Improving Access at the University of Kansas Biodiversity Institute Division of Archaeology

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The University of Kansas Biodiversity Institute (BI), Division of Archaeology is home to more than 1.5 million archaeological artifacts (http://biodiversity.ku.edu/archaeology). Spanning more than 100 years of acquisitions, the collections represent a significant resource, not only for the university, but also for archaeologists and researchers the world over. In the last twenty years, the division's collections and resources have been used in 41 PhD dissertations and Master's theses, 17 undergraduate honor's theses, and a number of professional publications (University of Kansas [KU] 2015:2). Recently, the Division of Archaeology applied for an Institute of Museum and Library Services (IMLS) grant for improved collection storage. If funded, the grant will facilitate the implementation of best practices for collection stewardship, which is one of the division's primary goals. According to the narrative of the grant, the division also aims to improve a focus on, "collection-based research, exploration of human-environment interactions, and outreach and dissemination" (KU 2015:3). Additionally, the 2016-2019 Strategic Plan for the Division of Archaeology states that a goal is to maintain its position as a leader in Great Plains archaeological research (KU 2016). For this reason, in conjunction with the commitment to collection-based research, it is in the division's best interest to improve access to its collections. Resultantly, the aims of this paper are twofold.

First, this paper aims to address how the Division of Archaeology can develop strategies for improving access to its collections and resources. The question of how to improve access for researchers, both professional and student, is specifically addressed. Researchers are the primary visitors and audience for the Division of Archaeology, which is why their needs are the focus of this paper (M. Adair, personal communication, February 16, 2016).

A Strengths Weaknesses Opportunities and Threats (SWOT) analysis is used to identify initial strategies to improve access based on a SWOT analysis. Strategies that satisfy the

fundamental needs of researchers are identified as the most significant for improving access to the Division of Archaeology collections. Recommended strategies involve improving the division webpage and the usability of the collection.

This paper begins with an historical background of the archaeological collections at the University of Kansas and a description of the Division of Archaeology as it stands today. From there, it defines what access is, what improved access means for the division, and who improvements are for. Next, a SWOT analysis is carried out and strategies are subsequently developed. Finally, the benefits of improved access for researchers at the Division of Archaeology are discussed.

<div align="center">**Background**</div>

Historical Overview

The University of Kansas' archaeological collections have been under the care of numerous entities since their establishment in 1895. Archaeological materials were first acquired for the Museum of Natural History through the efforts of university faculty (KU 2008: 7). The collection increased with the development of the Department of Anthropology in 1964, and, by the 1970s, the collection had outgrown the space and resources of the Museum of Natural History. At this time, the collection and lab were moved to a temporary home in Blake Annex and were separated from the Museum of Natural History (Patterson 1998: 4).

Following stewardship by the Museum of Natural History, the archaeological collections fell under the care of the Museum of Anthropology. The Museum of Anthropology was formed in 1976, and after it occupied its new home in Spooner Hall in 1978, the archaeological and ethnological collections were consolidated in one location. The Museum of Anthropology managed the collection until the public portion was closed in 2002. The collection was left in

Spooner Hall (where it still remains), but was divided and placed under the care of two separate

entities in 2006. The University of Kansas Biodiversity Institute (BI) assumed care of the

archaeological collections. The ethnographic collections, on the other hand, were placed under

the care of the Spencer Museum of Art (Perez, Frese, Case, & Conrad-Hiebner 2012:10-11). This

arrangement remains in place today.

Collections

Today, the Division of Archaeology maintains a collection of more than 1.5 million

archaeological artifacts and associated records; it is the largest collection of its kind in Kansas.

The collection includes materials from the North American Great Plains, Central and South

America, and Europe, ranging in age from the prehistoric to historic periods. Particularly notable

is the North American Central Plains collection, which represents the best "systemic materials

from the late Paleoindian, Archaic, and Kansas City Hopewell sites"

(http://biodiversity.ku.edu/archaeology). In addition to the permanent collection, the Division of

Archaeology maintains a teaching collection and three comparative collections. The comparative

collections consist of zooarchaeological, paleoethnobotanical, and lithic materials primarily from

North America. Collections are acquired through staff and faculty research, university sponsored

fieldschools, federally mandated projects, and donations (KU 2008: 7).

Facilities

The Division of Archaeology occupies the basement and sub-basement space in Spooner

Hall and space in the Public Safety Building on west campus. The Public Safety Building houses

70% of the collection, which was relocated from Spooner Hall in 2010, in compact shelving

units (Perez, Frese, Case, & Conrad-Hiebner 2012: 11). Spooner Hall houses the remaining 30%

of the collection and associated archives. In addition to staff and professional offices and six

small exhibit cases near the building stairwell, Spooner Hall maintains numerous facilities for

researchers:

> A smart classroom used for collection-based courses; open lab tables for class
>
> projects and processing new accessions; graduate student desk and lab space;
>
> computers equipped with data entry, mapping, graphics and data analysis
>
> software; and specialized labs for Lithics, Zooarchaeology, Paleoethnobotany,
>
> and Imagery. The Lithic and Paleoethnobotany Labs have high-resolution
>
> microscopes equipped with cameras and software. The Imagery Lab has a 3D
>
> scanner, rotary stand, computer, photo stand, and LED photo lights (KU 2015:
>
> 1).

Understanding Access: What Access Means for the Division of Archaeology

Simply put, access is the ability to use, get, or get to, something. Esther Roth-Kratz, in a

study on art museum libraries, refers to accessibility as " a user's ability to walk in the door of

[a] library and access resources regardless of institutional affiliation" (2012:125). In the past,

access to museums was limited. As the museum's focus began shifting increasingly toward the

public and education, restrictions to the museum were challenged (Richoux, Serota-Braden, &

Demyttenaere 1994:179). Now, it is a fundamental responsibility of all museums to provide and

ensure access to their resources for the public. Both the American Alliance of Museums (AAM)

and the International Council of Museums (ICOM) include access in museum standards and best

practices (ICOM 2010; Merritt 2008). The responsibility for providing access specifically for

archaeological collections is defined in the Society for American Archaeology's (SAA)

Principles of Archaeological Ethics (1996). For those institutions with federally owned

collections, access is also defined by the federal regulations known as the Curation of Federally

Owned and Administered Archaeological Collections (36 CFR 79)

The resources museums provide access to include collections, programs, services, and

facilities. Different strategies are required to provide access to each of these resources (Ambrose

& Paine 2006:6). For this reason, it is worth specifying the focus of discussion, which is access

to the Division of Archaeology's collection. This includes physical access to collections and

museum facilities as well as intellectual access to information about collection materials

(National Park Service 2001:1:1). This focus is based on the mission of the BI

(http://biodiversity.ku.edu/about) and the core values of the Division of Archaeology (KU 2008:

3; KU 2016). Both revolve heavily around collections. Moving forward, the term "access" shall

refer specifically to collections access.

Formal access policies can be a helpful tool for understanding what access means to a

specific institution (Richoux, Serota-Braden, & Demyttenaere 1994:186). Included in the

institution's collections management policies, these policies describe, "who has access to what

and why, and how those collections will be used" (AAM 2012). The Division of Archaeology's

policy states that access to the collection is, "for research and for the enrichment and education

of the public today and into the future". Furthermore, the "collection is available for professional

research purposes including research and teaching," and for use by Native American Tribes and

Government Agencies (KU 2008:15). The division's access policy serves as the basis for

defining the target audience, which is researchers, for improved access. In turn, the needs of this

audience characterize what access should look like at the Division of Archaeology.

Audience and Access Needs

Various publics have different access needs in the same way as museum resources do. Namely, the needs of the general public are quite different from the needs of researchers. (Buck & Gilmore 2010: 28; Roth-Katz 2012:124). In this instance, the goal is to improve access for researchers. This decision is also based on the mission of the division, which specifically states that access to the collection is permitted for research and teaching purposes (KU 2008:3).

The title of "researcher" can be used to describe a variety of individuals. Researchers can be scientists, archaeologists, academics, authors, curators and other museum professionals, students, family historians, and hobbyists, to name a few (Keene 2005:51; Richoux, Serota-Braden, & Demyttenaere 1994:180; Ambrose & Paine 2006:131). Dr. Mary Adair, Senior Curator in Charge for the Division of Archaeology, indicated that students represent one of the largest groups of collection researchers in the Division of Archaeology (personal communication, February 16, 2016). For this reason, the needs of student researchers and professional researchers (as mentioned in the division's access policy) are given the most consideration in this paper.

All researchers have three main access needs. Researchers require access to *information* about the existence of collection materials and where to locate them; access to the *collection materials*, which include associated documentation; and access to *facilities* that enable the study of collection materials (Keene 2005:52). It stands to reason that the satisfaction of these needs will result in improved access. A SWOT analysis can be a helpful tool in this endeavor.

SWOT Analysis

Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis is a strategic

planning and decision-making tool first described in the 1960s. Originally developed for the

business arena, SWOT analysis has since been widely adopted by a variety of organizations,

including non-profits (Helms & Nixon 2010:216). The elements of a SWOT analysis can be

described as internal (strengths and weaknesses) and external (opportunities and threats) factors.

SWOT analyses are typically organized in a four-quadrant grid. The first row lists the internal

factors and the second row lists the external factors. Once relevant information is organized into

the grid, internal strengths and weaknesses are matched with external opportunities and threats.

Doing so allows for the development of strategies (Renault 2015).

In this instance, I think that the section for threats to access for the Division of

Archaeology should also incorporate barriers to access. Like threats, barriers are outside the

control of the Division of Archaeology and have negative consequences for access. The

difference, however, is that some barriers are inevitable. Steps can, and should be, taken to

mitigate the effects of the barriers, but there is no question whether or not they will affect the

division. Resultantly, I have included some unavoidable barriers as well as potential threats in

that section.

The popularity and success of the SWOT framework lies in its simplicity, versatility, and

ability to organize information (Renault 2015; White et al. 2015). SWOT analysis is not without

its criticisms, however. The tool is primarily criticized as being overly simplistic, vague, and

subjective (Helms 2010:234-6). Despite this, research suggests that SWOT is still an effective

planning tool (Ghazinoory, Abdi, & Azadegan-Mehr 2011; SWOT analysis 2015; Willis &

Thurston 2015:384), especially for jump-starting the planning process (Helms 2010:234)

The following SWOT grid lists the strengths and weaknesses of, and opportunities and barriers to access for the Division of Archaeology *specifically* related to issues of access. These factors serve as the basis for possible improvement strategies to be discussed later.

Table 1: SWOT Analysis for BI Division of Archaeology

Strengths	**Weaknesses**
1. Collection 2. Facilities 3. Association with the Biodiversity Institute 4. University milieu	1. Awareness of division is low 2. Suboptimal usability 3. Limited resources 4. Perception of inaccessibility
Opportunities	**Threats/Barriers to Access**
1. Digitization 2. Campus exhibit spaces 3. Collaboration 4. Grants	1. Collection preservation 2. Federal collections restrictions 3. Upgrades to storage space

Strengths

1. Collection

The collection itself is probably the division's greatest strengths. The 1.5 million+ artifacts and associated records held by the Division of Archaeology constitute the largest collection of its kind in the state (http://biodiversity.ku.edu/archaeology). Though digitization of collections is on the rise, the physical study of artifacts is irreplaceable. In large part, this is due to the fact that digital databases and images do not necessarily include all the data a researcher may be able to gather from studying a physical object, such as exact measurements and fine details (Kemp 2015: 294; Newell 2012: 298). Even if digital versions of collections are able to provide the same level of information as the physical objects, there are still advantages of using physical collections. One such advantage is that physically researching a collection provides a

broader, more nuanced understanding of that collection and its context (Newell 2012: 299). Another advantage is demonstrated in an educational context.

A study carried out by Macquarie University, Australia found that students with physical access to objects had better knowledge retention regarding the objects than those students who only had digital access. Students were also more detail-focused when engaging physically with objects (Simpson & Hammond 2012:78-80). While the physical research of collections has its advantages, digitization is still a worthwhile endeavor to be discussed later.

2. Facilities

The Division of Archaeology facilities include a wealth of tools for researchers. Though there is room for improvement, the division provides all of a researcher's basic access needs (Ambrose & Paine 2006: 133; Keene 2005:). This includes space and tables in Spooner for research, computers and other analytical equipment, and equipment for proper handling of artifacts. In addition to these basic requirements, the Division of Archaeology's Lithic, Zooarcaheology, Paleoethnobotany, and Imagery laboratories are available (KU 2015:1).

3. Association with Biodiversity Institute

Other divisions within the BI, such as the Division of Entomology and the Division of Mammalogy, are more accessible than the Division of Archaeology in some ways. Primarily, this is because the collections for both divisions are accessible online (http://biodiversity.ku.edu). The BI is already utilizing one method for improving access. This method is digitization, which will be discussed further as it is identified as an opportunity (Bertacchini & Morando 2011:2). Presumably, the structure for digitizing collection materials and providing collection information online is already in place. If the Division of Archaeology can adapt the existing structure to fit the needs of an archaeological collection, its association with the BI may be an asset.

4. University Milieu

Being a university collection has certain perks. University museums/collections tend to have an easier time getting the funding and technological equipment needed for research compared to their non-university counterparts (Lourenço 2002b: 14). When secured, these resources improve the accessibility of the collection (Keene 2005:52). Moreover, university museums have successfully filled the research niche for hundreds of years (Lourenço 2002b: 15). Because research is inherent in the university, access is likely already given some basic consideration. It should also be easier to justify efforts that improve access, as they support the shared core values of the university and the museum.

Weaknesses

1. Awareness of division is low

There is a recognized need to raise awareness of both the Division of Archaeology's collections and previous research projects (M. Adair, personal communication, December 17, 2015; KU 2016). Awareness of the division may be low for a couple of reasons. First, the division lacks a "public outreach" space, which is one way to connect with potential researchers (M. Adair, personal communication, October, 1, 2015). Second, there is minimal information about the collections and facilities on the webpage, which is typically the first point of contact for potential users (Roth-Katz 2012: 124).

2. Suboptimal usability

The archaeological collection is divided between the storage space in Spooner Hall and the off-site storage space in the Public Safety Building (Perez, Frese, Case, & Conrad-Hiebner 2012: 1). While sufficient space for storage generally enables access, the separation of the collection may hinder access (Richoux, Serota-Braden, & Demyttenaere 1981:180; S. Olsen,

personal communication, March 3, 2016). Arlyn Simon, Curator of Collections at Arizona State

University's Center for Archaeology and Society, faces a similar situation. The Center for

Archaeology and Society collections are divided between four buildings. Simon noted the

inconvenience of this arrangement and how it made accessing the collections difficult (A. Simon,

personal communication, December 3, 2015). This difficulty is made worse by the shortage of

staff at both Arizona State University and the University of Kanas (KU).

In Spooner Hall, the storage equipment decreases usability of the collection. The storage

cabinetry has wooden drawers that limit visibility of, and access to, objects at the rear of the

cabinet. These cabinets may also discourage the use of fragile objects such as pottery and glass.

The heavy drawers tend to vibrate excessively when drawn, which increases the risk of

damaging the objects each time they are used (KU 2015: 3).

Usability is also decreased by the lack of an online electronic collection database

accessible to researchers. The Division of Archaeology finding aids for collections and

associated documents are also unavailable online. When the contents of a collection or archive

are unknown or difficult to identify, it is a major barrier to access (Merriman & Swain

1999:262). It is important to point out that the division is currently working on improving its

website and plans to make the finding aids available online.

3. Limited resources

Staff and funding are the two most limited resources in the division. Currently, the entire

staff includes Dr. Mary Adair, the Senior Curator in Charge and Dr. Sandra Olsen, the Senior

Curator who has a joint appointment as Professor of Museum Studies. This is particularly

challenging considering insufficient staff can undermine access (Meadow 2010:8). There needs

to be staff available to assist researchers as well as monitor them for security reasons (Ambrose

& Paine 2006:132; Keene 2005:62; Richoux, Serota-Braden, & Demyttenaere 1981:179).

Improved access to collections can further drain already limited staff resources (Richoux, Serota-Braden, & Demyttenaere 1981:180). The staffing situation is unlikely to be remedied anytime soon, considering the lack of funding from the state (KU 2015; Hancock 2016). Moreover, without funding, some strategies for improved access may not be feasible. It is worth mentioning that, though the Division of Archaeology staff is small, they are mighty in their efforts. They have already made and continue to make improvements to accessibility of the collection.

4. Perception of inaccessibility

For potential researchers, the perception of accessibility can be as important as actual accessibility. Information regarding visiting and use policies can be difficult to locate on institution websites. This fosters a perception of inaccessibility (Roth-Katz 2012). By looking at the Division of Archaeology's homepage, it is not possible to locate the address for the division nor discern the hours of operation. This certainly limits physical access to the facility. Only by locating the collections use policy will a visitor find that appointments are required and that collections are open for use between 9:30am and 4:00pm, Monday through Friday.

Opportunities

1. Digitization

Digitization can go a long way in making collection contents known (Merriman & Swain 1999:262). Digital technologies, namely the Internet, have allowed the museum to share information more efficiently and effectively (Parry 2010; Bertacchini & Morando 2011). Furthermore, visiting the museum website is often a user's first step. The growing importance of the museum website is an opportunity not to be ignored (Roth-Katz 2012:124). Listing collection information on the institution's website is one method for satisfying a basic researcher access

need (Kemp 2015:294). The development of digital collections also supports both national and international research programs (Heerlien et al., 2015:9). The Division of Archaeology may be able to provide access to a wider audience by taking advantage of this opportunity. In addition, digitization supports preservation in that it reduces damage that results from physical handling (Jones 2001).

2. Campus exhibit spaces

Like digitization, exhibitions increase awareness of museum collections (Soubiran 2010:24). Though the Division of Archaeology has extremely limited space for exhibition in Spooner Hall, there are a couple of campus spaces that provide opportunities to display collection materials. The first is the Kansas Union Gallery. This student-run gallery showcases artwork of interest to the university community; the BI entomology collection was featured in January 2016 (http://www.kansasuniongallery.org). Second is the Haricombe Gallery in Watson Library. This gallery mainly hosts exhibits that highlight library collections, but works with other cultural institutions to showcase their resources (History of the Haricombe n.d.). Third is The Commons. This multi-purpose space is the result of a partnership between the BI, the Hall Center for Humanities, and the Spencer Museum of Art. It aims to provide common space and common ground for interdisciplinary activities, including exhibitions (http://www.thecommons.ku.edu). Last are the hallway exhibit cases on the 6th floor of Fraser Hall. T his floor is home to the Anthropology Department. Though small, these cases are another opportunity to increase awareness of the Division's collections, especially among students.

3. Collaboration

There has been an increase in the number of museum collaborations in recent years (Hadani & Walker 2015:171). Collaborations enhance the visibility and accessibility of

collections (Soubiran 2010:28). At the same time, mutual professional development can be

derived (Hadani & Walker 2015:172). Collaborations could take many forms, including joint

research projects (Lourenço 2002b:14) and student internships. Museums and library projects are

a promising opportunity (Soubiran 2010:28). These collaborations are viewed favorably by

funding agencies. Digitization is a popular collaborative project (Gibson, Morris, & Cleeve

2007:61).

Internships could help expand the division's capacity to provide improved access by

easing the strains of limited staff and funding resources. Currently, the Division of Archaeology

and its collections and resources are not well integrated with the Museums Studies Department at

KU, which is a missed opportunity for both departments. While there have been some

collaborative efforts, there is certainly room for improvements. The Museum Studies Department

is ripe with potential collaboration opportunities. Students are required to complete a number of

internship and museum experience hours (http://museumstudies.ku.edu/). Through increased

collaboration, interns would have the opportunity to gain professional museum experience while

working on the division webpage, creating a collection finding aid, digitizing collections,

developing exhibitions, and assisting/ monitoring researchers, for example. The Museum Studies

Department also offers a course on collection management (http://museumstudies.ku.edu/).

There is potential for Division of Archaeology staff to co-teach this course.

4. Grants

Grants provide funding support for both museum projects and operational costs

(Ambrose & Paine 2006:266). Museums are given the opportunity to undertake work that may

not have been possible otherwise because of grant funding. A number of agencies provide grants

that support efforts to improve access to collections. Examples of such agencies include:

- Institute of Museum and Library Services

- National Endowment for the Humanities

- National Archives and Records Administration

- Kansas Museums Association

For the Division of Archaeology, grants could mitigate the effects of insufficient funding and staffing that impede access. These granting agencies offer financial support for the costs of digitization, collection supplies, storage equipment, and staff; all important elements in improving access.

Threats/Barriers to Access

1. Collection preservation

While it is true that museums are ethically responsible for the provision of access to resources for the public, as previously mentioned, it is also true that museums are responsible for the care and preservation of collection materials (ICOM 2010; Merritt 2008). At times, these responsibilities can be at odds. Improved access can result in the accelerated deterioration of artifacts from increased use. Moreover, improved access exposes artifacts to more chances of theft (Richoux, Serota-Braden, Demyttenaere 1981:179).

In most cases, preservation of the collection is the first priority of the museum, followed by access. Access to particular fragile artifacts may be restricted, as such. (Roth-Katz 2012:124). But, De Clerq has suggested that university museums and collections, particularly those with archaeological materials, hold research (access) in higher regard than preservation (as cited in Lourenço 2002a:55). Archaeological research can involve destructive analysis, which complicates the need for preservation (Lourenço 2002a:55). In any case, strategies for access

must be balanced with the need to care for collections; access cannot be unlimited (Buck &

Gilmore 2010:28).

2. Federal collections

The possession of federally owned and administered collections potentially presents a

barrier to access for the Division of Archaeology. The Curation of Federally Owned and

Administered Archaeological Collections (36 CFR 79) establishes permissible restrictions to

access, such as information pertaining to objects or collections that puts the objects or collections

at risk of theft or destruction (Childs & Corcoran 2000). Information relating to the location or

character of archaeological resources, namely archaeological sites, can also be restricted in

accordance with the Archaeological Resources Protection Act and the National Historic

Preservation Act. Likewise, this federal regulation provides Federal Agency Officials and

Repository Officials the authority to deny collection use requests (1991). The Native American

Graves Protection and Repatriation Act of 1990 is another federal regulation that potentially

restricts access to collections held by the Division of Archaeology. Access can be restricted to

those collections excavated from Native American lands at the discretion of the tribe (1995).

While these regulations have the capacity to restrict access, restrictions are only infrequently

called for.

4. Upgrades to storage space

If the Division of Archaeology is successful in its application for the IMLS grant, there

will be a potential threat to access to the modern comparative Zooarchaeology and

Paleoethnobotanical collections for an estimated 3-6 months. The new storage equipment

provided by the grant will require the relocation of collection materials until the equipment is

installed and ready to be used. During this time, it will be physically difficult to access a portion

of the collections (S. Olsen, personal communication, March 3, 2016). While improved access provided by the new storage equipment outweighs the brief inaccessibility of the collection, the Division of Archaeology must nevertheless be mindful of this threat.

Strategies

After arranging information in the SWOT grid, internal and external factors are paired in order to define strategies, in this case for improved access. For example, weakness factors are paired with opportunity factors. The resulting W/O strategies are those that minimize weaknesses by taking advantage of opportunities (Renault 2015).

As Keene explained, the needs of researchers are access to information, collection materials, and facilities (2005:52). I suggest that these needs can be organized by importance to the researcher. Most important is access to information about the existence and location of a collection. The second most important is physical and intellectual access to the collection. The third most important is space and equipment to conduct research. The main point is that if the researcher does not know the collection exists, the fact that the collection and facilities are accessible is irrelevant. This appears to be the division's greatest weakness.

Based on my interpretation of the SWOT analysis, it would be beneficial for the Division of Archaeology to focus on strategies that satisfy the two most important needs of the researcher: information and collection access. The following W/O strategies are the most feasible strategies for the division and will have the greatest impact.

W/O Strategies

The Division of Archaeology can take advantage of the growing importance of the Internet (Roth-Katz 2012) to maximize awareness of the division and its resources. An improved website is one strategy for doing so. Making it easier to locate information about the hours of

operation and the address of the division on the website is one non-resource intensive way to increase awareness. The University of Colorado Boulder Museum of Natural History website is a good example to consider. Information about the hours of operation is easily identifiable on the homepage, as is the address for the museum. This museum also has two collections highlighted on its site. Likewise, though it is not accessible yet, an online version of the collection database will be available for researchers in the next year, according to Christina Cain, the Anthropology Collections Manager (personal communication, February 5, 2016).

Providing collection highlights, like the University of Colorado Boulder Museum of Natural History, online is another way to improve the division's website for better awareness. Perhaps a better example of an online collection highlight comes from George Washington's Mount Vernon. The historic site has been the location of archaeological research since the 1930s. In that time, more than a million artifacts have been recovered. The professional archaeology program established at Mount Vernon is currently working on a multi-year project, called the Archaeological Collections Online, to create an online museum for its most significant collections. The artifact assemblage from Mount Vernon's South Grove Midden is already available in a searchable database (Mount Vernon Ladies' Association 2016).

Online databases not only increase access to the collection by providing a digital form of collection materials, but also increase awareness for what Mount Vernon, in this case, has to offer (Soubiran 2010:24). By increasing awareness of its resources, the Mount Vernon Archaeological Collection Online satisfies the researcher's need for information about the existence of artifacts (Keene 2005:52). The benefit of this endeavor is increased research activity, which will be discussed in depth later. In order to gain increased research activity,

researchers must have access to the collection. In order to have access, researchers must be aware of the resources available.

Creating an online database like that of the South Grove Midden for the Division of Archaeology's entire collection would be an expensive and time-consuming task (Bertacchini & Morando 2011:10). While this would have a high impact on accessibility and awareness, it is not necessarily the most feasible solution given the division's resources. Moreover, a digital database entry complete with picture and artifact description for the whole collection inventory doesn't make sense for the division's collections. Systematically recovered collections include a significant amount of bulk materials, which are not conducive to digitization (Kletter 2015:55). The Mount Vernon Archaeological Collection Online may provide some ideas to circumvent this challenge. First, the database focuses on object level data because the completeness of them facilitates "meaningful analysis beyond what sherd counts and broken bits of a whole buckle can tell us" (Mount Vernon Ladies' Association 2012). Secondly, the database reflects a representative sample for some artifact types.

Though the South Grove Midden collection highlight and database revolve around a single archaeological site, which is small in scope compared to the multitude of sites represented in the Division of Archaeology collections, it is still an interesting example to consider. Providing a searchable database of object level data on the division's website for a select number of significant sites or collections may be one feasible way to increase awareness of the division's resources.

The Division of Archaeology should also minimize the suboptimal collection usability. Taking advantage of both collaboration and grant opportunities to further develop collection finding aids and make them available online is one method. The further development of the

collection finding aids and their inclusion on the website would increase the usability of the

collection. The easier a collection is to use, the more accessible it is. This satisfies a researchers

need to access collection material (Keene 2005). Though the term "finding aid" is typically only

used in the context of archives (Society of American Archivists), a document that listed basic

information about an artifact collection (scope and content of a collection, date collected,

original collector, associated records, etc.) would be a great resource for researchers. This way, a

researcher would not necessarily have to have access to the collection database, which is as yet

only accessible to internal staff, to use its resources. The National Museum of the American

Indian "Object Collections" webpage is an excellent example of this type of finding aid, though

it is not explicitly referred to as such.

It is worth noting that, independent of this paper, the Division of Archaeology has just

begun pursuing some similar strategies to improve access that mirror my recommendations.

Improvements are already being made to the website. Improvements will include the addition of

six collection highlights divided by region. The North American highlight, for example, will

feature a map of North America with a number of pins representing significant collections types,

such as Kansas City Hopewell. Each pin will display pictures and basic data for those collections

(M. Adair, personal communication, April 1, 2016). Additionally, more improvements to access

will be on the horizon if the division receives the IMLS grant. The Zooarchaeology lab will

upgrade workspace for researchers as well as improve the storage for collections. In preparation

for the grant, the division has also implemented strategies for improving access. The lab floor

plan was reorganized to increase usable space and the comparative collections were inventoried

and arranged taxonomically (KU 2015:3-4).

Additional Strategies

In addition to the previously mentioned strategies, a number of other potential strategies were identified based on the SWOT analysis. These were not as supportive of researcher needs as those previously discussed. The strategies mainly focus on improving the visibility of the division. For this reason, they were not further explored. That being said, they are worth briefly mentioning. With additional research, the Division of Archaeology may find these strategies a viable means to improve access for researchers nonetheless.

- Seminars and lectures may serve to increase the awareness for the division

- Behind-the-scenes tours may be a way to increase awareness of the division's resources

- An open-house may increase awareness of the division as well as provide the opportunity for future collaborations, especially with museum studies students

- Creating an email account, listed online, that exists only to handle requests for collection use may facilitate increased access

- Collaborating with other KU departments for the use of lab and analytical equipment may provide improved access to facilities for research

Benefits of Improved Access

Improved access to the Division of Archaeology is of major interest for numerous reasons, mainly derived from the value of collection-based research. First, research is an essential museum function (Ambrose & Paine 2006:131; ICOM 2010, Lourenço 2002b:2). Research is perhaps even more fundamental in university museums and collections, such as the Division of Archaeology, than in other independent museums (Soubiran 2010:21). University museums and collections have been developed for research purposes since the late 17th century

(De Clerq & Lourenço 2004:2). Archaeological materials, specifically, are often only collected with research in mind; exhibition value is secondary (Keene 2005:54). This, in conjunction with the fact that the archaeological discipline "intrinsically [requires] objects" and museums for study, suggests the importance of museum research (Lourenço 2002b:7).

It has even been suggested that without research, university collections are at risk (Soubiran 2010:23). When not actively used, necessary funding for the management of collections can become nearly impossible (Meadow 2010:8). Worse, collections are often lost or damaged when not in use or properly managed (De Clerq & Lourenço 2004:2). The more accessible a collection is, the better preserved its artifacts are. Preservation is yet another basic museum function (Castell 2009: 1; Soubiran 2010:28). Research is also a core component of the Division of Archaeology's mission (KU 2008: 3). Additionally, the division's vision is, "to be a nationally recognized center for archaeological research emphasizing interdisciplinary excellence and a regionally acclaimed curation facility promoting best care standards" (KU 2008: 3). Improving access for research aids in upholding the division's mission as well as satisfying basic museum functions.

Second, the Division of Archaeology can, and should, provide added value to KU. University museums and collections rely on university funding. It is important that they mirror the brand and goals of the university for this reason (Hammond, Van Dyke, & Simpson 2012: 9). When they do align with the university, they are seen as an added value (Hammond, Van Dyke, & Simpson 2012: 9-10). As the Association of American Universities research university for the state of Kansas, KU strives to obtain, "the highest achievements in research internationally" (University of Kansas n.d.). Research activities at the Division of Archaeology not only support this mission but also can help improve university rankings and obtain those achievements

(Hammond, Van Dyke, & Simpson 2012: 9). Administration can also benefit from the marketing and public relation opportunities provided by research and publication (Hammond, Van Dyke, & Simpson 2012: 10). Increased visibility of the Division of Archaeology resulting from research publication may even lead to increased funding for the division and the university (Richoux, Serota-Braden, & Demyttenaere 1981:179). Improving access facilitates this.

Moreover, by adding value to the university, the Division of Archaeology is able to justify its existence and continued support. Simpson and Hammond suggest that, in order to ensure the survivability of university collections, such as those in the Division of Archaeology, institutions must, "extract the maximum amount of value from them" to support the university (Simpson & Hammond 2012: 76). If the Division of Archaeology is not perceived to fit into and support the mission of KU, it may be seen as extraneous and a source ripe for further budget cuts. Likewise, failure to define and defend the value of the collection will ultimately result in a loss of funding from university administration (Hammond, Van Dyke, & Simpson 2012:8). This was the case for the Museum Applied Science Center for Archaeology at the University of Pennsylvania Museum of Archaeology and Anthropology in 2009 (Jaschik 2009). The Division of Archaeology should be especially aware of this, as this was a contributing factor in the closing of the public portion of the University of Kansas Museum of Anthropology and the reduction of its staff in 2002.

Finally, improved access and ongoing use bolsters the value of the Division of Archaeology itself. Because they are so closely linked, supporting the university provides substantial value to the division in turn (Lourenço 2002a: 52). But the division does not have to rely on the university to derive value. Increased collection-based research enhances the value of the collection (Keene 2005: 61). Data collected on collection access can then be used to quantify

the Division of Archaeology's impact, thus demonstrating the excellence of the whole institution (Bertacchini & Morando 2011: 12). Moreover, access bolsters the educational value of collections (Sierra, Fernádez-Valmayor, Guinea, & Hernanz 2006: 56). As previously suggested, increasing the occurrence of inter-departmental collaborations is a means to improve access. These collaborations, in turn, may provide the division the ability to keep up with research trends. This then helps the museum to maintain its relevancy (De Clerq & Lourenço 2004:2).

Conclusion

The archaeological collections maintained by the BI Division of Archaeology represent a significant resource for not only student and faculty researchers at the University of Kansas, but for researchers from the archaeological community in general. Providing access to those collections is an important responsibility of the Division of Archaeology. Moreover, improvements to access support the division's efforts to remain a leader in archaeological research. In order to do so, the division must develop strategies for improving access that address the needs of researchers. A SWOT analysis is one helpful tool for developing these strategies.

Based on the analysis, I suggest that the Division of Archaeology first focus on satisfying two basic needs of all researchers: access to information and collections. The satisfaction of these needs should result in greater accessibility. The most feasible strategies with the most impact are those that take advantage of external opportunities to minimize internal weaknesses. Improving the division's website by clearly displaying the hours of operation and the address of the division and by providing a searchable database for highlighted collections are strategies that provide access to information. Further developing collection finding aids and providing them online is one strategy for improving the usability, and thus access, of the collections.

Collaborative internships with the Museum Studies Department are an invaluable opportunity for implementing these strategies.

The recommendations for improving access to collections may result in numerous benefits for the Division of Archaeology. These benefits are increasingly important as funding becomes ever more precarious. Not only do the strategies for improved access identified in this paper benefit the Division of Archaeology, but the strategies and the use of the SWOT analysis may benefit other institutions undertaking similar efforts.

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