow, "User Experience/Visitor Experience: A Holistic Approach for Understanding and Improving Mobile Apps in Museums," Presentation at edUi Conference in Richmond, November 4-6, 2013, Slides accessed online July 2014 at http://eduiconf.org/files/2013/06/Treptow-Kaiser-User-Experience-Visitor-Experience.pdf.

[62] Smithsonian Institution, "Mobile | Connect," Accessed September 2014, http://www.si.edu/Connect/Mobile.

the sheer scope of the collections' contents presents problems to collection managers. Those of the Museum of New Zealand Te Papa Tongarewa in Wellington, for example, include not only cultural materials but biological and zoological material as well.[63] Additionally, now more than ever, cultural institutions like the Museum of New Zealand are interested in a more dynamic interaction with stakeholders than they would have with a traditional museum model. The museum's collection manager Adrian Kingston calls for a more flexible approach to cataloguing than older database frameworks provide, looking to social media and other emerging technologies for inspiration. These, as opposed to what some information sciences researchers have termed the "straitjacket of traditional documentation practice" allow cultural heritage stewards to work with the specific needs of unique collections.[64] Giving stakeholders the opportunity to supply their own knowledge can help meet museums' sustainability goal of extending their community involvement. Despite the growing impact of Web 2.0 on methods of museum outreach, though, the specific mechanics of a system that would most effectively allow this are not yet clear.[65]

Three Brief Case Studies in Collection Management

In order to better understand how the challenges faced by museums and how these policies and tools perform in practice, it may help to consider three specific case studies of collection management at museums with major ethnographic/anthropological

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[63] Adrian Kingston, "The Swiss Army Knife Approach: How Far Can You Push a Collection Management System in a Changing World?," Presentation at the Museum Computer Networks Annual Conference in Seattle, November 7-10, 2012, Slides accessed online November 2013 at http://www.slideshare.net/adriankingston/mcn-2012-swiss-army-knife-approach.
[64] Ramesh Srinivasan et al, "Digital Museums and Diverse Cultural Knowledges: Moving Past the Traditional Catalog," Information Society.
[65] Kingston.

collections. Important characteristics to identify are the different histories and structures of their respective collections, which will highlight the differences (and commonalities) in their approaches to collection management.

- The **American Museum of Natural History** (AMNH) in New York City first opened in 1871. The brainchild of Harvard-educated zoologist Albert Bickmore, its anthropological collections were created in 1873.[66] By the museum's admission, the initial period of collecting for the museum's anthropological division followed no set pattern and underwent no guided growth in its early stages, and so the ethnographic component of the collection contains artifacts obtained from cultures all over the globe. Today, the collection is home to over 530,000 documented objects representing three of the four major subfields of study in anthropology: biological, archaeological, and sociocultural anthropology. In addition to the inorganic materials (such as glass, clay, and stone objects) with fairly routine preservation and conservation demands, the anthropological collections also contain biological specimens (including osteological samples from humans and various primates) with their own particular care needs.[67] The museum's mission, as stated on its website, is: "To discover, interpret, and disseminate—through scientific research and education—knowledge about human cultures, the natural world, and the universe."[68] In order to prolong the life of the diverse collection materials, the collections began to transfer to a more up-to-date compact storage unit in 1980. The

[66] "Collections History," American Museum of Natural History, accessed May 2014, http://www.amnh.org/our-research/anthropology/collections/collections-history.
[67] "Biological Anthropology Collection," American Museum of Natural History, accessed May 2014, http://www.amnh.org/our-research/anthropology/collections/collections-history/biological-anthropology.
[68] "Mission Statement," American Museum of Natural History, accessed May 2014, http://www.amnh.org/about-us/mission-statement.

collections' website details the preventative measures taken to care for the collection: the climate of the storage facilities is kept at seventy degrees Fahrenheit and at a relative humidity of forty-five percent. The collection storage is frequently checked for pests, and infestations are discouraged through maintaining a high level of cleanliness in the facilities and the preparation of traps as an additional precautionary measure.[69]

Projects undertaken in the collections, including surveys and research on individual collection materials, are funded by grants such as those awarded by the National Endowment for the Humanities and the Andrew W. Mellon Foundation.[70] Among these projects, the digitization of the collections records has been one of the most instrumental to the management of the collection. Due to the scale of the project, digitization has been done gradually, with only manageable subdivisions of the collection making the transition at a time: first the North American Ethnographic Collections between 1989 and 1995, followed by the Asian Collection from 1996 to 1999, the most recent portion of the project being the digitization of the Philippines Collection between 2009 and 2010.[71] Digital collection records made available to the public offer, in addition to descriptions of collection holdings, images of the object, photographs of the objects' entries in the museum's physical catalog manuscript, donor information, images of informational labels stored with the object, remarks on objects by various researchers conducting studies, and pop-up windows and links to external resources with additional

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[69] "Management," American Museum of Natural History, accessed May 2014, http://www.amnh.org/our-research/anthropology/collections/management.
[70] Ibid.
[71] "Digital Imaging – Anthropology," American Museum of Natural History, accessed May 2014, http://research.amnh.org/anthropology/database/imaging.

relevant information about particular types of objects or collecting expeditions.[72] Researchers can request passwords granting additional access to collection information.[73]

To help visitors to the collection database website navigate the search terminology and better identify the objects they wish to search for, the Museum of Natural History supplies a Collections Thesaurus where visitors can enter object terms and categories (using the Getty Research Institute's controlled vocabularies), and will be provided with all the possible terms they could use to describe works in the collection. The 1,000 categories available in the museum's thesaurus connect to 10,000 possible linked terms to help maximize visitor searches.[74] This helps reduce issues of information accessibility due to trouble using the system's terminology. The material available online is not a complete record, however: the museum's collection of biological anthropology materials is absent from their website. The potentially sensitive nature of the contents of the collection may have demanded some discretion in online exhibition of the material.

The goal of the digitization project, according to the museum, is to enable the museum's staff to more effectively manage their assets.[75] The enormous amount of information readily available on all items in the collection both to curatorial staff and the general public certainly seems to suggest that the museum may be well on its way to achieving it.

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[72] "Division of Anthropology: Textile Collection," American Museum of Natural History, accessed May 2014, http://anthro.amnh.org/textile.
[73] "Research Policy," American Museum of Natural History, accessed May 2014, http://www.amnh.org/our-research/anthropology/policies-links/research-policy#web_access.
[74] Kevin L. DeVorsey et al. "The Development of a Local Thesaurus to Improve Access to the Anthropological Collections of the American Museum of Natural History," *D-Lib Magazine*, April 2006, accessed May 2014, http://www.dlib.org/dlib/april06/devorsey/04devorsey.html.
[75] "Management".

- The **University of Pennsylvania Museum of Archaeology and Anthropology** (UPMAA) in Philadelphia, Pennsylvania, received the first components of its collections from an 1889 expedition to Nippur led by professors of Semitics at the University of Pennsylvania. In an effort to bring the university's offerings up to speed with the contemporary standards of the day, the then Provost William Pepper established a department of Archaeology and Paleontology, and along with it, an archaeological museum to house the university's findings.[76] Like the American Museum of Natural History, the collection of materials for the museum was not guided by any particular doctrine, and the museum was logistically overwhelmed by its acquisitions – according to the University's history of the museum, "…the Museum brought in more objects than it could properly catalog".[77] The collection today now contains almost one million ethnographic and archaeological specimens from several different geographical regions (such as North America, Asia, Europe, the Near East, and Oceania), and a large collection of physical anthropological samples.

In 2013, the University of Pennsylvania Museum published a revised mission statement, which summarized their goal: "The Penn Museum transforms understanding of the human experience."[78] There are four main ways the museum aims to achieve this – through research, education, collections care, and outreach. In a statement on their website, the museum elaborates on each point of this plan:

- Research: We expand knowledge of the human story through archaeological and anthropological research and fieldwork.

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[76] Alessandro Pezzati et al. "A Brief History of the Penn Museum," *Expedition*, 54.3, Accessed May 2014, http://www.penn.museum/documents/publications/expedition/pdfs/54-3/a_brief_history.pdf.
[77] Ibid, 8.
[78] "About Us," University of Pennsylvania Museum, Accessed May 2014, http://www.penn.museum/about-us.html.

- Teaching: We share knowledge and our collections in classrooms, galleries, and laboratories.
- Collections Stewardship: We preserve and steward one of the world's great archaeological and ethnographic collections.
- Public Engagement: We engage the University, and our local, national, and global communities through exceptional galleries, exhibitions, programs, and digital content.[79]

The direct relationship between the care of a collection and the collection's contributions to public knowledge could not be clearer. Instead of assigning collection management duties to a specially appointed collection management team, the tasks fall to multiple departments at the University of Pennsylvania Museum. For example, the registrar tracks the movement of objects into and out of the museum– such as through acquisitions and loans.[80] The conservation department, in addition to performing treatments to ameliorate the damage caused by age, is also responsible for the rehousing of materials and maintaining their conditions in storage and on display as a preventative measure – a task that frequently falls into the category of collection management duties.[81]

The digitized portion of the collection is substantial, with 335,571 objects currently represented online.[82] The information provided for each object is thorough, including not only data on the objects' material components, culture, and measurements, but also detailed descriptions of their conditions, their history of exhibition, and publications in which they have been featured. Suggestions for the records for related objects in the collection (by way of connection through shared source culture or similar

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[79] Ibid.
[80] "Registrar's Office," University of Pennsylvania Museum, Accessed May 2014, http://www.penn.museum/registrars-office.html.
[81] "Gallery Maintenance," University of Pennsylvania Museum, Accessed May 2014, http://www.penn.museum/conservation/1037-gallery-maintenance.html.
[82] "Online Collections Home," University of Pennsylvania Museum, Accessed May 2014, http://www.penn.museum/collections/.

object functions) are also offered for further study.[83] Additionally, the data from each department's collection is available for download from the website in multiple formats. Archival materials, including documentary films, administrative records, and manuscripts pertaining to the excavations that yielded these collections are accessible through the website for the museum archives.[84] A separate archive is available with information from the physical anthropology collection in the form of CT scans of cranial samples: the Open Research Scan Archive. [85] [86] All skulls currently in the collection have been entered into the database. Though about a quarter of the Morton Collection was originally comprised of skulls of native people throughout North and South America, about 100 skulls and 200 skeletal remains in total have been returned to source communities. It is not clear how many of the skulls currently digitized fall under the jurisdiction of NAGPRA, but statements by the stewards of the collection indicate a desire to cooperate with the indigenous community.[87]

The University of Pennsylvania Museum has long been a pioneer in the ethical management of material cultural heritage. The Pennsylvania Declaration, published by the museum staff in April 1970, was the first formal resolution on the ethical trade of cultural materials: in it, the museum asserted that it would only accept objects

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[83] Ibid.
[84] "About Our Collections," University of Pennsylvania Museum, accessed May 2014, http://www.penn.museum/archives.html/about-our-collections.html.
[85] "Overview," University of Pennsylvania Museum, Accessed May 2014 http://plum.museum.upenn.edu/~orsa/Overview.html.
[86] Emily S. Renschler and Janet Monge, "The Samuel George Morton Cranial Collection: Historical Significance and New Research," *Expeditions*, 50.3, Accessed May 2014, http://www.penn.museum/documents/publications/expedition/PDFs/50-3/renschler.pdf.
[87] Ibid.

"accompanied by a pedigree".[88] This policy would soon be followed by the historic UNESCO convention of that November, and in 1978, the museum adopted even more stringent criteria for the accession of new materials.[89] Regulation of intake isn't the only way the museum approaches the sensitive custodianship of potentially illicit materials. As with any museum with a large number of indigenous North American art and human remains in their collection, the University Archaeological Museum must be conscientious about honoring NAGPRA and about its consultation with the indigenous community.[90] The museum publically documents repatriation projects, detailing the process by which objects in the collection were identified as in need of repatriation and the museum's cooperation with the indigenous community to confirm their provenance and ensure their return. The oldest repatriation records published on the site, dating back to 1990, summarize the return of an Ahayu:da icon and associated materials to the Zuni.[91]

Maximizing the potential use of electronic collection records, the museum has even curated several digital exhibitions of their holdings, such as "Body Modification Ancient and Modern", "Traditional Navigation in the Western Pacific", and "The Real Story of the Ancient Olympic Games".[92] These enable exposure to yet more of the museum's collection and circumvents the chronic problems of limited gallery space or

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[88] University of Pennsylvania Museum, "The Pennsylvania Declaration," *Expeditions*, 22.3, Accessed September 2014, http://www.penn.museum/documents/publications/expedition/PDFs/22-3/The%20Pennsylvania.pdf.

[89] University of Pennsylvania Museum, "The University Museum Acquisitions Policy," *Expeditions*, 22.3, Accessed September 2014, http://www.penn.museum/documents/publications/expedition/PDFs/22-3/The%20Pennsylvania.pdf.

[90] "NAGPRA," University of Pennsylvania Museum, Accessed May 2014, http://www.penn.museum/nagpra.html.

[91] "Repatriations," University of Pennsylvania Museum, accessed May 2014, http://www.penn.museum/nagpra/67-repatriations.html

[92] "Online Exhibitions," University of Pennsylvania Museum, Accessed May 2014, http://www.penn.museum/program-resources/online-exhibits.html.

stability of the objects that museums may typically suffer. These digital exhibitions each address a theme related to a set of works in the museum's collection, complete with object information, interpretation and cultural context, and suggested further reading.[93] This supplements their online educational resources, which include virtual activities and lesson plans tailored to different audience constituencies, such as K-12 school groups, college and adult groups, and families.[94] The website also offers interactive visualization tools in the form of a Research Map and Timeline.[95] This tool allows visitors to explore museum research projects past and present by map location; each expedition's section links back to the digital collections website, with options to apply different search filters through which to view the collection and understand how the collection materials support the researchers' studies.

The wealth of information that the University of Pennsylvania Museum provides for research purposes and for the sake of transparency is substantial. Full access to collection contents isn't possible; due to the culturally sensitive nature of some of the materials, not all works in the museum's collection can be digitized and made public.[96] However, since such a large portion of the collection is still available – alongside a wealth of interpretive and instructional materials – the museum is more than able to support the development of public knowledge.

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[93] Ibid.
[94] Ibid.
[95] "Interactive Map and Timeline," University of Pennsylvania Museum, Accessed August 2014, http://www.penn.museum/timeline/web/.
[96] "About: The Museum's Building," Brooklyn Museum, accessed April 2014, http://www.brooklynmuseum.org/about/building.php.

- The **Brooklyn Museum** in Brooklyn, New York, is one of the largest museums in the city. The museum was not initially founded as an independent institution, but instead grew out of the Brooklyn Institute. Like the many university museums that became the models for contemporary museums, the Brooklyn Institute maintained a regular program of art exhibitions and lecture series on a variety of topics.[97] A gradual restructuring of the institute into the Brooklyn Institute of Arts and Sciences also included the founding of a museum division of the institute, which in time became the independent Brooklyn Museum that exists today. The core collections of the Brooklyn Museum were created through the collecting efforts of Stewart Culin – an ethnographer and a former director of the University of Pennsylvania Museum.[98] An enthusiast of culture with no formal anthropological training, Culin headed a large number of collecting expeditions throughout his time as curator of the Brooklyn Museum, gathering artifacts from all over North and South America, Asia, the Middle East, and the Pacific Islands, beginning in 1903 until his death in 1929.[99] Today, the museum's mission is:

> …to act as a bridge between the rich artistic heritage of world cultures, as embodied in its collections, and the unique experience of each visitor…. the Museum aims to serve its diverse public as a dynamic, innovative, and welcoming center for learning through the visual arts.[100]

The Brooklyn Museum currently houses, to its knowledge, over 1.5 million objects, including not only the impressive ethnographic collections assembled by Culin and other curators, but sizeable collections of European, American, and Contemporary

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[97] Ibid.
[98] "Guide to the Culin Archival Collection," Deirdre E. Lawrence and Deborah Wythe, Accessed December 2013, https://www.brooklynmuseum.org/opencollection/research/culin/culin.php.
[99] Ibid.
[100] "Mission Statement," Brooklyn Museum, Accessed August 2014, http://www.brooklynmuseum.org/about/mission.php.

decorative arts, sculpture, and paintings as well. Accessioning and deaccesssioning of collection materials is done through the museum registrar, and collection management is handled by the curatorial departments in conjunction with the registrar. Collection management projects such as surveys are done on a small scale, and when funding allows – typically with the support of grants. Objects infested with pests are quickly isolated by curatorial and treated by conservation staff. The first major project to install climate control measures took place in 1977; the most recent, undertaken between 2007 and 2014 as part of a larger facility improvement renovation, brought climate control in the older galleries up to contemporary standards.[101]

The collections of the Brooklyn Museum, like those of the other two museums, have been documented and published on the museum website. The museum uses TMS (on the back end) in conjunction with Luna Imaging's Insight software (on the front end). Of the museum's collection, over 106,000 records are available to the public. Browsing options allow visitors to the site to see works listed by curatorial department or view gallery installations past and current. Individual object entries include extensive information, including multiple images of objects, object exhibition history, descriptions from catalogue entries, and object record completion ratings. Sidebars on the webpage give visitors the option to view metadata associated with the objects, or other objects in the collection with similar tags.[102] The museum collection website also spotlights recent acquisitions and updates to the digital collection contents and interface.[103]

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[101] "Renovation and Climatization (2007-2013)," Brooklyn Museum, Accessed August 2014, http://www.brooklynmuseum.org/about/renovation.php.
[102] "Browse Collections," Brooklyn Museum, Accessed August 2014, http://www.brooklynmuseum.org/opencollection/collections/.
[103] "Collections News," Brooklyn Museum, Accessed August 2014, http://www.brooklynmuseum.org/opencollection/news.

The museum has implemented a number of social media initiatives to help supplement the museum experience. In 2009, the staff released the BklynMuse mobile gallery guide, which enables visitors to create a self-guided tour of the galleries by making recommendations based on users' interests and suggestions submitted by other museum goers.[104] This, and many of the museum's other digital collection management projects, are documented on a subsection of the museum website – the BKM TECH technology blog.[105] Other cultural heritage stewards and members of the public with an interest in museological applications of information technology can follow the museum's major developments through social media documentation. Additionally, the museum's online collections contain a number of interactive features.[106]

The issue of limited space has troubled the museum for some time. With so many works in the collection, the museum has struggled to find places to keep its extensive holdings – even more so to give them all adequate exposure. Several mass donations and repatriation efforts have been planned to counter the strain on the museum's resources. The Metropolitan Museum received the Brooklyn Museum's impressive costume collection in 2009, and in 2010, the Brooklyn Museum made a controversial offer to return 4,500 works of pre-Colombian art to the National Museum of Costa Rica (with the stipulations that the Costa Rican museum front the shipping costs and that the Brooklyn Museum would be permitted to keep the pieces of the collection most fit for

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[104] Shelley Bernstein, "Going Mobile With a Gallery Powered by People," *BkylnMuse: Technology Blog of the Brooklyn Museum*, August 29, 2009, Accessed August 2014, http://www.brooklynmuseum.org/community/blogosphere/2009/08/26/bklynmuse-going-mobile-with-a-gallery-guide-powered-by-people/.
[105] *BkylnMuse: Technology Blog of the Brooklyn Museum*, August 29, 2009, Accessed August 2014, http://www.brooklynmuseum.org/community/blogosphere/.
[106] "Browse Collections".

exhibition).[107] Both gifts were accepted in the end, but not without calling public attention to the difficulties inherent in trying to find sustainable solutions to the museum capacity crisis.[108] [109] Many other objects in the collection simply can't be deaccessioned, though, due to a clause in the terms under which they were originally donated.[110] In order to further boost the number of collection materials receiving exposure, the Brooklyn Museum has also installed 2,000 objects in visible storage at its Luce Center for American Art Visible Storage and Study Center. Works in the installation are regularly rotated so as to give exposure to more pieces in the museum collection.[111] Supplementary information on the works in the exhibit is provided on a mini-database devoted exclusively to Luce Center objects. The Luce Center database offers interactive learning tools so that visitors can explore the installation by physical location of featured objects or unifying themes.[112]

The Brooklyn Museum's difficulties in accommodating the sheer size of its collection highlight the need to implement more sustainable collection management practices. Despite this major obstacle, the museum is clearly going to great lengths to make use of its holdings. The breadth of digital initiatives undertaken is sure to be an

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[107] Patricia Cohen, "Brooklyn Museum Finds Some Problematic Gifts Can't Be Returned," *New York Times*, January 15, 2013, Accessed online August 2014, http://www.nytimes.com/2013/01/16/arts/design/brooklyn-museum-finds-some-problematic-gifts-cant-be-returned.html.
[108] Kevin Stayton, "The Brooklyn Museum Costume Collection," Accessed August 2014, http://www.metmuseum.org/research/curatorial-research/the-costume-institute/american-woman-symposium/collection-sharing/brooklyn-museum-costume-collection.
[109] Alex Leff, "Costa Rica reclaims artifacts from the prestigious Brooklyn Museum in New York," *Art Daily*, Accessed August 2014, http://artdaily.com/news/50822/Costa-Rica-reclaims-artifacts-from-the-prestigious-Brooklyn-Museum-in-New-York#.VAYOTUttcy4.
[110] Cohen.
[111] "Research: Luce Center for American Art," Brooklyn Museum, Accessed August 2014, http://www.brooklynmuseum.org/opencollection/research/luce/.
[112] Ibid.

asset to the development of the museum's collections and its ability to care for them in the long term.

These three case studies demonstrate the wide variety of concerns cultural heritage stewards must address when managing large collections of anthropological materials. It should be noted, of course, that for collections with different focuses, care and documentation practices may differ wildly from those outlined above. Collections containing natural history specimens (including geological or biological materials) demand their own care practices, separate and distinct from those governing collections comprised mainly of fine arts material ("art for the sake of art" objects) and vice versa. For example, the Mütter Medical Museum in Philadelphia collects and displays full and partial human remains preserved in a variety of methods, such as wet specimens, dry osteological specimens, and desiccated tissue.[113] Each object must be cared for on a case-by-case basis, in accordance with its unique conditions and preservation needs. Furthermore, accessioning policy must be rigorous to ensure that all materials accepted have been obtained legally.[114] However, the collection needs driving the development of these museums' outreach efforts are very much the same.

All collections demand constant upkeep and it is in museums' best interests to ensure that as much of their contents serve the public as possible. By that same token, the value of peer collaboration between institutions and pushing the envelope with emerging technologies is readily apparent. Contemporary approaches and emerging technologies like those cited in these case studies allow the stewards of cultural heritage to grant

[113] "Collections," Mütter Medical Museum, Accessed September 2014, http://muttermuseum.org/collections/
[114] "About/FAQ," Mütter Medical Museum, Accessed September 2014, http://muttermuseum.org/about/faq/

museum audiences access to a larger portion of the museum's collection than ever before and to engage with the material in new ways. These new methods of managing collections and sharing them with the public will be instrumental to ensuring that museums' holdings can be experienced to their fullest – sustainably.

CHAPTER IV: COLLECTION MANAGEMENT GOING FORWARD

Though new perspectives on collection management will play a major role in the development of sustainable museum practices, collection management is only a set of procedures meant to improve the care of a collection and support its development, and is a recent development in the field of museum management at that. The collection management strategies and tools that have developed must continue to adapt alongside constantly changing technologies. As such, these methods are hardly perfect. For one, they are extremely labor-intensive to implement and may become costly projects if additional consultation is necessary. The undertaking of collection management improvement projects can often depend on the availability of grants, which in turn means that the percentage of the collection that can be reviewed and cared for must be chosen carefully, and based on which portions of the collection may need it most.

And even when well documented, a collection may encounter difficulties in making the information available to the public. As has been discussed in previous portions of this thesis, museums now have opted to make their collections viewable online, with individual object record pages supplying images of and basic information pertaining to the object. While this fulfills the goal of making the information available to the public, it only does the bare minimum of what stewards intend for it to: the museum can present and interpret individual objects, but they are limited by the constraints of the technology they can afford to use and the technology that they have the training to operate. In addition to the basic object information typically displayed in an online object

record, there may be further interpretation stewards may wish to supply, such as anecdotal information or historical trivia typically presented to tour groups or in gallery talks; the nature of the object record in the museum database being used to construct the online record may limit what information can be entered or made public.

Furthermore, there is often difficulty accessing the information in a museum's digital collections due to the lack of a universal set of vocabulary with which to describe and discuss objects. There have been some efforts made to establish some consistency of terminology; the Getty Research Institute, for example, has attempted to create a professional standard vocabulary and compile the various alternative terms for each entry.[115] (See Appendix, Figures 3b and 4.) Likewise, the Dublin Core Metadata Initiative, begun in Dublin, Ohio in 1995, also seeks to provide researchers and museum professionals with a vocabulary to work with.[116] These initiatives, though, are scattered efforts, and their search terms do not always overlap. The hurdle this poses in terms of ease of access to information is considerable: in order to find the information, users need to be conversant in the search terminology. Without more straightforward means of finding works in the digital collections, how can the public benefit from their contents?

One approach stewards may take is the one implemented by the University of Pennsylvania Museum of Archaeology and Anthropology, in which stewards of the collection define their descriptive vocabularies for the museum audience in a glossary or appendix. This approach allows the stewards selecting the metadata used to identify the collection objects to retain internal consistency. However, it also requires those exploring

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[115] "Getty Vocabularies," J. Paul Getty Trust, Accessed December 2013, http://www.getty.edu/research/tools/vocabularies/.

[116] "Dublin Core Metadata Element Set, Version 1.1," Dublin Core Metadata Initiative, Accessed December 2013, http://dublincore.org/documents/dces/.

the collections to expend extra time and effort to familiarize themselves with the terminology used on a collection-by-collection basis. For an audience comprised of cultural heritage stewards, this might be only a slight inconvenience; for a wider audience, this could render a digital collection nearly unusable. If accessibility is contingent upon the ability of the collection to perform in the public arena, then a vocabulary system that is less than intuitive could have serious drawbacks.

Another response to this problem has been to allow for as much public input as possible in choosing the search terms for each object: open-source object tagging on museum collection websites.[117] Allowing any and all stakeholders to provide their perspective in classifying and describing cultural heritage materials, stewards can let visitors to digital collections cast a wider net as well. Additionally, by giving public stakeholders a chance to add their own descriptors to the metadata associated with collection materials also helps bring about new ways to explore connections between objects in the collection. The metadata supplied might demonstrate usage patterns, which in turn can help stewards identify the interests and needs of museum visitors.

This is only one of the many ways in which Web 2.0 has become a more prominent player than ever before in museum management. Interactivity is increasingly essential to the museum experience, cultural heritage stewards find. In addition to being a beneficial learning tool, interactive programs at museums help visitors feel better able to connect with the collection materials. Although the museological paradigm shift first introduced in chapter one of this thesis has already begun, the public perception of museums as elitist academic institutions has yet to be shaken. Interactivity helps to break

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[117] "Tag! You're It!," Brooklyn Museum, Accessed December 2013, http://www.brooklynmuseum.org/opencollection/tag_game/start.php.

through the museum-going audience's expectation that they will be passive recipients of the information that the museum will impart and makes visiting a museum an exciting and memorable experience.[118] The success of the Collection Wall at the Cleveland Museum of Art is further proof of the warm public reception towards interactivity: the installation is a wall-length touch screen featuring works from the museum's collection, and it implements many of the technologies mentioned prior to help visitors select works they are interested in targeting, choose pre-made tours to load onto personal devices, create their own self-guided tours, and provide feedback for the museum staff and other museum visitors.[119] Visitors contribute to collection records by supplying their own metadata and favoriting pieces they enjoyed most. For such tools as these to remain effective, however, requires that collection records be up to date and supplied with accurate information, which further necessitates the careful management of the collections.

The ease of gathering public input by making collection records accessible online and encouraging open participation has also made it much simpler for stewards to request the support of a wide base of stakeholders. Visitors to museums can be encouraged to contact museum staff with any information they may have to contribute on individual collection objects – the Brooklyn Museum's collection website, for instance, offers contact information for those interested in doing so.[120] A potential drawback of open-source input, however, is the sheer amount of information that may be received, and the

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[118] Marianna Adams, "The Interactive Experience: Linking Research and Practice," Paper presentation at Interactive Learning in Museums of Art conference at the Victoria and Albert Museum, May 17-18 2002, Accessed August 2014, http://media.vam.ac.uk/media/documents/legacy_documents/file_upload/5748_file.pdf.
[119] "Collection Wall," Cleveland Museum of Art, Accessed August 2014, http://www.clevelandart.org/gallery-one/collection-wall.
[120] "Browse Collections".

issue of how reliable the input may be. Sorting through the information submitted and fact-checking the input may demand even more time and energy than stewards may have to spare, and hiring more staff could cost money an institution may simply not have.

Furthermore, the background training of cultural heritage stewards can also prove less than advantageous to sustainable development. Cultural heritage management as a profession demands a breadth of knowledge including not only an in-depth understanding of the subject matter within the collection but also command of the information technology that can help organize and share data. However, cultural heritage stewards tend to specialize in one field or the other with little overlap. And while museums do possess information technology departments, they are usually separate from the curatorial, collection management, and registrar sectors that handle objects directly and deal with the interpretation and presentation of cultural heritage information. As a consequence, there is less professional synergy than is ideal between the physical and digital management of collection objects.

To date, trial and error and communication between institutions have been responsible in large part for the spread of awareness of these issues and potential solutions among cultural heritage stewards, though many of the problems remain yet unsolved nevertheless. As a result, peer collaboration amongst cultural heritage stewards working in digital asset management development and its applications will also be instrumental in directing the future of collection management practice. Different collections have different needs and the social context in which they operate is continually changing – especially with the advent of new technologies. The ready availability of information on various museum's successes and failures can help

museums with fewer means to make decisions on how to manage their own collections, without risking as much as they might have had they taken on a new approach their selves.

In conclusion, despite the many tools that have emerged to assist in the organization of and access to cultural heritage information in the present day, the potential of the newer sets of tools has yet to be understood and fully realized. The ability to identify, document, and reach out to stakeholders has opened up a wealth of possibilities in terms of gathering and sharing information and targeting the interests and needs of stakeholders. This current, more participatory model of cultural heritage management may continue to prove itself to be sustainable in museum contexts. However, rigid boundaries still separate the management of information and related technology from the physical management and outreach process. Without improved synthesis between the two sectors or more user-friendly options, cultural heritage stewards are a long way away from establishing a more sustainable model of cultural heritage management within museums. It is difficult to say what new technologies and cultural heritage management ideologies may come into existence to guide the practice of sustainable cultural resource management, but is clear that they will be instrumental in shaping the future of the field.

BIBLIOGRAPHY

Adams, Marianna. "The Interactive Experience: Linking Research and Practice." Paper presentation at Interactive Learning in Museums of Art conference at the Victoria and Albert Museum, May 17-18 2002.

American Alliance of Museums. "Museum Facts". Accessed November 2013. http://www.aam-us.org/about-museums/museum-facts.

American Alliance of Museums. "Code of Ethics for Museums." Accessed July 2014. http://www.aam-us.org/resources/ethics-standards-and-best-practices/code-of-ethics.

American Alliance of Museums. "Developing a Mission Statement." *Alliance Reference Guide*. Downloaded as a PDF November 2013 from http://www.aam-us.org/resources/assessment-programs/core-documents/documents.

American Alliance of Museums. "Developing a Collection Management Policy." Accessed December 2013.

American Museum of Natural History. "Collections History." Accessed May 2014. http://www.amnh.org/our-research/anthropology/collections/collections-history.

American Museum of Natural History. "Biological Anthropology Collection." Accessed May 2014. http://www.amnh.org/our-research/anthropology/collections/collections-history/biological-anthropology.

American Museum of Natural History. "Mission Statement." Accessed May 2014. http://www.amnh.org/about-us/mission-statement.

American Museum of Natural History. "Management." Accessed May 2014. http://www.amnh.org/our-research/anthropology/collections/management.

American Museum of Natural History. "Digital Imaging – Anthropology." Accessed May 2014. http://research.amnh.org/anthropology/database/imaging.

American Museum of Natural History. "Division of Anthropology: Textile Collection." Accessed May 2014. http://anthro.amnh.org/textile.

American Museum of Natural History. "Research Policy." Accessed May 2014. http://www.amnh.org/our-research/anthropology/policies-links/research-policy#web_access.

Association for Information Science and Technology. "Dublin Core Metadata Element Set, Version 1.1." Accessed December 2013. http://dublincore.org/documents/dces/.

Bernstein, Shelley "Going Mobile With a Gallery Powered by People." *BkylnMuse: Technology Blog of the Brooklyn Museum*, August 29, 2009, Accessed August 2014, http://www.brooklynmuseum.org/community/blogosphere/2009/08/26/bklynmuse-going-mobile-with-a-gallery-guide-powered-by-people/.

BkylnMuse: Technology Blog of the Brooklyn Museum. Accessed August 2014. http://www.brooklynmuseum.org/community/blogosphere/.

Blackaby, Jim and Beth Sandore. "Building Integrated Museum Information Retrieval Systems: Practical Approaches to Data Organization and Access." *Archives and Museum Informatics.* 11: 117–146, 1997.

Bohlen, Celestine. "Museums as Walk-In Closets; Visible Storage Opens Troves to the Public," *New York Times Magazine*, May 8 2001, accessed May 2014, http://www.nytimes.com/2001/05/08/arts/museums-as-walk-in-closets-visible-storage-opens-troves-to-the-public.html.

Brodie, Neil. "Euphronios (Sarpedon) Krater". *Trafficking Culture: Researching the global traffic in looted cultural objects*. Accessed December 2013. http://traffickingculture.org/case_note/euphronios-sarpedon-krater/.

Brooklyn Museum. "Tag! You're It!" *The Brooklyn Museum*. Accessed December 2013. http://www.brooklynmuseum.org/opencollection/tag_game/start.php

Brooklyn Museum. "Browse Collections." The Brooklyn Museum. Accessed December 2013. http://www.brooklynmuseum.org/opencollection/collections/.

Brooklyn Museum. "About: The Museum's Building." Accessed April 2014. http://www.brooklynmuseum.org/about/building.php.

Lawrence, Deirdre E. and Deborah Wythe. "Guide to the Culin Archival Collection." Accessed December 2013. https://www.brooklynmuseum.org/opencollection/research/culin/culin.php.

Brooklyn Museum. "Mission Statement." Accessed August 2014. http://www.brooklynmuseum.org/about/mission.php.

Brooklyn Museum. "Renovation and Climatization (2007-2013)." Accessed August 2014. http://www.brooklynmuseum.org/about/renovation.php.

Brooklyn Museum. "Collections News." Accessed August 2014. http://www.brooklynmuseum.org/opencollection/news.

Brown, Michael F. "Exhibiting Indigenous Heritage in the Age of Cultural Property." In *Whose Culture? The Promise of Museums and the Debate over Antiquities*, edited by James Cuno. Princeton: Princeton University Press, 2009.

Burgess, Chris and Rachel Shane. "Deaccessioning: A Policy Perspective". *The Journal*

of Arts Management, Law, and Society. 41: 170-185, 2011.

Byrne, Sarah, Anne Clarke, Rodney Harrison, and Robin Torrence. *Unpacking the Collection*. New York: Springer Science + Business Media, LLC, 2011.

Callery, Bernadette C., ed. *Collaborative Access to Virtual Museum Collection Information: Seeing Through the Walls*. Binghamton, New York: Haworth Information Press, 2004.

Cameron, Fiona and Sarah Mengler. "Complexity, Transdisciplinarity and Museum Collections Documentation: Emergent Metaphors for a Complex World." *Journal of Material Culture*. 14: 189-218, 2009.

Cohen, Patricia. "Brooklyn Museum Finds Some Problematic Gifts Can't Be Returned." *New York Times*, January 15, 2013. Accessed August 2014. http://www.nytimes.com/2013/01/16/arts/design/brooklyn-museum-finds-some-problematic-gifts-cant-be-returned.html.

Cleveland Museum of Art. "Collection Wall." Accessed August 2014. http://www.clevelandart.org/gallery-one/collection-wall.

Cloonan, Michèle V. "The Paradox of Preservation". *Library Trends*. 56.1 (2007): 133-147.

Cohen, Patricia. "Museums Faulted on Restitution of Nazi-Looted Art." *The New York Times,* June 30, 2013. Accessed September 2014, http://www.nytimes.com/2013/07/01/arts/design/museums-faulted-on-efforts-to-return-art-looted-by-nazis.html?pagewanted=all.

CollectiveAccess. "About CollectiveAccess." Accessed June 2014. http://collectiveaccess.org/about.

Corsane, Gerard. *Heritage, Museums, and Galleries: An Introductory Reader*. New York: Routledge, 2005.

Cowie, Trevor and Peter McKeague. "Mapping Material Culture: Exploring the Interface Between Museum Artifacts and Their Geographical Context." *Scottish Archaeological Journal*. 32.1 (2010): 73-93. doi: 10.3366/saj.2011.0009.

Kevin L. DeVorsey et al. "The Development of a Local Thesaurus to Improve Access to the Anthropological Collections of the American Museum of Natural History," *D-Lib Magazine*, April 2006. Accessed May 2014. http://www.dlib.org/dlib/april06/devorsey/04devorsey.html.

Dorge, Valerie and Sharon L. Jones. *Building an Emergency Plan: A Guide for Museums and Other Cultural Institutions.* Los Angeles: The Getty Conservation Institute, 1999.

Dublin Core Metadata Initiative. "Dublin Core Metadata Element Set, Version 1.1." Accessed December 2013. http://dublincore.org/documents/dces/.

Duff, Wendy M. and Verne Harris. "Stories and Names: Archival Description as Narrating Records and Constructing Meanings." *Archival Science*. 2: 263-285, 2002.

Eriksen, Hilary and Ingrid Unger. *The Small Museums Cataloguing Manual, Fourth Edition*. Victoria: Museums Australia, 2009.

Fahy, Anne, (ed.) *Collections Management*. London: Routledge, 1995.

Green, David and Rachel Mustalish. *Digital Technologies and the Management of Conservation Documentation*. (Andrew W. Mellon Foundation Survey, 2009).

Hekman, Willem (ed). *Handbook on Emergency Procedures*. ICOM, 2010.

Hirshhorn Museum and Sculpture Garden. "About ARTLAB". *ARTLAB+ Program*. Accessed December, 2013. http://www.hirshhorn.si.edu/collection/artlab/#collection=hirshhorn-aerial-view&detail=http%3A//www.hirshhorn.si.edu/bio/about-artlab/.

van Hooland, Seth et al. "Between Commodification and Engagement: On the Double-Edged Impact of User-Generated Metadata within the Cultural Heritage Sector". *Library Trends*. 59.4 (2011): 707-720. doi: 10.1353/lib.2011.0011

Huijbregts et al. "A Proposed Method to Assess the Damage Risk of Future Climate Change to Museum Objects in Historic Buildings." *Building and Environment*. 55: 43-56, 2012.

Hurdle, Jon. "A Museum Full of Antiquities Embraces Modernity." *The New York Times*, December 4, 2010. Accessed August 2014. http://www.nytimes.com/2012/12/05/us/penn-museum-pushes-for-broader-public-appeal.html.

ICOM. "Frequently Asked Questions." Accessed March 2014. http://icom.museum/resources/frequently-asked-questions/.

ICOM, "Thematic Panel of the Advisory Committee No. 1." June 2011. Accessed online: http://archives.icom.museum/download/june2011/panels/110602_%20JM_panel1.pdf

ICOMOS. "The Paris Declaration on Heritage as a Driver of Development." December 1, 2011. Accessed online April 2014, http://www.international.icomos.org/Paris2011/GA2011_Declaration_de_Paris_EN_20120109.pdf.

J. Paul Getty Trust. "Getty Vocabularies". *The Getty Research Institute*. Accessed December 2013. http://www.getty.edu/research/tools/vocabularies/.

Kaiser, Kathi and Tanya Treptow. "User Experience/Visitor Experience: A Holistic Approach for Understanding and Improving Mobile Apps in Museums." Presentation at edUi Conference in Richmond, November 4-6, 2013. Slides accessed online July 2014 at http://eduiconf.org/files/2013/06/Treptow-Kaiser-User-Experience-Visitor-Experience.pdf.

Karp, at al. *Museum Frictions: Public Cultures/Global Transformations*. Durham: Duke University Press, 2006.

Keene, Suzanne. *Fragments of the World: Uses of Museum Collections* (Oxford: Elsevier Butterworth-Heinemann): 2005.

Keene, Suzanne. "All That is Solid? – Museums and the Postmodern." *Public Archaeology*. 5.3 (2006): 185-198.

Keene, Suzanne. "The Future of the Museum in the Digital Age." *ICOM News*. Vol. 3 (2004): 4.

Koeppe,Wolfram. "Collecting for the Kunstkammer." Accessed April 2014. http://www.metmuseum.org/toah/hd/kuns/hd_kuns.htm.

Kaufman, Ned. *Place, Race and Story: Essays on the Past and Future of Historic Preservation*. New York: Routledge, 2009.

Kim, Jeonghyun. "Building Rapport Between LIS and Museum Studies." *Journal of Education for Library and Information Science*. Vol. 53. No. 2: 149-161, 2012.

Kingston, Adrian. "The Swiss Army Knife Approach: How Far Can You Push a Collection Management System in a Changing World?" (Presentation at the Museum Computer Networks Annual Conference in Seattle, November 7-10, 2012. Slides accessed online November 2013, http://www.slideshare.net/adriankingston/mcn-2012-swiss-army-knife-approach.

Knudson, Ruthann. "Cultural Resource Management in Context." *Archives and Museum Informatics.* 13: 359-381, 1999.

Kunda, Sue and Mark Anderson-Wilk. "Community Stories and Institutional Stewardship: Digital Curation's Dual Roles of Story Creation and Resource Preservation." *Libraries and the Academy.* 11.4 (2011): 895-914. doi: 10.1353/pla.2011.0047.

Ladkin, Nicola. "Collections Management." In *Running a Museum: A Practical Handbook*, edited by Patrick J. Boylan. Paris: ICOM, 2004.

Leff, Alex. “Costa Rica Reclaims Artifacts from the Prestigious Brooklyn Museum in New York.” *Art Daily*, Accessed August 2014. http://artdaily.com/news/50822/Costa-Rica-reclaims-artifacts-from-the-prestigious-Brooklyn-Museum-in-New-York#.VAYOTUttcy4.

Lourenço, Marta C. “A Contribution to the History of University Museums and Collections in Europe.” Accessed March 2014, http://publicus.culture.hu-berlin.de/umac/2002/lourenco.html.

Lowenthal, David. *The Heritage Crusade and the Spoils of History*. Cambridge: Cambridge University Press, 1998.

Henry Luce Foundation. “American Art Program Evaluation Report 2009 – American Art: The State of the Field.” Accessed August 2014. http://www.hluce.org/amerartprogeval.aspx.

Marty, Paul F. “Museum Informatics and Information Infrastructures: Supporting Collaboration across Intra-Museum Boundaries.” *Archives and Museum Informatics.* 13: 169-179, 1999.

Marty, Paul F. “Museum Informatics and Collaborative Technologies: The Emerging Socio-Technological Dimension of Information Science in Museum Environments.” *Journal of the American Society for Information Science*. 50.12 (1999). 1083-1091.

Masri, Layla and Emily Grossman. “Pimp My Site Architecture: Reorganization and Usability Tools and Tactics to Reinvigorate Museum Websites on a Budget.” *Archives & Museum Informatics: Museums and the Web 2010.* Accessed November 2013. http://www.museumsandtheweb.com/mw2010/papers/masri/masri.html.

McGill, Alicia Ebbitt. “Research, Preservation, and Education: An Introduction to Various Heritage Centers, Organizations, and Projects.” *Archaeologies*. Vol. 7. No. 2: 423-453, 2011.

McGovern, Megan. “Digital Asset Management: Where to Start”. *Curator: The Museum Journal.* Vol. 56. No. 2: 237-254, 2013.

McLachlan, Sean. “Behind the Scenes at the British Museum”. *British Heritage* January 2004: 48-51.

Meringolo, Denise D. *Museums, Monuments, and National Parks*. Amherst, MA: University of Massachusetts Press, 2012.

Merril, William L. et al. “The Return of the Ahayu:da: Lessons for Repatriation from Zuni Pueblo and the Smithsonian Institution.” *Current Anthropology* 34.5 (1993): 523-567.

Michalski, Stefan. “Care and Preservation of Collections.” In *Running a Museum: A Practical Handbook*, edited by Patrick J. Boylan. Paris: ICOM, 2004.

Metropolitan Museum of Art. “About the Heilbrunn Timeline of Art History.” Accessed July 2014. http://www.metmuseum.org/toah/intro/atr/atr.htm

Metropolitan Museum of Art. “Connections.” Accessed May 2014. http://www.metmuseum.org/connections/.

Milanich, Jerald T. “Homeless Collections.” *Archaeology*. November/December 2005: 58-64.

Museums and Galleries of New South Wales. *Collection Management Manual*. Downloaded as PDF, February 2013 from http://mgnsw.org.au.

Museums Association. “Defining Sustainability.” Accessed August 2014. http://www.museumsassociation.org/campaigns/sustainability/definitions.

Mütter Medical Museum. “Collections.” Accessed September 2014. http://muttermuseum.org/collections/.

Mütter Medical Museum. “About/FAQ.” Accessed September 2014. http://muttermuseum.org/about/faq/.

Myers, John H. “The Use of Computers in Cultural Resource Management.” *Archives and Museum Informatics.* 13 (1999): 341-457.

National Park Service, “International Repatriation,” Accessed September 2014, http://www.nps.gov/nagpra/SPECIAL/International.htm.

National Park Service. *Museum Handbook*. Washington, D.C.: National Park Service Museum Management Program, 1990.

National Preservation Institute. “Collections Management, Conservation, and Disaster Planning.” Accessed September 2014. http://www.npi.org/conservation.

O’Hagan, John W. “Art Museums: Collections, Deaccessioning and Donations.” *Journal of Cultural Economics*. 12 (1998): 197-207.

Panero, James. “What’s a Museum?” *The New Criterion*. March Edition (2012): 4-12.

Pezzati, Alessandro et al. “A Brief History of the Penn Museum.” *Expedition*, 54.3, Accessed May 2014. http://www.penn.museum/documents/publications/expedition/pdfs/54-3/a_brief_history.pdf.

Povoledo, Elisabetta. “Euphronios Krater Returned: Ancient Vase Comes Home to a Hero’s Welcome”. *New York Times*, January 19 2008. Accessed November 2013. http://www.nytimes.com/2008/01/19/arts/design/19bowl.html?_r=0.

Paris, Scott G. ed., *Perspectives on Object-Centered Learning in Museums*. Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc., 2002.

Poole, Robert M. “Looting Iraq.” *Smithsonian Magazine*, February 2008. Accessed September 2014, http://www.smithsonianmag.com/making-a-difference/looting-iraq-16813540/?no-ist.

Price, Sara. “Collection Management Systems: Tools for Managing Oral History Collections.” Accessed November 2013. http://ohda.matrix.msu.edu/2012/06/collection-management-systems/

Renschler, Emily S. and Janet Monge, “The Samuel George Morton Cranial Collection: Historical Significance and New Research.” *Expeditions*. 50.3 (2008): 30-38. Accessed May 2014, http://www.penn.museum/documents/publications/expedition/PDFs/50-3/renschler.pdf.

de Rijcke, Sarah and Anne Beaulieu. “Image as Interface: Consequences for Users of Museum Knowledge.” *Library Trends.* 59 4 (2011): 663-685.

Roberts, Andrew. “Inventories and Documentation.” In *Running a Museum: A Practical Handbook*, edited by Patrick J. Boylan. Paris: ICOM, 2004.

Roberts, Diana Lynn. “Extending a Museum Exhibition’s (Out)Reach.” *Ceramics Monthly*. October (2012): 47-51.

Smith, Susan N. “The Accidental Museum: Expropriating and Appropriating the Past.” *The Russian Review*. 67 (2008): 438-453.

Smithsonian Institution. “Mobile | Connect.” Accessed September 2014, http://www.si.edu/Connect/Mobile.

Smithsonian Institution Office of Policy and Analysis. “Increasing Museum Visitation by Under Represented Audiences: An Exploratory Study of Art Museum Practices.” May 2001.

Starn, Randolph. “A Historian’s Brief Guide to New Museum Studies.” *American Historical Review*. February (2005): 68-98.

Stayton, Kevin. “The Brooklyn Museum Costume Collection.” Accessed August 2014, http://www.metmuseum.org/research/curatorial-research/the-costume-institute/american-woman-symposium/collection-sharing/brooklyn-museum-costume-collection.

Stiliaras, Georgios D. et al. "AssetCollector: A System for Managing Collections of Cultural Assets." *Springer*. Vol. 8 (2007): 61-78. doi:10.1007/s00799-007-0028-3

Srinivasan, Ramesh et al. "Digital Museums and Diverse Cultural Knowledges: Moving Past the Traditional Catalog." *Information Society*.

Triarico, E. "From Collection to Museum: The Development of the Geoffrey Kaye Museum of Anaesthetic History." *Anaesth Intensive Care*. Vol. 36 (Suppl. 1) (2008): 32-36.

IUEAS. "Evolving Humanity, Emerging Worlds." *17th World Congress of the IUAES*. Accessed April 2014. http://www.nomadit.co.uk/iuaes/iuaes2013/panels.php5?PanelID=1462.

UNESCO. "Museums." Accessed November 2013. http://portal.unesco.org/culture/en/ev.php-URL_ID=35032&URL_DO=DO_TOPIC&URL_SECTION=201.html

UNESCO. "Stored But Not Safe: Museum Collections Are At Risk Worldwide." Accessed December 2013. http://www.unesco.org/new/en/culture/themes/movable-heritage-and-museums/museums/museum-projects/stored-but-not-safe-museum-collections-.

University of Pennsylvania Museum. "About Us." Accessed May 2014. http://www.penn.museum/about-us.html.

University of Pennsylvania Museum. "Registrar's Office." Accessed May 2014. http://www.penn.museum/registrars-office.html.

University of Pennsylvania Museum. "Gallery Maintenance." Accessed May 2014. http://www.penn.museum/conservation/1037-gallery-maintenance.html.

University of Pennsylvania Museum. "Online Collections Home." Accessed May 2014. http://www.penn.museum/collections/.

University of Pennsylvania Museum. "About Our Collections." Accessed May 2014. http://www.penn.museum/archives.html/about-our-collections.html.

University of Pennsylvania Museum. "Overview." Accessed May 2014. http://plum.museum.upenn.edu/~orsa/Overview.html.

University of Pennsylvania Museum of Anthropology and Archaeology. "Annual Report". 2012-2013.

University of Pennsylvania Museum. "NAGPRA." Accessed May 2014. http://www.penn.museum/nagpra.html.

University of Pennsylvania Museum. “Repatriations.” Accessed May 2014. http://www.penn.museum/nagpra/67-repatriations.html.

University of Pennsylvania Museum. “Online Exhibitions.” Accessed May 2014. http://www.penn.museum/program-resources/online-exhibits.html.

University of Pennsylvania Museum. “Interactive Map and Timeline.” Accessed August 2014. http://www.penn.museum/timeline/web/.

University of Pennsylvania Museum. “The Pennsylvania Declaration.” *Expeditions* 22.3 Accessed September 2014, http://www.penn.museum/documents/publications/expedition/PDFs/22-3/The%20Pennsylvania.pdf.

University of Pennsylvania Museum. “The University Museum Acquisitions Policy.” *Expeditions*. 22.3 Accessed September 2014, http://www.penn.museum/documents/publications/expedition/PDFs/22-3/The%20Pennsylvania.pdf.

Valerie Casey. “The Museum Effect: Gazing from Object to Performance in the Contemporary Cultural-History Museum.” Presented at Cultural Institutions and Digital Technology, Paris, September 8-12 2003.

Wang et al. “Cultivating Personalized Museum Tours Online and On-Site.” *Interdisciplinary Science Reviews*. 34.2-3 (2009): 139-153.

Weill, Stephen. *Making Museums Matter* (Washington D.C.: Smithsonian Institution, 2002)

West, Suzie ed. *Understanding Heritage in Practice*. Manchester, UK: Manchester University Press, 2010.

Wray, Tim and Peter Eklund. “Exploring the Information Space of Cultural Collections Using Formal Concept Analysis.” *International Conference on Formal Concept Analysis*. (2011): 251-266.

APPENDIX

List of Images

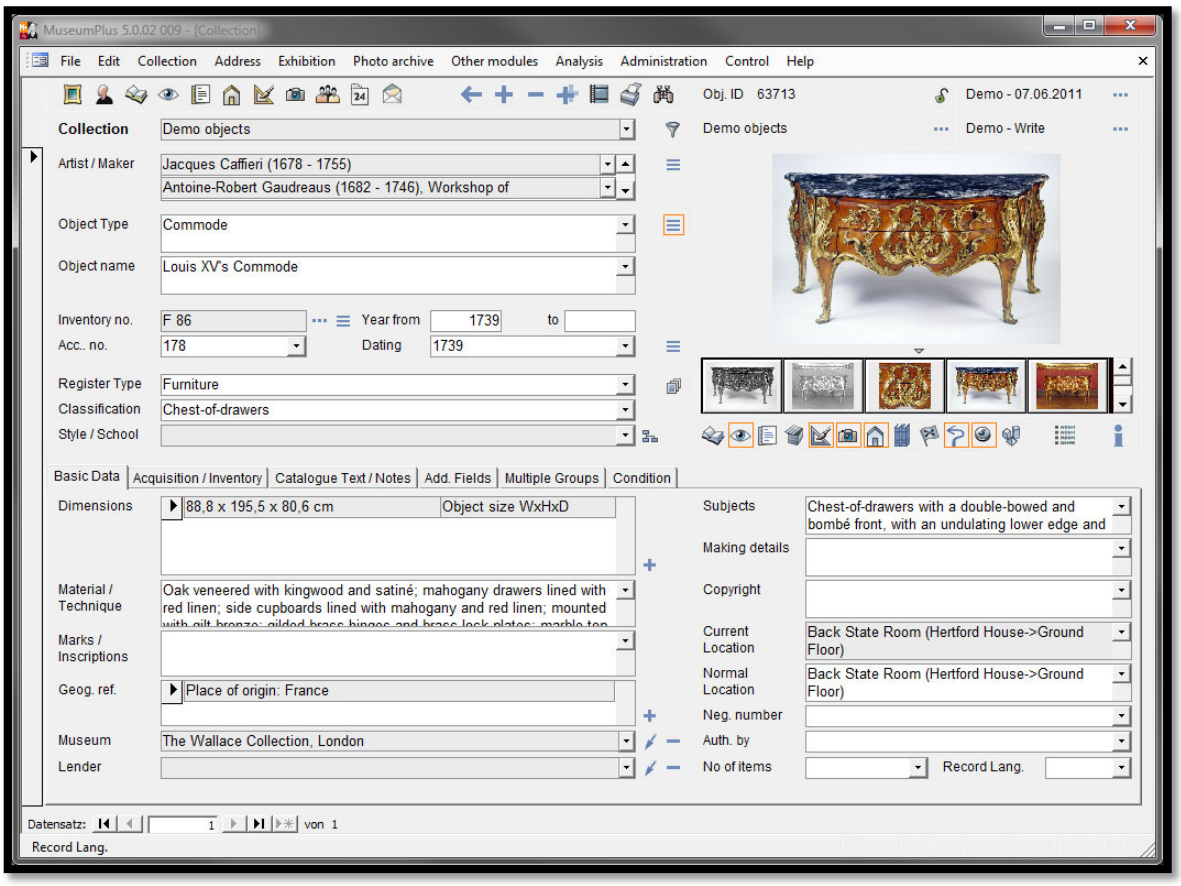


Figure 1. Sample image of Museum Plus collection management software object record and data fields. Image obtained from http://www.zetcom.com/products/collection-management-software-museumplus/

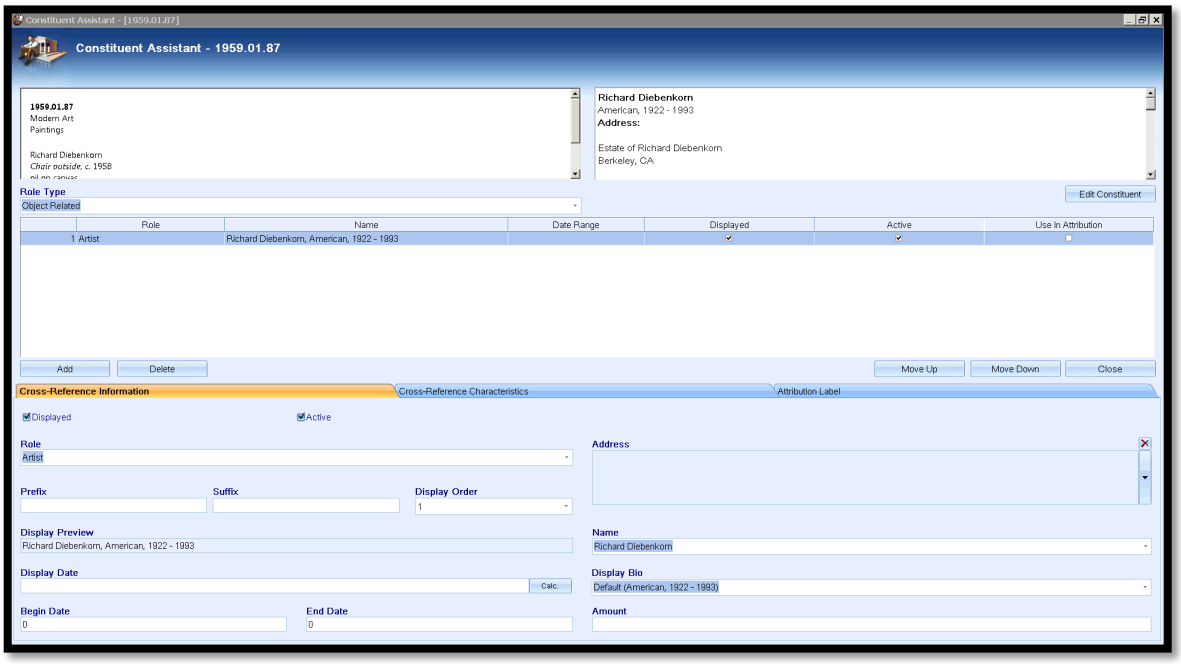


Figure 2. Sample of "constituent" file in TMS for management of stakeholder information. Image obtained from http://www.gallerysystems.com/tms.

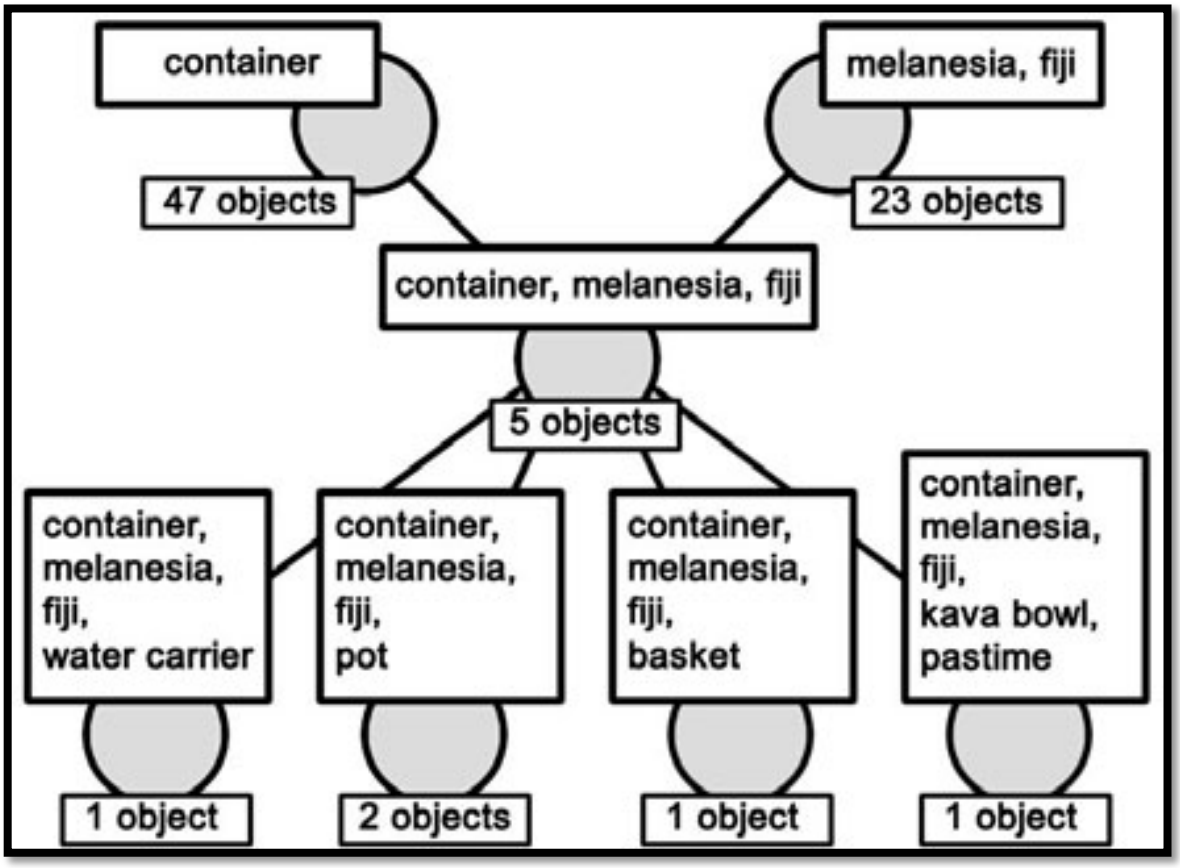


Figure 3a.

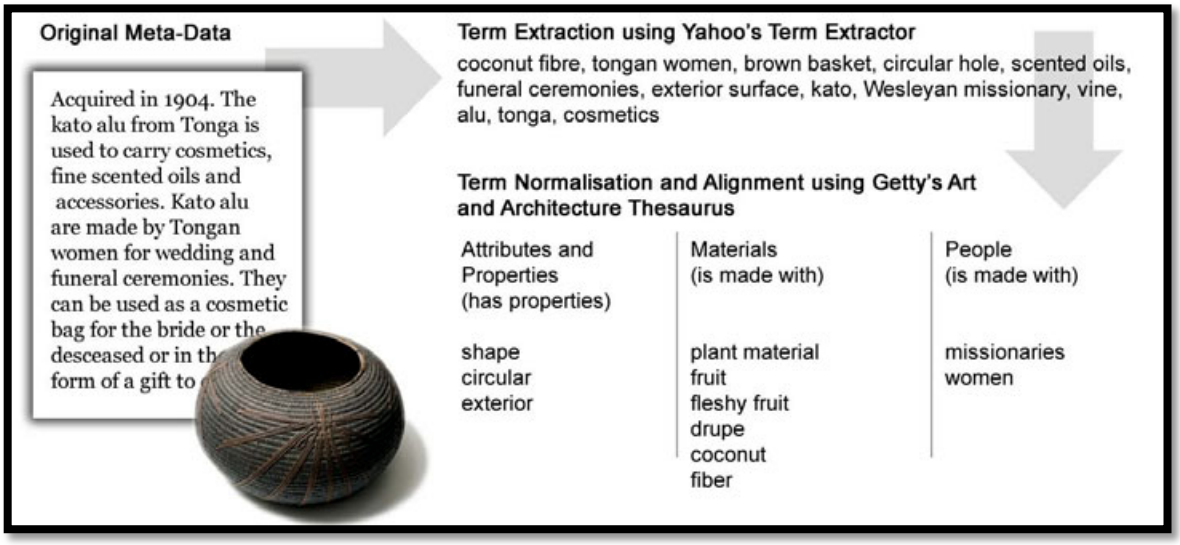


Figure 3b.

Figures 3a and 3b. Sample models of linked attributes, from "Exploring the Information Space of Cultural Collections Using Formal Concept Analysis".

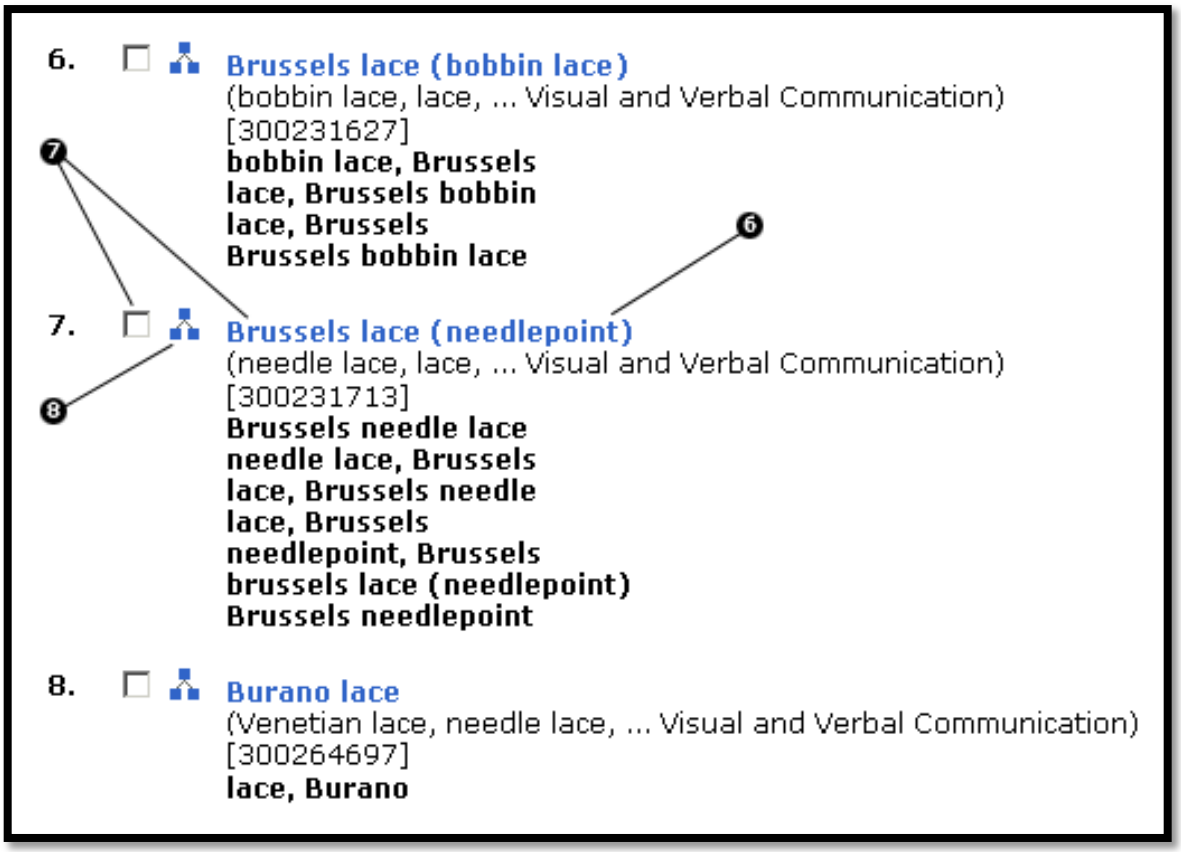


Figure 4. Sample image of objects identified by/searchable under multiple terms, from "How to Use the AAT Online" guide to the Getty Thesaurus. Image obtained from http://www.getty.edu/research/tools/vocabularies/aat/help.html.

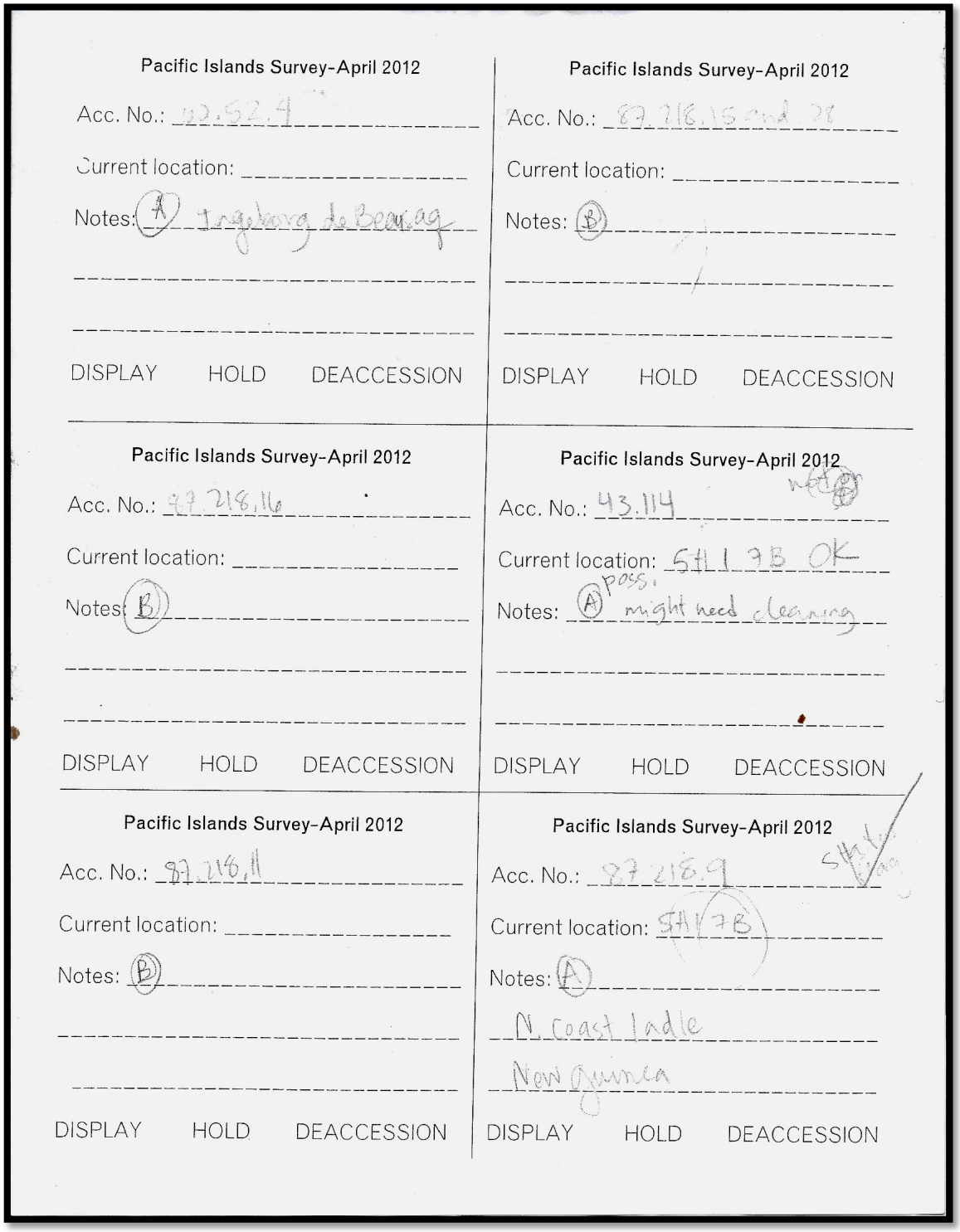


Figure 5. Sample of collection survey documents obtained from 2012 Survey of Pacific Islands Art at the Brooklyn Museum (1 of 2).

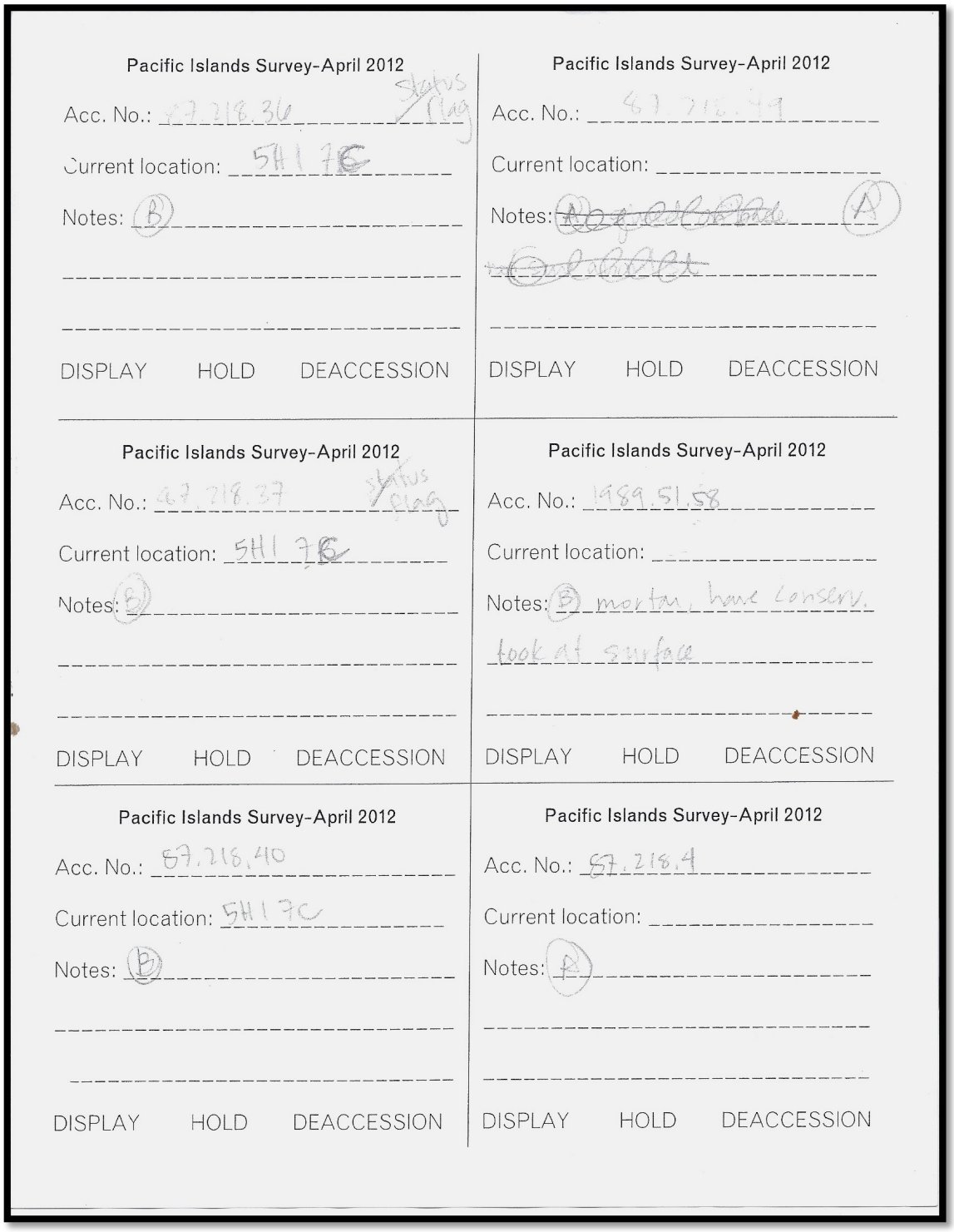
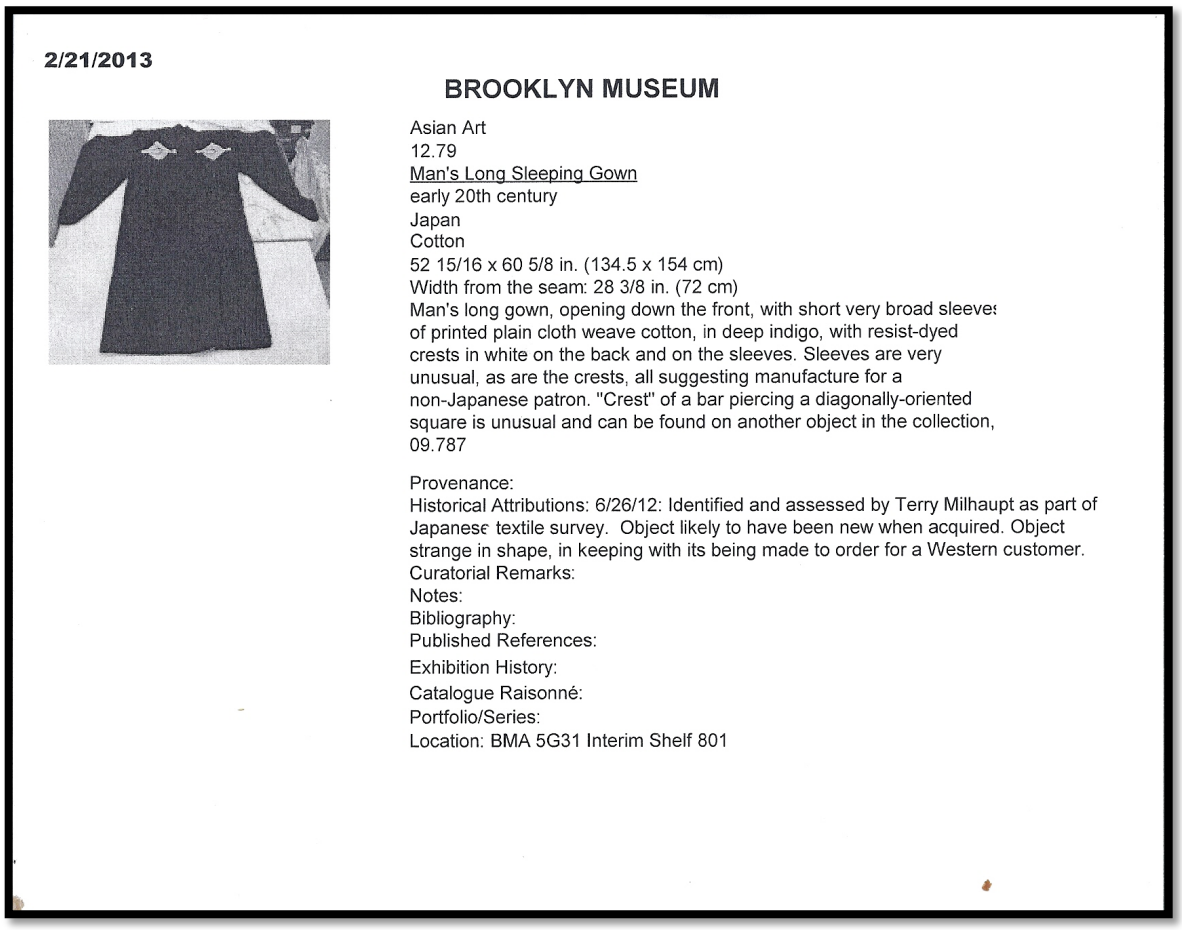


Figure 6. Sample of collection survey documents obtained from 2012 Survey of Pacific Islands Art at the Brooklyn Museum (2 of 2).



2/21/2013

BROOKLYN MUSEUM

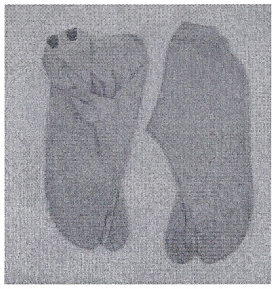
Asian Art
12.79
Man's Long Sleeping Gown
early 20th century
Japan
Cotton
52 15/16 x 60 5/8 in. (134.5 x 154 cm)
Width from the seam: 28 3/8 in. (72 cm)
Man's long gown, opening down the front, with short very broad sleeves of printed plain cloth weave cotton, in deep indigo, with resist-dyed crests in white on the back and on the sleeves. Sleeves are very unusual, as are the crests, all suggesting manufacture for a non-Japanese patron. "Crest" of a bar piercing a diagonally-oriented square is unusual and can be found on another object in the collection, 09.787

Provenance:
Historical Attributions: 6/26/12: Identified and assessed by Terry Milhaupt as part of Japanese textile survey. Object likely to have been new when acquired. Object strange in shape, in keeping with its being made to order for a Western customer.
Curatorial Remarks:
Notes:
Bibliography:
Published References:
Exhibition History:
Catalogue Raisonné:
Portfolio/Series:
Location: BMA 5G31 Interim Shelf 801

Figure 7. Sample of object record with information obtained from 2012 Survey of Japanese Textiles at the Brooklyn Museum (1 of 4).

2/21/2013

BROOKLYN MUSEUM



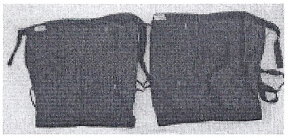
Asian Art
12.81.1-.9
Fireman's Uniform
19th century
Edo or Meiji period
Japan
Cotton (slippers & trousers)
12.81.5 (21666f):: 3 15/16 x 3 11/16 x 9 5/8 in. (10 x 9.4 x 24.5 cm)
12.81.6 (21666e):: 3 15/16 x 3 11/16 x 9 5/8 in. (10 x 9.4 x 24.5 cm)
Fireman's coat Hikeshibanten (b) with matching hood (a) and gloves (c and d).
Coat, hood, and gloves are cotton sashiko (a form of quilting), indigo resist dyed with broad white band around center, red bands at shoulders and hem, all stitched throughout with blue thread. Hood has long pendant element to protect ears and neck. Gloves consist of gauntlets with mittens inside.
Hood has number 9 in circle on front top and character for "ichigumi" (= first brigade)
Coat has number 1 on back top, also apparently to designate first brigade.
Collar has notation that has not yet been read.
Gloves have slight wear on finger and thumb areas, but otherwise costume is in excellent condition.
12.81e and f: pair of tabi (socks) in plain weave cotton

Provenance: Label on tabi indicates that this came from the Long Island Historical Society.
Historical Attributions: 6/25/12 and 6/27/12: Viewed and identified by Terry Milhaupt as part of Japanese textile survey.
Curatorial Remarks:
Notes: TROUSERS WRINKLED ID; ONLY G,H & I ARE IN THIS LOCATION. ONLY E & F IN AA-DB4
Bibliography:
Published References:
Exhibition History:
Catalogue Raisonné:
Portfolio/Series:
Location: BMA 5G31 Interim Shelf 1101 ASB361 (12.81.1-.4 components A, B, C, D)
Location: BMA 5G31 Interim Shelf 1101 ASB361 (12.81.9 I component)
Location: BMA 5G31 Interim Shelf 1101 ASB361 (12.81.5 E component)
Location: BMA 5G31 Interim Shelf 1101 ASB361 (12.81.6 F component)
Location: BMA 5G31 Interim Shelf 1101 ASB361 (12.81.7 G component)
Location: BMA 5G31 Interim Shelf 1101 ASB361 (12.81.8 H component)

Figure 8. Sample of object record with information obtained from 2012 Survey of Japanese Textiles at the Brooklyn Museum (2 of 4).

2/21/2013

BROOKLYN MUSEUM



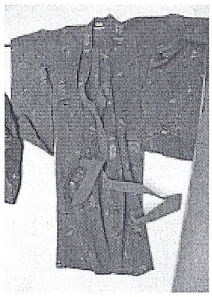
Asian Art
14.135a-b
Pair of Man's Leggings Part of a 5 Piece Costume
Japan
Cotton
Each: 12 3/8 x 13 3/8 in. (31.5 x 34 cm)
Pair of man's leggings in blue cotton. Woven stripes and checks.
Museum Expedition 1913-1914, Museum Collection Fund

Provenance:
Historical Attributions: 6/25/12: Viewed and identified by Terry Milhaupt as part of Japanese textile survey. Not clear what the original use was. Commoner quality (i.e. not elite).
Curatorial Remarks:
Notes:
Bibliography:
Published References:
Exhibition History:
Catalogue Raisonné:
Portfolio/Series:
Location: BMA 5G31 Interim Shelf 1108 ASB351

Figure 9. Sample of object record with information obtained from 2012 Survey of Japanese Textiles at the Brooklyn Museum (3 of 4).

2/21/2013

BROOKLYN MUSEUM



Asian Art
18.12
Child's Robe or Kimono
Late 19th century - early 20th century
Japan
Silk
27 9/16 x 35 7/16 in. (70 x 90 cm)
Child's kimono, opening down the front with ties. Plain-weave, blue stencil-printed silk (?) crepe with a delicate design of cherry blossoms and objects from the garden (wells). Inside the sleeves is a border of orange plain-weave cotton (wool?) and inside the collar is a border of similarly woven red cotton (wool?). Ties are of orange wool.
Gift of William J. Baer

Provenance:
Historical Attributions: 7/6/12: Identified and assessed by Terry Milhaupt as part of Japanese textile survey.
Curatorial Remarks:
Notes:
Bibliography:
Published References:
Exhibition History:
Catalogue Raisonné:
Portfolio/Series:
Location: BMA 5G31 Interim Cart/Crate/Rolling Bin GCBM276

Figure 10. Sample of object record with information obtained from 2012 Survey of Japanese Textiles at the Brooklyn Museum (4 of 4).