Native American Material Heritage and the Digital Age: "Virtual Repatriation" and its Implications for Community Knowledge Sharing

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Abstract

With the advent of digital technology and increased collaboration between indigenous communities and museums, many institutions are working collaboratively with tribes to develop digital databases of their cultural heritage objects. Theoretically, these databases can then be accessed by tribal members so that they may view the objects and then share their own knowledge about them in the virtual space. In examining one such database, the Great Lakes Research Alliance for the Study of Aboriginal Arts and Culture (GRASAC), it is evident that community members are not sharing their cultural knowledge as the site was intended to encourage. Exploring past research on object surrogacy, some scholars have suggested that when an object is replicated digitally it loses the aura that the physical original possesses, thus degrading the connection the viewer feels to it (Benjamin 1936). To understand how community members share information through interaction with the *physical object*, I examine two case studies in which tribal elders and artists visited museums housing their cultural heritage objects and explored the collections. Within the physical museum space, stories and cultural knowledge *were* shared by these community members. Comparing details from the case studies to the analysis of GRASAC, it is clear that physical interaction with the object is essential to promote the sharing of cultural knowledge by members of indigenous source communities. Thus, I argue that digital databases should be viewed as a foundation for the forging of collaborative relationships between tribes and museums through which the community members' physical access to collections is encouraged.

Introduction

In museums around the world today, there is a growing movement to digitize various collections in order to facilitate easier access to the artifacts for outside parties, modernize documentation techniques through digital photography or 3D modeling, and ensure that a digital replica will always be available for study even if the original object is not (Schweibenz 1998). Additionally, digitization of collections also has the potential to forge collaborative relationships between source communities (communities from whom objects were first collected) and the institutions housing their dispersed cultural items (Christal et al. 2002). Though it is a relatively new frontier, several "virtual vaults" have been created with the primary purpose of reuniting individuals and communities with objects relating to their cultural heritage (Christal et al. 2002). Once the object can be accessed within the digital medium, members of its source community can then share information about the artifact's history or cultural significance via the World Wide Web. Due primarily to its widespread use and accessibility, the virtual space has become the preferred arena for sharing knowledge of material culture. However, when so much attention is paid to the potential of the object in a digital form, it is sometimes implied that the physical object is no longer as important as it was in the pre-digital age. While virtual sites do facilitate access and communication by making certain types of information about objects accessible to community members, exactly how is knowledge shared within the digital space, and how does this type of contact differ from the encounters that occur when individuals interact with the object in its *physical* form?

To answer this question, the majority of my analysis focuses on the Great Lakes Research Alliance for the Study of Aboriginal Arts and Cultures (GRASAC) digital

database. GRASAC and many other virtual vaults have focused on cultural items relating to indigenous history, mainly because they constitute such a large portion of museum collections. Thus, my research regarding the ways in which knowledge in shared between and among museum professionals and source communities in the digital space will center primarily on *indigenous* source communities. In addition to my analysis of knowledge sharing on GRASAC, I will also examine two case studies in which Native American community members had the opportunity to visit European museums housing some of their cultural heritage items and personally interact with the objects. I will draw upon accounts of these events to better understand the ways in which original objects elicit the sharing of cultural knowledge, and then contrast these observations to my analysis of information-sharing on the GRASAC site. Finally, to further explore the process of digitization, I input a portion of the Museum of Anthropology's Great Lakes basket collection into the GRASAC database. Using this experience, I identify the information that I as the documenter included and discarded when digitizing an object so as to better understand the process of "digital repatriation."

By comparing the ways in which objects are utilized and cultural knowledge is shared between community members in both the virtual and physical realm, I identify ways to improve collaborative projects built upon digital repatriation initiatives. I show that the need for the physical object has not become obsolete simply because we can now create a digital surrogate. Instead, it is possible for the physical and virtual object to compliment one another, thus introducing even greater potential for collaboration.

Museums and the Digital Frontier

With the advent of publicly accessible internet over two decades ago, museum institutions around the world began a transformation in community outreach, scholarship, and collections management that continues into the present day. Due primarily to its short existence in comparison to the physical museum institution, the "virtual museum" still lacks a concrete definition. However Werner Schweibenz (1998) has identified three generally accepted classifications for the phenomenon: the "brochure museum", which is usually a simple website offering a brief overview of the institution and its highlighted collections; the "learning museum", which offers interactive and experience-oriented activities or lessons as a compliment to visiting the physical space; and the "content museum", a sort of digital database which presents the museum's collections to be explored on-line. Though each category has helped to transform the museum experience for professionals and visitors alike, it is the "content museum" that has had the greatest implications for the study, preservation, and sharing of cultural artifacts housed within museums today. As a result, institutions have increased their use of digital databases, which are defined simply as virtual collections of artifacts which can be accessed through the internet.

According to museum philosopher Paul Conway (2000), various institutions have begun making virtual surrogates of their collections for three reasons: to represent the originals, to protect the originals, and to transcend the originals. By making digital copies available on-line, researchers as well as interested members of the public would theoretically be able to see the objects through local computers and avoid the encumbrance of traveling to the museum, satisfied instead with the digital representation

of the objects. As the need to handle the artifacts in person decreases, there is less danger of damage or deterioration to the originals, so preservation issues become more manageable. And finally, new technology such as zoom-in cameras and special lighting allows those digitizing artifacts to bring out certain details that may otherwise go unnoticed to the naked eye, thus transcending the research and education potential of the original object.

Because numerous U.S. and Canadian institutions contain such a high quantity of Native American cultural artifacts, many of the first on-line databases focused on collections of indigenous heritage items. For instance, in the early 2000's the Phoebe A. Hearst Museum of Anthropology (University of California, Berkeley) began digitizing their collection of Native American baskets to include in an on-line database. Home to roughly 3.8 million objects in total, the museum's 9,000 piece basket collection contained baskets from every tribe in the state of California (Bajczy, Islar, and Wilson 2006). Like most museums attempting to create digital databases, their choice to digitize the baskets was fueled largely by a desire to increase access to the items. Exhibit space within the museum was extremely limited and thus not large enough to display even a small portion of the 9,000-piece collection. The baskets were instead stored in an off-site storage facility to which access was strictly controlled. Because they were extremely fragile and deteriorating, anyone wishing to view the baskets had to make an appointment with the curator and then be supervised during the visit. The situation was not ideal for scientists whose funding was limited and therefore could not afford the time or monetary cost of traveling to the site (Bajczy, Islar, and Wilson 2006).

Access was also a great concern in regards to members of the baskets' source communities[1]. Again like most museums of its kind, the Hearst Museum had recently begun working more collaboratively with indigenous tribes to further their understanding of the context and history of the items in their collections. In the case of this specific basket collection, they knew that there were many Native Californians still practicing traditional basket-making techniques who could contribute greatly to the understanding of the collection, but many lacked the time or money to travel to the museum. By digitizing the basket collection and making it available on-line, the Hearst Museum opened access not just to researchers, but also to members of these indigenous source communities (Bajczy, Islar, and Wilson 2006).

The factor of access to heritage items has been a chief concern for many of the world's museums turning to digital technology. Even on the continent of Africa, where in 1999 only 1 million people had access to a computer, museums still see the internet as a viable option in addressing issues of distance and monetary constraints for those interested in seeing heritage collections. The National Museum of Kenya, for example, has begun putting portions of its collections into a digital database, and the National Museum of Mali now features a virtual tour of the museum on its website (Abungu 2002). Though the staff has acknowledged that many Africans will still be unable to view the collections, they praised the fact that it has facilitated greater access for even a small number of people who would otherwise have been unable to travel to the site. They also expressed hope that as internet access increases across the continent, the museums will be ready to meet the digital demands of their public (Abungu 2002).

[1] "Source community" is defined as the group from whom the object in question was originally collected.

For many institutions exploring digital technology, however, issues of access have been secondary to concerns of documentation. At the time when the Hearst Museum was first beginning its digitization project, archaeologists at Arizona State University (ASU) were concluding their initial work on a 3-dimensional library for pottery. The project, developed under a National Science Foundation Knowledge and Distributed Intelligence grant, worked to create 3-dimensional models of ceramic vessels from a collection excavated during the renovation of the Roosevelt Dam in Arizona (Rowe 2000). Unlike the Hearst Museum, the digitization project at the ASU was conducted through the university's Archaeological Research Institute and was not associated with any museum. As such, their principal interest lay in improving the process of artifact documentation by supplementing records with a 3D image as well as developing "strategies for acquiring, modeling, and cataloguing information about the artifacts" (Rowe 2000). Their work highlights an important aspect of the digital database: its potential to improve the ways in which objects are documented within the collecting intstitution.

The goals of the ASU team raise another intriguing aspect of the digital databases' potential purpose; while the Hearst Museum and many others were interested in using digital databases to increase collection access for Native American community members, the ASU began digitizing their pottery collection partly to "document and obtain representations of the vessels before they were repatriated and lost to further study" (Rowe 2000). This objective illustrates the often overlooked point that museums sometimes digitize collections out of fear that they may not own them much longer. However this fear is not limited to concerns of repatriation. Though generally kept in controlled environments, the potential always exists for the loss or destruction of material

collections. Unforeseen events like fire or other natural disasters can easily lay waste to even well-protected items. And of course museum professionals and the public alike watched in horror as thousands of priceless artifacts were looted from the National Museum of Iraq in 2003, many of which have never been recovered (Renfrew 2005). By creating a virtual surrogate of the item, scientists may, at least to some extent, prepare for such tragedies. Digital technology allows them to continue studying or virtually exhibiting the artifact even if they someday lose the original.

Though they are only a small sample of the hundreds of digitization ventures currently taking place at museums, these projects highlight the primary factors motivating the creation of digital collections: a lack of physical exhibit space, concerns about preservation and documentation, the desire to increase collection access, and the fear of losing the artifacts for future study. As seen in the example of the Hearst Museum, while museum institutions today are beginning to delve more deeply into virtual technology, many are also expanding their relationships with indigenous source communities on issues of both repatriation and representation. As these relationships develop in parallel with the progression of digital technology, more museums and tribes are recognizing the potential of the internet in facilitating a sort of "digital repatriation."

Digital Repatriation

The concept of "digital repatriation" stems chiefly from the aforementioned concerns of community access motivating the creation of many virtual vaults. Museums who want to work collaboratively with tribes to further information on artifacts and to facilitate greater collection access have begun using the internet to achieve these ends.

While these efforts have earned the title of "digital repatriation" by most groups involved in them, the term is problematic. Repatriation by definition suggests that something is being returned. It is therefore implied that, in the case of "digital repatriation", ownership of an object is changing hands when in fact nothing is actually being returned. While it may be incorrect to label the phenomenon as repatriation, it is true that a sort of transfer is taking place in the virtual space that would not have otherwise been possible. Rather than framing the event within the context of the repatriation of objects, it is perhaps more accurate to think of it as a repatriation of knowledge. Because digital surrogates and their accompanying contextual information are available to access on the web, knowledge that may otherwise be difficult to retrieve is available to source communities with relative ease.

This transfer or repatriation of knowledge in the virtual space is not, however, one-sided. Many of the aforementioned collaborative relationships between museums and tribes have involved a certain degree of relinquishment of curatorial authority on the part of the museums. Within the past few decades, there has been a growing recognition of the importance of including indigenous perspectives in the telling of Native American history or culture. Hence, many museum exhibits have been created with the collaboration of community members, thus creating a situation in which the subjects of exhibits are doing much of the educating. As museum scholar Peter Walsh has said, "museums have traditionally ignored an important aspect of communication: that communication is not a monologue, but a dialogue. In order for communication to exist, information must pass from both sides, like a conversation, so that each side can check and question the message" (1997:234). As collaborative encounters increase and knowledge becomes an

asset that is not just distributed but shaped through dialogue, the web becomes the ideal venue for such work.

In most digital knowledge-sharing projects, when an object is digitized through photographing or 3-dimensional modeling and then incorporated into an on-line virtual archive, it is usually possible for tribal members to not only view their cultural heritage item but also contribute to the way in which it is interpreted by posting comments on the site. In so doing, the "visitor-learner can become the educator or the storyteller, the missing link in identifying use or provenance, and a valued member of a museum community" (Holland and Smith 1999). Digital collaboration, then, is more than just facilitating community access to museum collections: it is the recognition of a shared authority over those objects and a collaborative effort to build information through the transfer of knowledge.

One of the first organizations to tap into the potential of digital collaboration was the Four Directions Project, a collaboration between 19 Bureau of Indian Affairs Schools and 11 private universities and institutions across the United States dedicated to using technology as a means of encouraging communication and learning (Christal et al. 2002). Partnerships between the schools and institutions within the group resulted in the creation of nine virtual museums which the students could access to supplement their lessons. What has become known as the Four Directions model summarizes many of the key elements present in all digital repatriation cases: culturally responsive teaching and knowledge sharing using community values to guide organization of the project, a concentration on cultural revitalization, and collaboration (Christal et al. 2002).

Through digital repatriation projects, it is possible to historically and culturally contextualize artifacts that would likely otherwise be kept in isolated storage. For instance, in a digital environment, indigenous community members as well as scholars can contribute their perspectives or stories of the objects, and video and audio recordings highlighting the use of certain artifacts may be included in the archive alongside the item. For cultures that value oral tradition, the internet is an ideal arena for such forms of knowledge sharing because stories can be told-first hand to a much wider audience than is possible in the physical realm (Holland and Smith 1999). While many community members would perhaps prefer ownership or increased access to the *physical* object, *digital* collaboration projects allow for more than just access or ownership. Instead, community members become collaborators, helping to shape the way in which the object is both represented and understood in a cultural context.

Digital Repatriation Projects and Indigenous Source Communities

The majority of collaborative digital repatriation projects have begun only within the past decade. Though new, it is possible to distinguish three distinct categories of virtual spaces of Native American material heritage: the indigenous heritage public website which facilitates cultural education but not reciprocity of knowledge sharing; the community-centered digital database created by, and only accessible to, one native group; and the networked digital database which links communities and scholars across the globe and encourages their collaboration. To fully understand the ways in which knowledge of material culture is shared on these sites, it is necessary to look at examples of each type in greater detail.

Indigenous Heritage Public Websites

Many federally recognized Native American tribes or Canadian First Nations have a website which serves as their group's public face. Such sites generally detail information such as reservation location, history, politics, or press releases. More recently, some tribes have also begun using the web to showcase their community's material heritage. With the advent of increased digital technology in conjunction with further collaboration between museums and tribes, many digital repatriation projects are now taking on this form.

One of the first of such websites is "Gibugadinamaagoom", meaning "To Sanction, To Give Authority, To Bring to Life" in the Ojibwe language (Gibugadinamaagoom 2006). Started by University of Pennsylvania professor Timothy Powell in collaboration with local Ojibwe tribal members, the website features documents, photographs, artifacts, and also video recordings of elders interacting with various cultural objects and discussing their traditional use (Powell 2007). The website is unique because it is built upon the epistemological principles of the Ojibwe religion and educates the public about Ojibwe culture from the perspective of the Ojibwe themselves (Fletcher 2009). Tribal members describe the site as a "living museum"; rather than displaying items without community context, cultural ideals are shared with the public through the combination of digitized art and storytelling.

In his article *A Drum Speaks: a Partnership to Create a Digital Archive Based on Traditional Ojibwe Systems of Knowledge*, Powell (2007) tells a story of an event that occurred at the debut celebration of the Gibugadinamaagoom website. Ojibwe elder Larry Aitken picked up a drum that had been digitized and explained that all objects have a

spirit which are awoken when they are used. He then told the crowd what role the drum played in the Anishinaabe creation story, explaining that the artifacts themselves are not important but rather what is important is their part within the history of creation and their greater cultural context. He praised Gibugadinamaagoom for allowing community members to share those stories with the world through the digitized artifacts (Powell 2007). The website features an "Ask the Elders" section in which visitors can see a video of Aitken with a similar explanation of the use of the drum, as well as other videos of tribal members interacting with heritage objects and explaining their application (Fletcher 2008).

The site is dedicated to the celebration, preservation, and teaching of Ojibwa spirituality (Fletcher 2009). While the University of Pennsylvania Museum provided the Ojibwa objects in their collection for digitization and inclusion in the site, Ojibwe tribal members like Aitken contributed the interpretation of the pieces. Through the site's virtual museum, members of the public interested in learning more about Ojibwa material heritage can visit the website and read about the artifacts' history and their place in Ojibwa worldview from the perspective of tribal members.

Though an excellent example of collaboration and cultural education, the way in which knowledge is shared on Gibugadinamaagoom is relatively static in comparison to projects in which community members can post comments on the site. The Ojibwa perspective is represented in the text and videos on the webpage and tribal members can view the site like everyone else, but Ojibwa individuals who were not involved in the project are not able to contribute their own stories or information. To avoid this potential

drawback, other groups looking to explore the possibility of digital repatriation have instead created databases designed to facilitate the contribution of user knowledge.

Community-Centered Databases

While websites like Gibugadinamaagoom are accessible to all members of the public with access to the internet, other digital repatriation projects are more contained. Most exist as collaborative database projects involving tribes and museums, however access to the databases is restricted based on museum or tribal affiliation. Additionally, the educational component present in publicly oriented museum websites is generally not a key feature of these community-centered databases. They focus primarily on facilitating access to heritage objects for tribal members or collaborating museum professionals only, and are not as concerned with using the site to educate non-tribal members. However, unlike Gibugadinamaagoom, most community-centered databases allow users to contribute their own perspectives to the artifacts through comment sections.

Though my research focuses primarily on indigenous projects within North America, there have been interesting examples of digital collaboration outside of the continent which are worth examining. The Mukurtu Project, for instance, was started by the Warumungu community of Australia in 1995. This project serves as an excellent example of collaborative partnerships between indigenous groups and museum institutions outside of the United States. In Australia, museums have been signing Memoranda of Understanding with tribes since the early 1990's to facilitate greater access to or repatriation of artifacts for indigenous groups. But like tribal members in

the United States, the Aboriginal people of Australia are still limited by issues of distance, poverty, and language barriers (Christen 2008). The Warumungu Community chose to address these issues through the creation of a digital archive of heritage materials.

Mukurtu began strictly as virtual photo archive. The tribe spent two and a half years collecting thousands of historic photographs of tribal scenes and individuals for incorporation into the site. Over time they expanded to include artifacts as well as pictures. Because knowledge is circumscribed within the Warumungu community by gender or family relations, they developed a set of protocols outlining who was and was not allowed to view certain aspects of the database. The Warumungu managed access to the artifacts based on a user identification system in which all users were assigned one of three status levels: community member, traditional owner, or elder. In this way, access to certain objects could be restricted as per Warumungu protocol, based primarily on factors of gender, family relations, and country affiliations (Christen 2008).

Like other databases of its kind, users of the Mukurtu archive are able to post comments on the pages of objects to which they are allowed access, thereby contributing to the knowledge of the artifact. This arrangement allows for "cultural material - and their attendant knowledge and narratives - to circulate through Warumungu cultural protocols without the threat of permanent loss of a physical object" (Christen 2008). The project also features a "My Collections" page for assembling artifacts to which individuals have personal or family connections. It is described as an "especially powerful tool to aid in reconstructing family and

community histories disrupted by national policies of forced assimilation" (Christen 2008). This arrangement, as well as the ability to post comments, facilitates the sharing of family and community stories that help to reshape understandings of history. In this context, the artifacts serve as the nexus through which integral cultural stories are shared with others.

Generally, communities like the Warumungu that have begun to create databases of their material heritage that are only accessible to certain individuals are those for whom privacy is a valued ideal. The Zuni, for instance, have recently begun a similar project that like Mukurtu's features only Zuni objects, with access restricted to Zuni tribal members and collaborating museums and anthropologists (Isaacs 2009). In both cases, the primary focus is on facilitating access to heritage objects for community members, rather than the public or scholarly community at large as is seen with Gibugadinamaagoom. However, the project does allow for the continual contribution of knowledge from all involved members of the community. Intermediate between the two, other collaborating museum and tribal partners have looked instead to networked databases. I turn to these below.

Digital Networking Projects

The third type of digital repatriation projects is that of the networked cultural heritage site, a concept that could be defined as a combination of the first two types. While websites like Gibugadinamaagoom are open to all members of the public and access to Mukurtu and the Zuni database is restricted to only tribal members and collaborating professionals, networked sites encourage the virtual connecting of tribes

and museum institutions far removed from each other. Some privacy controls do exist within these projects in the form of user identification and page restrictions, but for the most part they encourage the open collaboration of those with knowledge of indigenous cultural heritage. Just as popular social networking sites connect friends and distant acquaintances through chatting and picture-sharing capabilities, *heritage* networking sites facilitate the sharing of cultural knowledge through the display of material artifacts.

One such digital database is the Reciprocal Research Network (RRN). The RRN brings together artifacts from the Northwest Coast region currently housed in museums throughout the world. It was co-developed by the Musqueam Indian Band, the Stó:lō Nation/Tribal Council, the U'mista Cultural Society and the University of British Columbia Museum of Anthropology (RRN 2010), thus exemplifying an exceptional collaborative undertaking between source communities and a museum. The RRN was created in the early 2000's and now has a membership of 632 individuals and 14 tribes and museum institutions, not just from Canada and the United States but from all over the world. Collaborating institutions are able to digitize and then upload portions of their Northwest Coast collections for inclusion in the site, which tribal members from the Northwest Coast region as well as other scholars and interested members of the public can then view (RRN 2010). Though a user-identification is required to access the database, anyone interested in acquiring an ID may do so. In addition to simply viewing the objects, those who wish can contribute their own perspectives on the items through comment sections on each artifact's page (RRN 2010). In so doing, the database

theoretically becomes a dynamic space in which knowledge about the artifacts is continually expanding.

The Great Lakes Research Alliance for the Study of Aboriginal Arts and Culture (GRASAC) is another example of such a networking database and is the primary focus of my research. GRASAC was started in 2004, roughly around the same time as the RRN, by Carleton University professor Ruth Phillips and University of Toronto professors Darlene Johnston and Heidi Bohaker. Their goal was to create a virtual database that would reunite Native American communities of the Great Lakes area with their cultural heritage objects scattered in museums all around the world (GRASAC 2008). Like the RRN, the project focuses on making the site interactive by encouraging collaboration between tribes and museums and allowing visitors to post comments and stories about the artifacts. Within the site, members can access the pages of specific artifacts accompanied by information ranging from its creation and acquisition history to its physical characteristics.

The goals of GRASAC could be understood within the context of the "post-colonial museum." On their website, GRASAC creators point to colonial practices like the residential schooling programs which served to disrupt the cultural continuity of many North American indigenous groups (GRASAC 2008). Though their membership is composed primarily of museum, rather than political, institutions, GRASAC attempts to address colonial injustices by reuniting native communities with cultural heritage objects, even if it is just digitally (GRASAC 2008). They express the hope that by doing so, cultures that were affected by colonialism can use the digital artifacts to regain some historical understanding that may have been eroded in the colonial era

(GRASAC 2008). Their objective stems from the recent trend seen in many fields of museum practice: an increased collaboration with source communities, particularly indigenous groups. By working with native tribes on issues of repatriation and collection interpretation, projects like GRASAC have in some ways helped museums and indigenous groups address the legacy of colonialism.

However, the database is not publicly accessible but is limited only to those whose membership has been approved by GRASAC coordinators, primarily museum institutions and tribal members. These limitations exist for three reasons: first, some of the material is considered sacred or sensitive to indigenous communities and thus museum professionals uploading the objects may deem them inappropriate for public viewing (as is seen in Mukurtu); second, some material, like photography, is copyrighted; and third, GRASAC was founded on the ideal of reciprocity in which members do not just view the site passively as observers, but rather contribute back to it through knowledge sharing (GRASAC 2008).

GRASAC's founders hope that by encouraging this collaboration, a few of the wrongs committed by both government and museum institutions, some stretching back 400 years, may be corrected. In the past it was customary to remove heritage objects from source communities without any regard for the perspective of those community members. Today, even though the objects remain in museums, digital repatriation projects like GRASAC are ushering in a new era of collaboration and knowledge sharing in the virtual space.

Whether it exists in the form of a website, contained community database, or networked heritage site, digital repatriation is built above all else on the principles of

collaboration and knowledge sharing. In all of the aforementioned cases of digital repatriation, the object acts as a vessel through which stories are shared with the world and with other community members. In websites like Gibugadinamaagoom we see that though the information is relatively static, it still serves as an example of combining museum collections with indigenous knowledge in the digital space. In both privately-contained and networked databases, knowledge is intended to be shared between museum professionals housing the physical items and their source communities through the contribution of comments. Efforts to facilitate access to heritage collections for indigenous groups and then to encourage the sharing of knowledge over those objects are noble. They address many of the inadequacies historically present in the museum and source community relationship, namely the disregard for aboriginal perspective in the exhibiting of indigenous culture. They also attempt to build on the information available on historic artifacts so that in the future native community members as well as scholars may benefit from this shared knowledge. For my research, I will take a closer look at the success of the GRASAC database in achieving its goals in order to understand the effectiveness of "digital repatriation" in general.

Methodology Overview

To answer my primary question of how heritage knowledge is communicated and shared in the virtual medium as compared to the physical, my research is threefold. As explained previously, I will offer an analysis of the Great Lakes Research Alliance for the Study of Aboriginal Arts and Cultures (GRASAC) site, which I will then contrast to the knowledge-sharing trends I have observed in two case studies of physical interaction with

heritage objects. I will then offer a personal reflection on the process of digitizing the Museum of Anthropology's Great Lakes basket collection, including my struggles, successes, and observations. Additionally, I will draw upon conversations I have recently had with Dr. Sven Haakanson and Dr. Aaron Glass, two scholars with experience in both digital and physical repatriation cases, to offer further insights into the digitizing process. In so doing, I will infer drawbacks and benefits of the digitization process in general, resulting in potential recommendations for improving the concept of "digital repatriation."

Great Lakes Research Alliance for the Study of Aboriginal Arts and Cultures (GRASAC)

Although I discussed the history of GRASAC above, it is worth reiterating the goals of this digital repatriation project for the purposes of my analysis. First, GRASAC was started with the intention of networking museum professionals, archivists, researchers, and aboriginal community members through the virtual sharing of historic objects from tribes around the Great Lakes area. Second, the GRASAC database is meant to facilitate viewing of heritage objects by Native American source communities whose access would otherwise be limited, in the hopes of redressing the "forces that have combined to silence and disrupt Aboriginal perspectives…since the beginning of a sustained European presence in North America" (GRASAC 2008). And third, through the networking of researchers and indigenous groups involved in GRASAC, information available on the objects can be improved for the benefit of all future scholars and community members (GRASAC 2008). Since the site was founded in 2004 and is thus

only six years old, my analysis is intended more as an assessment, rather than a critique, of how fully they are meeting their goals thus far. Their successes and deficiencies can, I think, be applied more broadly to several aforementioned heritage databases. Therefore, looking at the site in detail could provide some indications as to what GRASAC and other projects can do to improve their marketed concept of "digital repatriation."

Before outlining my analysis, I must first explain my motives in choosing GRASAC as the primary target of my research. As discussed previously, I have identified three ways in which Native American material heritage is presented in the virtual space. First, the website which educates the public about cultural worldviews but does not encourage reciprocal knowledge sharing. Second, the privately contained heritage database which facilitates community access to heritage objects and subsequent knowledge sharing but is not generally accessible to the public. Third, the networked heritage database which connects communities and museum scholars across the globe and promotes their sharing of information over items of material culture. As my research question addresses the reciprocal knowledge sharing of museum and native communities, it follows that my research is concentrated on this third type. However, to my knowledge, there are only two digital databases created to provide this type of collaboration: GRASAC and the Reciprocal Research Network (RRN) described above. Though the databases are conceptually similar, the RRN features items from the Northwest Coast area whereas GRASAC contains objects from around the Great Lakes. The University Of Michigan Museum Of Anthropology contains a large assortment of Great Lakes baskets and was interested in becoming part of GRASAC to share information on the collection.

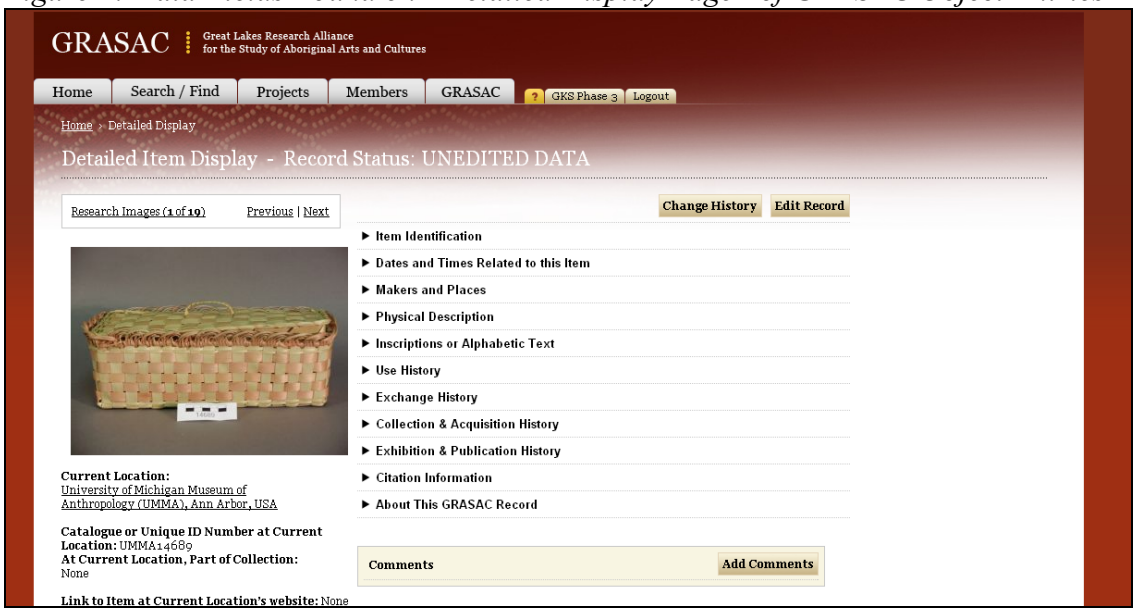
Thus, my involvement and subsequent research followed from the museum's interest and prior contact with the site's coordinators.

My analysis of GRASAC began with a closer examination of its general framework. Because one of the goals of GRASAC is to link Native American communities with researchers and museum institutions and to provide Native Americans access to objects of their cultural heritage, I was particularly interested in examining the institutions that composed GRASAC's membership. I compared the percentage of non-native-community-based institutions, such as (non-tribal) museums and universities, with native-community-based institutions such as tribes or cultural centers registered as members. Furthermore, since the site attempts to address past colonial injustices in North America (GRASAC 2008), I chose to look critically at the composition of membership by geography. On its website, GRASAC points specifically to the residential schooling programs and other political wrongdoings directed towards indigenous groups that worked to disrupt their cultural identity. They suggest that through digital heritage sites like GRASAC, some of these injustices could be corrected. As they are specifically referring to disruptive programs carried out by institutions in the United States and Canada, I would expect the membership of GRASAC to reflect the attempts of institutions *on this continent* to address that history. Thus, while I know that GRASAC has members in Europe, I would expect the large majority of its members to be North American groups, primarily indigenous community members.

Since my research examines the sharing of knowledge about items of Native American material culture, I am also interested in how much information about each object is available in the database. To examine this shared knowledge, I will analyze the

level of completion of object data-fields on the site. Within GRASAC, visitors can pull up "detailed display pages" for each artifact in the database. An object's "detailed display page" contains pictures of the artifact and descriptive information as well as various aspects of context, such as current location, maker, and region of origin. A screen view of an object's display page can be seen Figure 1. This particular object is a basket from the Museum of Anthropology's Great Lakes collection, which I photographed and then uploaded into GRASAC.

Figure 1: Data Fields Found on "Detailed Display Page" of GRASAC Object Entries



In order to understand what knowledge was being provided to GRASAC visitors by the staff members of the repositories housing the artifacts, I chose to examine the extent to which these fields were completed. However, not all of the data-fields present on an object's display page would necessarily be filled in, even assuming the object had complete provenance records. For example, plain utilitarian objects would likely not have any "Motifs or Images" or "Associated Ceremonial Time", and since many objects have

never been on public display, it is logical that the "Exhibition and Publication History" are often left blank as well. Thus, to avoid unnecessary analysis, I limited my examination to only those fields that theoretically should have been filled in if the museum had complete provenance and collection history records of the objects. Additionally, since my research question addresses the sharing of cultural heritage knowledge, my analysis excluded such fields as "Catalogue Number" and instead focused solely on cultural, rather than curatorial fields, to encompass information that is relevant for community members to reconstruct the social history of an object. And finally, fields such as "Current Location" or "Member with Editorial Responsibility", while relevant, are included automatically upon creating a new object entry. Since they are therefore included in all objects' display-pages, they were excluded from my analysis as well. Thus, only a subset of data-fields is relevant for my analysis of completion levels (Figure 2).

Figure 2: Analyzed Data Fields Found on Display Page of GRASAC Object Entries

- **Item Identification**
  - Description/Summary
- **Dates and Times Related to Item**
  - Date Made or Date Range
- **Makers and Places**
  - Maker
  - Region of Origin
  - Nation of Origin
  - Local Origin
- **Use History**
  - Original Function
- **Physical Description**
  - Materials
  - Formats/Techniques
  - Dimensions
- **Collection and Acquisition History**
  - Date of Acquisition by Current Institution
  - Acquisition Source
  - Original Collector
  - Original Collection Date

In addition to looking at the extent to which each data-field was completed for the object entries, I was also interested in examining the number of images on each object's display-page. Accepting the claim that GRASAC is intended to both reunite Native Americans with their heritage objects and provide researchers with extensive information for study, it follows that pictures of the objects are necessary for facilitating this sharing of knowledge. However, as scholars and native artists alike have argued (Haakanson and Steffian 2009), a simple portrait shot of an item is usually insufficient for understanding its detail. Depending on the sort of information an individual hopes to glean from examining digital photos, it is sometimes necessary to have as many as 50 pictures from varying angles and degrees of proximity in order to capture the necessary details (Haakanson and Steffian 2009). Part of my study therefore includes an analysis of the number of pictures accompanying each object-page.

To analyze the completion level of the data-fields and the number of pictures associated with each object, I examined a sample of 64 object pages from the GRASAC site. The selection of the pages in my sample was not random but rather guided by the desire to examine specific artifacts relevant to my research. Because part of my study involves the digitization of the Museum of Anthropology's Great Lakes "basket collection", I chose to focus my analysis on similar objects already present in GRASAC. I put the term "basket collection" in quotation marks because in actuality, while the bulk of the collection is comprised of baskets, there are a large number of boxes and bags as well. Thus, I chose to analyze a sample of basket, box, and bag display-pages on the GRASAC site.

To compile my sample, I began by searching for basket entries in GRASAC. Though the search brought up 60 baskets, the bulk of those pages were ones that I myself had created as part of my work digitizing the Museum of Anthropology's collection. I chose to exclude analysis of my own entries for the obvious reason that I was in control over what I included in the data fields, which would have resulted in skewed data. I was therefore left with 21 basket pages for inclusion in my sample. I then proceeded to search for box pages within GRASAC, yielding 23 results, none of which were my own, so I included all box pages in my sample. The search for bag entries yielded over 150 results. In the interest of keeping the number of bags in my sample fairly consistent with the sample of baskets and boxes, I chose to limit the number of bag pages. I selected the first 20 "hits" that appeared in my search. While it was initially a concern that perhaps these "hits" closest to the list's beginning were the ones most recently entered and thus less likely to be complete, an examination of their creation dates revealed that they were not listed in order of their entry into the database and most had been present for several months if not years.

An additional concern I initially thought might skew my data was the frequency with which certain institutions made these entries. I was concerned that perhaps if the 64 object-pages were only created by two or three institutions then any findings I made regarding the completion of data-fields could be explained as a habit of those institutions, rather than a trend. However my sample contained objects from a mix of over ten institutions, thus ensuring that any trend I observed could not be explained as merely the oversight of a few institutions but rather a pattern stretching across the entries of several members.

Since there are just over 2,000 objects total in GRASAC, my sample of 64 items represents roughly only 3% of the total number of items in the database. However, as previously explained, I myself am digitizing utilitarian items to include in GRASAC, theoretically facilitating access to them for members of their original source community. Thus, I wanted to explore the type of knowledge being shared over the specific sorts of items which unfortunately make up only a small proportion of the total digital collection. I believe the analysis of my sample, though small, will yield results applicable to GRASAC at large because it contains objects from a large variety of institutions who have contributed several other types of objects through a presumably similar approach. Additionally, basketry, bag-making, and beading (as seen on boxes) are crafts still practiced in many native communities today. The items then are ideal vessels for studying the way in which cultural knowledge is shared on the site in general. Thus, while I will remain cognizant of the potential limitations of the small sample for my analysis, the size is sufficient for exploring my primary research question.

GRASAC Findings and Analysis

My primary motivation in analyzing GRASAC was to identify the ways in which the site reaches or fails to reach its stated goals of furthering access to heritage items, addressing issues of colonialism, and facilitating knowledge sharing between tribal members and museums. Because these goals are common to many digital heritage sites, the implications of their completion can thus be applied more broadly. To identify the effectiveness of the site in reaching their outlined objectives, I analyzed the membership breakdown of GRASAC, the degree to which the data fields on the objects' display-pages

were completed, the number of pictures present on the objects' display-pages, and the number of comments posted from community members.

In the following section I will describe in greater detail the patterns I identified in analyzing these fields. In so doing, I identify what I believe to be trends regarding the ways in which information is communicated between tribes and museum professionals in the digital space. After identifying patterns related to knowledge sharing on GRASAC, I will address my broader research question of how the sharing of knowledge differs in a virtual and physical environment by outlining examples of communities interacting with physical museum collections and detailing my own digitizing experience.

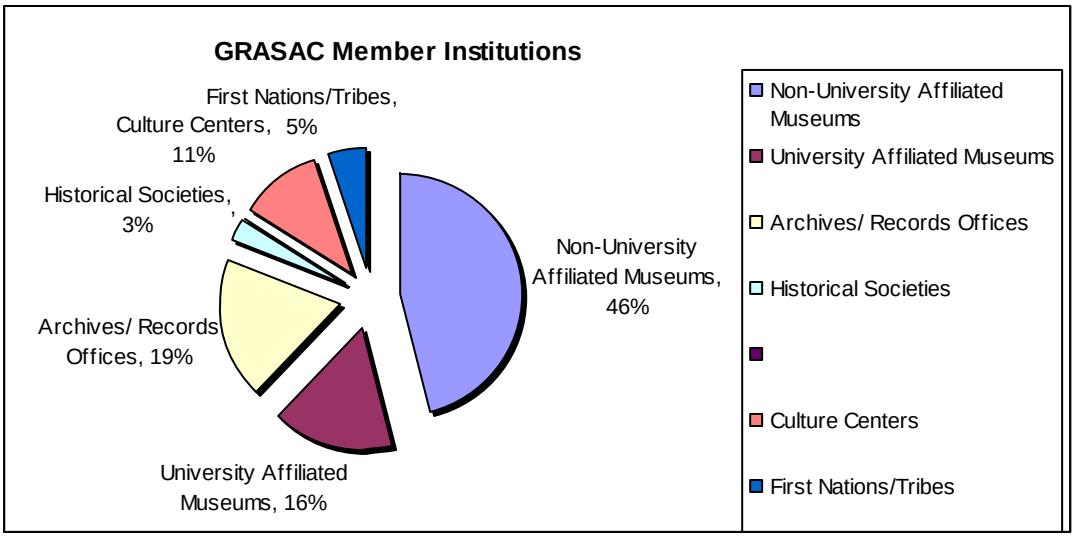
GRASAC Membership

Regarding the composition of GRASAC membership, my analysis identified notable patterns in terms of what I identified as native-community compared to non-native-community-based membership. Of the 37 member institutions, 86% can be described as non-native-community-based, namely museums and archive offices. The remaining 14% can be described as native-community-based, enrolled in GRASAC as either a tribe or a cultural center (Table 3). The majority of institutions (62%) involved with GRASAC are museums, including both those affiliated and unaffiliated with universities (Table 1).

Table 1: GRASAC Membership Table

Member Institution Categories	Geographic Region			Total	Percentage of Total Institutions
	United States	Canada	Europe		
Non-Native					
Non-University Affiliated Museums	1	4	12	17	46%
University Affiliated Museums	4	0	2	6	16%
Archives/ Records Offices	2	4	1	7	19%
Historical Societies	1	0	0	1	3%
Native					
Culture Centers	1	3	0	4	11%
First Nations/Tribes	0	2	0	2	5%
Total Number	9	13	15	37	
Percentage of Total Institutions	24%	35%	41%		

Figure 3: GRASAC Member Institution Percentage Breakdown



The fact that the majority of involved institutions are museums rather than tribally enrolled community members raises interesting questions regarding the mission of GRASAC and the ways in which knowledge is shared on the site. If the number of researchers and museum professionals involved so drastically outnumbers that of tribal members, it suggests that perhaps the knowledge being shared is primarily shared *between museums*, rather than between museums and tribes. It also begs the question of

whether the majority of these objects have even been seen by native community members, a point I will address in more detail below. However, looking at membership trends just in Canada, the discrepancy between native and non-native involvement is much less pronounced. Specifically, there are five Canadian tribes or culture centers involved with GRASAC compared to eight (non-native) universities and records offices. Since GRASAC was started in Canada five years ago, it is perhaps possible that the membership composition from that country is more indicative of what the founders originally hoped to accomplish. It is probable that social and professional connections had a great effect on the initial building of membership, so the Canadian base of the site's founders likely contributed to the larger number of Canadian tribes involved with the project. These numbers show that the possibility exists for tribal involvement to equal that of museums with the right recruiting practices.

Though the point is secondary to my research, the analysis of GRASAC membership has shown that while a major aim of the site is to address colonial injustices carried out by Canadian and American institutions (GRASAC 2008), a large number of GRASAC member-institutions are in Europe (Table 1). Certainly there were several European institutions and political bodies, even those without an extended imperialist presence on the continent, who conducted expeditions in North America with the intent of collecting indigenous artifacts to take home (Haakanson and Steffian 2009). However the GRASAC website explicitly expresses the intent of using the database as a way to rectify past Native American residential schooling programs of assimilation which "contributed to the language loss [and] eroded the oral transmission of traditional histories" (GRASAC 2008). Though Europe was arguably the foundation of colonial

perspective, they were not involved with the development of boarding school policies in the United States and Canada. It is therefore interesting that over 40% of members working to address the consequences of boarding school through GRASAC are European institutions. However the site does go on to say that its primary goal in addressing colonialism is to rectify the "fragmentation [that] resulted from the institutional practices of archives and museums, which have by traditional practice divided and scattered heritage materials among different repositories" (GRASAC 2008). Since European as well as Canadian and American institutions contributed to this "fragmentation of heritage materials", it thus makes sense that they would be involved in the attempt to address the separation.

Additionally, the vast geographic diversity of GRASAC membership emphasizes the importance of virtual heritage sites like this. Digital databases in general and GRASAC in particular espouse the argument that virtual sites are necessary to provide access to collections that would otherwise be limited (GRASAC 2008). Considering that the majority of GRASAC member institutions are in Europe, it seems as though this truly is a valid argument for the perpetuation of digital heritage sites. Native American members of GRASAC are of course located in North America[2]. In so far as they are limited by geographical constraints, it follows that European institutions holding items of Native American material heritage are the most difficult to visit and it is thus the most difficult for source communities to access information about collections related to their heritage. Through GRASAC, heritage items that would otherwise be separated from their source communities by an entire ocean are available at the click of a button.

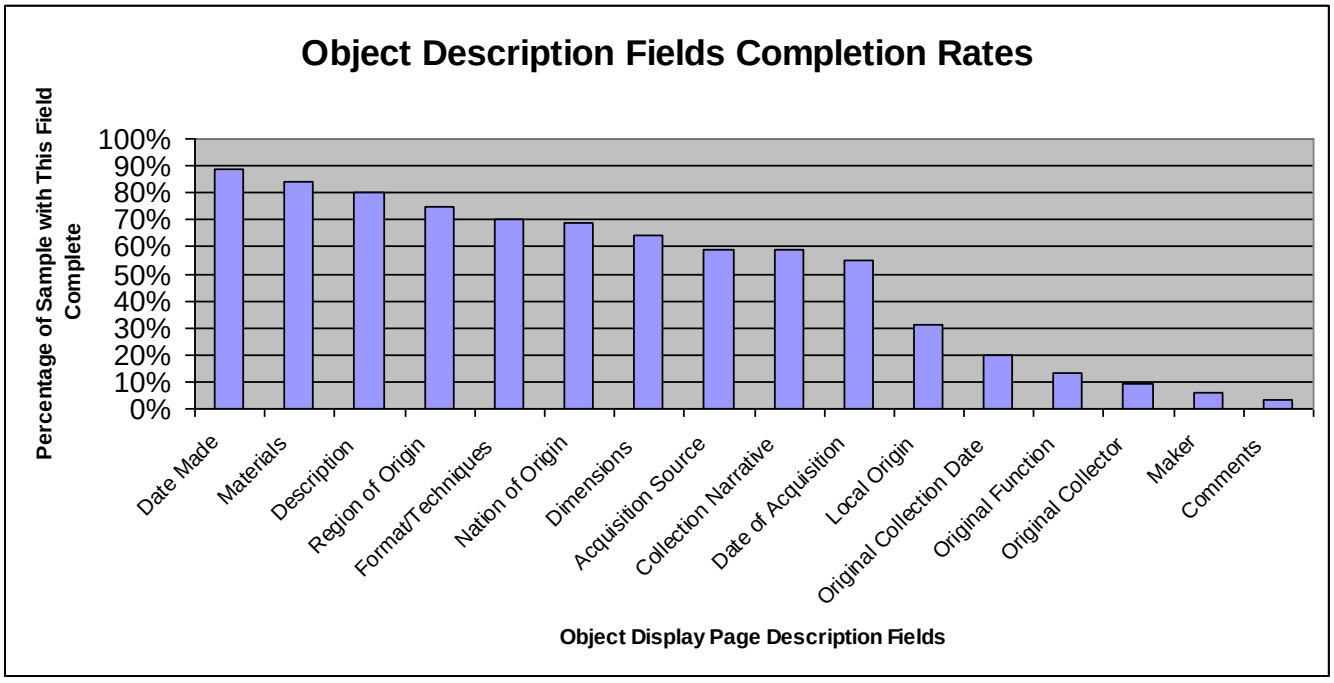
[2] Here I am speaking of tribal institutions or cultural centers, not individuals

GRASAC Information Sharing

In examining the extent to which data-fields were completed on the display-pages of my sample, I consider the information available on each object. Looking at the data, some striking trends emerge. My analysis shows that the relevant data-fields on each object-page of my sample were, on average, only 52% completed (Figure 4). Considering that I identified these information fields as necessary to fully understand the context of the artifact for purposes of cultural recognition, a completion level of half is very low. Furthermore, if the major purpose of the site is to share knowledge about the cultural artifacts, a 52% completion of descriptive data suggests that a great deal of knowledge is in fact not being shared. While I will delve more deeply into the reasons that may underlie this trend during the discussion of my experience with digitization, it is necessary to reflect briefly on why certain information is absent before analysis may continue. Knowing the amount of time that is required to make a new contribution to GRASAC, I would suggest that many individuals creating entries often put in only the information they consider absolutely necessary, and either do not concern themselves with the other fields or perhaps resolve to complete them at a later date. Even more likely, however, is the explanation that the information which appears in GRASAC, as incomplete as it often is, is a reflection of the information available in the museum's catalogue records. As previously mentioned, many museum collections began out of past practices of collecting items through expeditions in which little regard was given for contextual information. Even if the museum itself was not doing the collecting, many current collections were donated by avid non-academic enthusiasts or their descendants who sometimes had a limited interest in keeping detailed records. It very well could be

that while collections created by museum professionals are generally well detailed, those that were collected by non-professionals are lacking important provenance or other contextual information. The records that go into GRASAC, then, sometimes reflect the inadequacies of the *physical* museum records.

Figure 4: Object Description Data-Field Completion Rate



While it is possible to view these blank spaces as a breakdown of the system's conceptual framework, it is also worth considering the fact that these absences may be just as significant as the presence of information in so far as the absences speak to the past collecting practices that GRASAC is attempting to address. That is, the founders point to the practice of collecting without regard for cultural context as an issue they seek to redress (GRASAC 2008). Considering then that the primary purpose of GRASAC is to give a voice back to the aboriginal people whose perspectives were silenced and then

combine that knowledge with museum records, it is perhaps possible to use collaboration with tribes to fill in those blank spaces. Rather than view the blank spaces as inadequacies of the system then, it is perhaps more accurate to view the spaces as opportunities to integrate indigenous knowledge with the museum records, enhancing the information available on the artifacts.

However, the encouragement of collaboration between museums and source communities involved with GRASAC calls for a closer examination of the ways in which artifacts are identified as belonging to certain groups. Of the 64 object-pages in the sample, 75% identified a region of origin, 69% a nation of origin, and 31% a local origin (Figure 4). I highlight these numbers to both praise and question the effectiveness of using GRASAC to "reunite" Native American tribal members with objects of their heritage (GRASAC 2008). The fact that 75% of these 64 objects were accompanied by a description of their region of origin suggests that it is possible to find artifacts from specific areas through GRASAC if the user is so inclined. Sourcing them to a region then, theoretically, encourages tribal members from that region to view the items and contribute their own cultural knowledge to the object's page, perhaps filling in some of the aforementioned blank spaces. This would be an example of the site working as it was intended, and does seem to occur occasionally, as I will subsequently discuss. However, when only 31% of the object-pages list a local origin, it certainly does not seem as though GRASAC facilitates many reunions with specific communities, especially considering that many of the local tribes identified as source communities may not actually be members of GRASAC and would thus be unable to view the objects (Figure 3). While the low rate of identification of local sources arguably stems from the inadequate

collection records mentioned previously, the fact remains that it is difficult to share knowledge of artifacts between tribes and museums when the local origins of those artifacts are not known.

One of the many benefits of digital databases is that they often work as an excellent resource for artists from indigenous communities, particularly those attempting to maintain or revitalize traditional styles (Haakanson and Steffian 2009). To that end, the completion rates of the "Materials", "Techniques", and "Dimensions" data-fields seem particular relevant when considering its use by tribal members attempting to replicate these heritage styles. A completion rate of 84% for the "Materials" field and 70% for the "Techniques" field indicates that GRASAC may indeed work as such a resource for artists who wish to gain a better understanding of how their ancestors made these particular objects, and with what material. It is however, problematic that the "Dimensions" field has a completion rate of only 60%. While this is more than half, this field could be filled even if the museum institution making the contribution does not have the information on record. The "Dimensions" field could potentially be completed by any institution with access to a measuring device, though there are perhaps issues of time constraint. But by including dimensions, Native American artists would gain a fuller understanding of the object from which they could potentially glean both information and inspiration. However, the inclusion of detailed pictures which included a scale could also help to address blank spaces in the fields of "Dimension", "Materials", and "Techniques" without the excessive use of text. Taking photos from every angle of the object which highlight the construction, design, and colors may create a better record of the item than words alone can accomplish.

Expanding on the potential importance of images for knowledge sharing, my analysis of the use of photos on GRASAC object-pages indicated that there were not often more than five photos accompanying each object In fact, 55% of the object-pages featured five photos or less, while 83% of the object entries included ten photos or less. Entries were almost never accompanied by more than 15 photos (Table 2). Just as is the issue with the inclusion of dimensions in an object's data, the lack of photographs is unsettling in regards to community and artist access. Accepting that the primary purpose of GRASAC is to reunite indigenous communities with objects of their cultural heritage, how many photographs are considered enough in accomplishing those ends? Certainly the number of photographs an individual wishes to see is dependent on individual preference as well as his or her purpose in viewing those photos. An artist wishing to replicate a basket, for instance, may want to see digital images of every angle of that basket, including the bottom, as well as close-up images of the design, materials, and evident construction techniques. In contrast, someone simply viewing the artifacts casually may be content to scroll through only a few pictures. However if we think about the site as a venue for knowledge sharing, it could reasonably be argued that more detailed pictures equals more available knowledge. Perhaps seeing a design element up close, for instance, would trigger the memory of a fact or story that would otherwise have gone un-elicited.

Table 2: Photo Accompaniment Table

Photo Count	Number	Percentage of Sample with This Amount of Photos
1 or no photos	7	11%
2 to 5 photos	28	44%
6 to 10 photos	18	28%
11 to 15 photos	8	12%
16 to 20 photos	2	3%
More than 20 photos	1	2%

Considering both the sufficiency of photos and the completion rates of object data-fields, it is also necessary to reflect on the number of comments present on each object's detail-page. GRASAC is meant to facilitate the sharing of knowledge between institutions and tribal members through the "Comment" field. Theoretically, an indigenous person viewing a cultural heritage item contributed by a museum can offer his or her knowledge about that item, be it a story, comment on the design, or fact regarding its production. There are no standards that must be met in posting comments. Yet out of the 64 items I analyzed in my sample, only 2 (or 3%) contained comments from a tribal member (Figure 4). It is also important to note that these comments were made by the same individual, a tribal member who offered comments regarding her own family's history of basketry and the similarities in design she noticed between the styles they used and the basket on whose page she commented. While her comments do seem to qualify as the sort of knowledge sharing digital sites like GRASAC are attempting to encourage, objects with comments are still the exception.

The frequency with which comments are made suggests that what is estimable in theory may be falling short in practice. It should be taken into account, however, that perhaps the baskets, boxes, and bags which make up my sample are not items that frequently solicit comments. Yet among other more decorative and ceremonial items,

such as headdresses and dance staffs, I have encountered in my casual perusal of the site, I have seen a similar lack of comments.

Given this discrepancy between theoretical goals and reality, it is perhaps necessary to think more critically about the role of the object in a virtual space. Are sites like GRASAC perhaps ideal for providing information on museum collections to a wide audience who have access to the internet, but insufficient in the solicitation of community knowledge sharing? To answer this question, I will now examine the role of the *physical* object in the access of community heritage through the analysis of surrogacy research and two case studies.

Original Objects and the Human Connection

As the concept of the virtual museum and "digital repatriation" become a more integral part of museum future, some scholars are calling for a closer examination of what digital surrogacy really implies (Taylor 2000). As stated previously, digital database projects are ideal for facilitating more convenient access to collections, improving documentation systems, and ensuring preservation of the original artifacts. However, some are questioning whether it is really accurate to view the digital surrogate as a viable alternative to the "real thing." In fact, when the web first became widespread, its use was originally approached with trepidation by many museum professionals. The museum as an institution earns much of its legitimacy from the physicality of objects. It the presence of authentic objects which contributes to the prestige and authority many view the museum as possessing. Thus, the idea of a virtual reality initially seemed to run counter to what many museums saw as their niche (Parry 2010). While that fear has, for the most

part, subsided, it is perhaps necessary to consider its underlying cause. What is it about the physical object that digital surrogacy cannot capture?

Assuming a quality that can elude replication does exist, it could very well explain the lack of comments on the GRASAC site. Though it is meant to facilitate the sharing of knowledge between museums and community members, very few individuals seem to share stories or comments as intended. Would this perhaps be different if they were able to interact with the object in person? If so, then how?

To look at the importance of the physical object, German philosopher Walter Benjamin (1936) examined the importance of originals versus replicated works of art in his groundbreaking essay *The Work of Art in the Age of Mechanical Reproduction*. In the work, he introduced the concept of the "aura of the original", a suggestion that original works of art have certain intangible elements that are impossible to duplicate even in a perfect mechanical copy (Benjamin 1936). While he acknowledged the difficulty of defining a work's "aura", he suggested it related largely to an individual's feelings and emotions produced through interaction with an original object. Though primarily advocated in the field of art history, his suggestion that "that which withers in the age of mechanical reproduction is the aura of a work of art" (Bejamin 1936: 4) has important implications for considering the ways in which knowledge is shared through virtual replications of heritage objects. If, as Benjamin suggests, there is in fact an important human-connection element missing from replicas, whether they be physical or photos, because they are not originals, it could have a profound effect on the way a community member interacts with them. The lack of comments and indigenous knowledge sharing

in my sample could thus be explained by an individual's lack of emotional connection that the original object may solicit.

This concept of emotional connection to original works of art was further explored by Bradley Taylor in his Toledo Picture Study (2001). In the study, Taylor investigated the way individuals respond emotionally to both original works of art and their surrogates. The research took place in the summer of 2000 at the Toledo Art Museum. In the first part of the study, 86 participants were given an extensive list of "feeling words" and then asked to identify the feelings they interpreted as existing in an original oil-on-canvas painting, a black-and-white glossy photo, a picture in a book, a color slide, and a digital image. In all, the participants looked at twenty nineteenth and twentieth century oil paintings in every aforementioned medium. In the second part of the study, they answered ten survey questions regarding *their own* feelings and emotions when looking at the images. In analyzing their responses, Taylor found that individuals used words of greater emotional intensity when viewing original works of art than in looking at reproductions, both to describe what they saw in the painting and what they felt within themselves (Taylor 2001).

His findings have enormous implications for the study of "digital repatriation." Founders of virtual databases of heritage items like GRASAC almost always openly acknowledge that the digital image will never be as good as having access to the original, but rarely do they acknowledge that the limitations of surrogacy may be compromising the goals of the site. It is worth exploring the notion that perhaps the reason only two out of the 64 object-pages in my sample had any comments from an indigenous community member is that the digital image does not compel the emotional retrieval of cultural

knowledge or stories to the same degree as the original object. Taylor calls the digital replication process a sort of experiential compression (2001), arguing that digitization reduces an individual's interaction with an object to a single-sensory experience:

> "Such experiential compression demands that we imagine the sound of Beethoven's pianoforte by looking at a picture in a book or that we imagine the weight of a hand-held plow by clicking on a digitized thumbnail image. How do we intend to serve the needs of curators, academics, collectors, and armchair enthusiasts who share an interest in artifactual evidence with even the most refined digital technologies when the process of surrogation currently robs the documentation so?" (Taylor 2001: 7)

His question of "how do we intend to serve the needs" is even more compelling in regards to indigenous source communities. If sites like GRASAC are intended to reunite native tribes with items of their cultural heritage and then solicit the sharing of their knowledge through comment sections, what are the implications if community members are uninspired by digital images? To answer this question, I will examine two case studies in which elders and artists from two native communities had the opportunity to personally visit a museum collection of their heritage materials and interact directly with the objects.

"Visual Repatriation": Two Case Studies

Below, I describe the experiences of native tribal members interacting with heritage items in museums, particularly emphasizing the knowledge sharing provoked by interacting with the original objects of their cultural heritage. I will then contrast these observations to the sort of knowledge sharing, or sometimes lack thereof, I have witnessed on the GRASAC site to better understand the potential benefits and limitations

of each medium. I selected these particular case studies because they were two of the very few I've seen which were written about with such detail by the anthropologists involved, one of whom was a community member himself. Additionally, these cases were particularly interesting because the projects were initiated by the community members. While there have been other cases of indigenous groups visiting museums to interact with heritage items, to my knowledge few have been written about in published books or articles. Thus, the choice to use these cases as points of comparison to my analysis of GRASAC was motivated primarily by their accessibility.

Yup'ik Elders and the Etnologisches Museum

In the summer of 1994, a group of seven Yup'ik elders traveled to the Etnologisches Museum of Berlin with anthropologist and friend Ann Fienup-Riordan to spend three weeks among the largest collection of Yup'ik heritage items anywhere in the world. They were undertaking a venture which Fienup-Riordan labeled "visual repatriation", an examination of cultural items from which they could glean knowledge to take home to their communities. As stated by Fienup-Riordan (1999: 29), "what we sought was not so much the collection's physical return to Alaska, but the return of the knowledge and stories, the history and pride that they embodied and that, we hoped, we would be able to bring home."

The objects in question were collected by Johan Adrian Jacobsen in 1882-83 on his expedition to Alaska, commissioned by Berlin's Royal Ethnology Museum. Of the 6,720 items he brought back to Germany, one-third were from the Yup'ik community along the coast of the Bering Sea. Fienup-Riordan had been working in the Ethnology

Museum on an unrelated project when she became aware of the collection, and she soon notified the Yup'ik of its existence. After community members decided that they wanted to see the collection personally, Fienup-Riordan worked with them to apply for grants. Funding was eventually rewarded from the National Science Foundation through Alaska's Association of Village Council Presidents (Fienup-Riordan 1994).

The seven-person team to Berlin consisted of Fienup-Riordan, four elders by the names of Wassilie Berlin, Paul John, Annie Blue, and Catherine Moore; Marie Meade, a Yup'ik individual acting as both interviewer and translator; and Andy Paukan, the community's mayor who also acted as videographer (Fienup-Riordan 1999). During their three weeks in Berlin, they viewed all 2,000 Yup'ik objects in the collection. In her essay describing the event, *Yup'ik Elders in Museums: Fieldwork Turned on its Head* (1999), Fienup-Riordan notes that for the elders "the handling of the objects was savored as a personal experience that would be talked about for years to come" (Fienup-Riordan 1999: 33). They not only *viewed* the objects but rather "danced through the collection" (33), playing with toys and recreating ceremonies.

Above all else, the handling of these objects elicited a sharing of stories; Wassilie Berlin picked up a wooden bowl and discussed his village's rules regarding what could and could not be eaten from it; Paul John saw a wooden shovel and told a traditional story about a boy who had to shovel snow for four years before he could be considered a good hunter; and for Catherine Moore, a wooden dipper evoked stories of her own family that had not been told for decades (Fienup-Riordan 1999). Many of the stories were not told merely for the sake of entertainment; rather, several of them reflected the teaching of the moral values most important to the Yup'ik, values they were afraid the younger

generation was losing. Annie Blue, while reflecting on the objects in the collection, expressed the concern that while rules guided actions in the past, they often go ignored at present. According to Fienup-Riordan (1999:35), she wanted "the younger generation to hear her stories and gain awareness of their history so that they can avoid very real dangers in the world today."

As well as being educationally and culturally significant for the Yup'ik delegation, the sharing of knowledge that took place during this "visual repatriation" was not limited to the elders alone. Museum personnel expressed their thankfulness for Yup'ik assistance in improving the collection's historical and contextual information. From the elders they learned that dog feces was a common binding agent in shaping clay pots, seal blood was often used as glue, and carvers collected and dried sea foam to use as sandpaper for polishing wooden bowls Additionally, some of the male members of the delegation made the staff aware that they had mislabeled several kayak parts as harpoon parts, a mistake they were then able to correct (Fienup-Riordan 1999).

Likewise, it is important to note that the Yup'ik community was equally thankful to the museum staff for their tremendous care of the collection, and for allowing them access to the degree that they did. While the museum was initially concerned about issues of preservation or even possible attempts to get the items repatriated, they soon learned that their fears were unfounded. They allowed the delegation to move freely throughout the collection without requiring the use of gloves so that the elders could "[own the objects] in ways more restricted access would have made impossible" (Fienup-Riordan 1994: 40).

Due partly to this unrestrained degree of access, the Yup'ik visitors managed to gain an unprecedented amount of historical knowledge from the artifacts. They viewed the experience as a means through which they could revitalize elements of their culture that had been lost, bringing the knowledge back to their community to encourage a reawakening of social identity. As Paul John explained,

> "Many of us seem to have been in the dark for many years. And now, stories and information about our roots have emerged from this unknown, faraway place across the ocean. Now that the knowledge is out, I hope our work will be written and presented to our people…If our people begin to see them and begin to understand the culture of our ancestors, they might begin to believe and gain pride in their own identity" (Fienup-Riordan 1999: 38).

As he stated, the primary accomplishment of the visit seems to have been the resurgence of traditional stories and knowledge which the delegation could then bring home to their communities. This "visual repatriation" experience, then, can really be viewed as a catalyst for the sharing of stories that were present within these individuals all along, but simply had not yet been awoken.

Sugpiat Artists and the Boulogne-sur-Mer

In 1986, a French doctoral student working in the Boulogne-sur-Mer Museum contacted the Alutiiq Museum in Kodiak, Alaska to notify them of a large assortment of Sugpiat masks present in the French museum's collection. Because masks were traditionally considered sacred to the Sugpiat, the collection was of immediate interest to the staff. Dr. Sven Haakanson Jr., Director of the Alutiiq Museum and Sugpiaq tribal member, contacted the Boulogne-sur-Mer to pursue the possibility of bringing the masks to Anchorage as part of a traveling exhibit. While the museum was initially in agreement

with the plan, they backed out after the passage of the Native American Graves Protection and Repatriation Act in 1990. While American laws did not apply to the French museum, staff still feared that because of the increased interest in repatriation after the act's passage, if they sent the collection to Alaska they might never get it back (Haakanson and Steffian 2009).

Haakanson thus began pursuing other avenues through which he could provide his community access to the collection. He traveled to France to photograph a number of the masks which he then used to teach carving to some children in Kodiak. He soon faced an increased interest in carving lessons that he alone could not handle, and "realized that he needed to train the current generation of carvers in classical styles and manufacturing techniques to develop additional instructors" (Haakanson and Steffian 2009: 11). He then procured a grant through the Institute for Museum and Library Services to bring nine Sugpiaq carvers to France to see the collection. Together, they "traveled the eight thousand miles to Boulogne-sur-Mer to see their ancestors' work and absorb the details of tool use, design, proportion, and color that could not be fully appreciated in the few published photographs of the collection" (Haakanson and Steffian 2009: 11).

In traditional Sugpiat culture, masks were used in hunting ceremonies and viewed as spirit representations that could communicate with the unseen world (Haakanson and Steffian 2009: 7). Following festivals, the masks were usually, though not always, burned or destroyed to protect individuals from their power. The masks in Boulogne-sur-Mer were collected by Alphonse Pinart in the winter of 1871. Trained as a linguist, he conducted a tremendous amount of ethnographic fieldwork on Kodiak, collecting information on Sugpiat stories, songs, and traditions as well as 115 material objects. It is

thanks to his meticulous note-taking that the museum and Sugpiat people can now recreate the context of the masks so effectively (Haakanson and Steffian 2009).

When Pinart arrived in Kodiak, the Sugpiat were undergoing dramatic changes as they adjusted to a more European way of life, most having already adopted the Russian Orthodox religion. While many blended Russian Orthodox and Sugpiat religious beliefs, others rejected Sugpiat religious traditions entirely, including that of masked ceremonies. Pinart "may have sensed that the traditional masks and other representations of Sugpiaq culture were about to be lost" (Haakanson and Steffian 2009: 44), so he both collected and purchased over 200 cultural items which he then donated to the Boulogne-sur-Mer a few years after his return to France (Haakanson and Steffian 2009).

When the collection of seventy masks was rediscovered over 100 years later, the Sugpiat had in fact lost a number of the traditional practices still present at the time Pinart came to Kodiak. The masks in the Bolougne-sur-Mer thus led to a renewed cultural exploration for this community. For the nine artists who were able to travel to France to see the collection, the experience was equated to "apprenticing with master artists" (Haakanson and Steffian 2009: 79). They were able to view elements of design, color, and technique that would likely have gone unnoticed in photographs. As Haakanson stated, "tool marks record the movement of ancestral hands and the use of specific implements to transform wood into spirit" (Haakanson and Steffian 2009: 81).

Seeing these objects in person evoked in many of the artists a sense that they were connecting to their history in a very real way. Sugpiat artist Doug Inga described seeing the masks as feeling as though he was looking into the faces of his own ancestors. And Will Anderson, chair of the Alutiiq Heritage Foundation Board of Directors, spoke of the

"essence" in the room (Haakanson and Steffian 2009: *ix*), not unlike what Walter Benjamin described as constituting an original object's aura.

Just as was true for the Yup'ik, seeing the objects in person elicited a sharing of knowledge in the Sugpiaq community that would not otherwise have been possible through an interaction with a picture. However in this case, the artists brought their knowledge home in the form of art and education. In return for their participation in the trip, each artist agreed that they would teach the traditional carving they learned from the collection in France to the younger generations of their communities. Additionally, calling upon the knowledge they gleaned from the collection, they each crafted a mask of their own for inclusion in the Alutiiq Museum's permanent collection. In so doing, the community ensured that the knowledge that came home with the artists would be accessible to the Sugpiat for years to come (Haakanson and Steffian 2009).

In addition to the increased knowledge of carving that the artists brought home, they also used their experience with the masks to revisit traditional stories that had been dormant for a hundred years. As Sugpiaq artist Perry Eaton described,

> "For me, as a mask carver, the collection has become my baseline on shape and form…The variety and variations represented in the masks collected by Pinart allow an almost endless mixing and matching for storytelling. I believe that the mask is but a tool for transformation through storytelling and dance. It is costuming for the play. In its purest form, the mask is paraphernalia for the greatest art form of all- the telling our story, the thing that makes us human" (Haakanson and Steffian 2009: 172).

As Eaton stated, the masks are beginning to fill what contemporary Sugpiaq perceive as a void created by the passing of many traditional Sugpiaq life-ways (Haakanson and Steffian 2009: 168). Through the sharing of carving knowledge as well as the stories

these masks elicit, the Sugpiat are beginning to build a bridge that will re-connect them to their past.

Case Study Summary and Analysis

Looking at both the Yup'ik and Sugpiaq case studies, some common themes emerge regarding the ways in which knowledge was shared through the tribal members' physical interaction with their heritage objects. First, both groups viewed the experience as a way to revitalize certain cultural elements that had been lost; second, both expressed immense gratitude to the museums for caring for the objects and providing them with such unprecedented levels of access; third, seeing the objects awoke stories that otherwise may never have been shared. It is this third point upon which I wish to focus the majority of my analysis.

In both case studies, the heritage objects are presented as vessels for the sharing of stories. For the Yup'ik, seeing wooden bowls or shovels elicited stories of cultural practices or family rituals, while for the Sugpiaq, ceremonial masks prompted a teaching of art traditions that had been virtually lost to the community. I unfortunately do not know whether the knowledge the Yup'ik gleaned from visiting the Berlin collection was "brought home" in the same sense that it was for the Sugpiaq, who drew on the event to create works of art and education programs. But given their eagerness to make use of the information as a way to rectify current social voids, I can only assume that the Yup'ik utilized their experience in similar ways.

It is at first logical to suggest that perhaps photographs would be just as adequate in encouraging this exchange. However in reading the Sugpiaq case study, it is evident

that Haakanson first attempted to expose his community to the masks through photographs but eventually concluded that "it was not possible to share their full impact in pictures" (Haakanson and Steffian 2009: 10). Instead, he believed it was necessary to travel to France in order for artists to "absorb the details of tool use, design, proportion, and color that could not be fully appreciated in the few published photographs of the collection" (Haakanson and Steffian 2009: 10-11). My analysis of GRASAC reveals that while the site provides pictures (albeit a limited number) and a certain degree of relevant contextual information about each artifact, very few individuals from the objects' source communities are sharing any stories, as the site was meant to encourage.

Thinking about the Yup'ik and Sugpiat cases within the context of Walter Benjamin's discussion of the "aura of the original", I would argue that perhaps the element of original physicality is necessary to compel the sort of cultural exchange virtually missing from GRASAC but present in these case studies. To further explore this point, I will discuss my own experience digitizing portions of the Museum of Anthropology's Great Lakes basket collection.

Digitization Process and Reflections on Digital Repatriation

Throughout my research process, I addressed the question of how knowledge about cultural heritage objects is shared differently between the physical and digital medium. I began by analyzing the GRASAC database to examine the communities with which information from the database is being shared and the type of information that was available. I found that while in some aspects the site seemed to reach its stated goal of facilitating the sharing of knowledge between museums and members of the objects'

source communities, it fell short in other aspects. Specifically, while most object-pages in my sample contained general contextual information in so far as the museum catalogue records allowed, they lacked the input from community members. Only two of the 64 objects in my sample were commented upon by a tribal member. This fact then raised questions for me as to why GRASAC was failing to solicit the reciprocal knowledge sharing it was intended to encourage. Looking at case studies in which indigenous community members were able to interact with their heritage objects in the physical museum space, I realized that being with heritage objects in person encouraged exactly the sort of sharing of cultural and historic stories that were missing from GRASAC. I concluded that there was something inherent in being physically *with* the objects, rather than viewing them digitally, that encouraged the sharing of personal stories. It seems as though individuals need the opportunity to *interact* with objects; to not only see them but also hold them, smell them, play with them; in order to actually connect with that past and remember the stories related to each item. To explore exactly why this would be the case and to analyze my findings in greater depth, I will outline my own experience digitizing the Museum of Anthropology's Great Lakes basket collection. I will also draw upon recent conversations with Drs. Sven Haakanson and Aaron Glass to offer suggestions regarding how these virtual sites can be improved to encourage the kind of knowledge sharing that they were intended to, and that as of now, only really seems to be happening in the physical space.

I previously mentioned the philosopher Walter Benjamin's research on "the aura of the original", or rather, the idea that an original object has a certain element of power that cannot be replicated even in a perfect digital copy. As I began the process of

photographing items in the Museum of Anthropology's Great Lakes basket collection for inclusion in GRASAC, this concept seemed particularly relevant. I knew that the point of GRASAC and thus the point of digitizing these baskets was to reunite them with members of their source communities, so I was cognizant of photographing them in such a way that they could be viewed in detail. When I finished photographing the first basket, an object roughly 10 inches in diameter and 8 inches in depth, I had 24 photos of every angle of the object. As detailed as my work was, I knew that I did not capture, and would never capture, what Benjamin deemed the object's aura.

There is undeniably a connection felt when holding an original historic or cultural object. It is a connection to the past, a notion that you are holding something that someone valued years before you, and that in a small way still contains their stories. This is the reason that people go to museums, to see *real* objects. It may be impossible to define that sense as anything more than an aura, but it is equally impossible to deny that it exists; and few people would try. Even founders of virtual databases acknowledge that the digital surrogate will never sufficiently take the place of the original object. GRASAC founders, for example, say that their goal is to "facilitate digital repatriation of heritage materials *where physical repatriation is not currently possible or practical*" (GRASAC 2008, italics added for emphasis). Thus, though the concept is relevant to the way in which I think about my research, I am not attempting to address the inadequacies of the digital surrogate. I understood immediately after beginning the basket digitization process that the virtual surrogate would never compare to the original and no one was trying to argue that it would. Rather, in answering my question of how knowledge sharing differs in the physical and virtual space, the idea of the original object's aura *is* relevant in

considering the way in which it elicits knowledge sharing, particularly in the form of stories.

Photos and Documentation

In my experience digitizing the baskets, I encountered limitations in the Museum of Anthropology's catalogue records which had a direct impact on the entries I made into GRASAC. As previously mentioned, numerous museum records are incomplete due primarily to donations accompanied by sparse contextual documentation. Many of the baskets I digitized, for instance, came from collections donated to the museum in the 1930's with a limited amount of provenance information for each object. Thus, the basket entries I created generally followed the trends I identified in my analysis of GRASAC. Specifically, most records lacked identification of a maker or a local origin. According to GRASAC protocol, if the information is missing from the museum's records then the data-field should be left blank on the object's page. Consequently, though I attempted to include as much information as possible by going through additional accession records, there were many blank spaces in my entries. What I lacked in contextual information I tried to rectify through photo documentation, but that method introduced another set of issues.

When I spoke with Dr. Sven Haakanson about his experience visiting the Sugpiaq masks in the Etnologisches Museum in Berlin, I asked him specifically about his experience photographing the collection. In his book *Like a Face: Sugpiaq Masks of the Kodiak Archipelago* (2009), he features pictures of several masks but also expresses his feelings regarding the insufficiencies of past photographs in capturing the details of the

objects. When I asked him about this point, he said that while there were photos taken of the masks in the past, they never included a side profile. He said that as a carver, seeing the side of the mask as well as the front was necessary to understand its dimensions for replication or inspiration.

This point forced me to reevaluate my own practices in photographing the baskets. While I knew that they were theoretically meant to be accessed by members of the source communities, I had not considered the fact that they could be the source of inspiration for a basket maker. My biggest hurdle in photographing the collection was undoubtedly my general lack of knowledge regarding basketry. Even after reading books covering materials and technique, there was no escaping the fact that I myself was not a basket maker and thus did not know exactly what was important to capture in photographs. Dr. Haakanson, from his limited experience with basketry, suggested it was most important to shoot the bottom starting point and rim of the object. Once he made me more cognizant of the fact that the baskets could be used as models for indigenous craftsmen and women, I began focusing on aspects I thought would be important for native artists accessing the site.

However I also noticed that very few object-pages on GRASAC featured more than a few photos. When I became involved in the basket digitization project, GRASAC administrators provided me with a list of guidelines outlining the sort of photos that had to be taken of each object. They included not only front and back angles but also a top and bottom view as well as side profiles. If these protocols were being followed exactly, it seems unlikely that anyone would have fewer than 10 photos of each object. Yet, as discussed above, my analysis of GRASAC revealed that, of the objects in my sample,

most were accompanied by five or fewer photos (Table 2). Assuming that the individuals creating these entries were provided with the same guidelines I was, it seems as though photograph protocols were ignored. If this is in fact the case, I am, for the most part, sympathetic. In my own experience digitizing the collection for GRASAC, I have found that photographing the baskets in detail and then uploading them onto the site is the most time consuming portion of the project. Considering most museum staff face great time constraints, it is not surprising that many object-pages have few pictures. However, I would suggest that everyone working on the digitization process should reflect on why they chose to become involved in GRASAC. Since the site's purpose is to reunite objects with their communities, it is in some ways being misused when the object is not photographed in detail. Following the logic of my discussion with Sven Haakanson, I would suggest that everyone photograph items as though they may eventually be used in a cultural revitalization project. Otherwise, source communities are not able to see the objects in nearly the amount of detail to which they are entitled through the GRASAC project.

Digitization Reflections

Even with a large number of photos, I never felt as though I was capturing the same essence exuded by each basket as when I held them in my hands or looked at them in person. There is a sense of connection that, as Walter Benjamin argued over seventy-five years before me, is impossible to replicate in a digital surrogate. However sites like GRASAC exist to address situations in which access to the original object *is not possible or practical* (GRASAC 2008). It is therefore pointless to argue that digital replication is

not a sufficient alternative to having the original object because, at least in the case of GRASAC, no one is claiming that it is. It is however necessary to consider the ways in which the digital medium may be failing to solicit the knowledge-sharing of indigenous individuals just by its very nature of *being digital*.

In his article *The Web and the Unassailable Voice*, Peter Walsh (1997:230) suggests that the voice of the curator or recognized authority we read on exhibit labels "tends to enhance the slightly patronizing, intimidating atmosphere" of the museum. Partly in response to the existence of the patronizing museum, collaborative digital projects like GRASAC encourage an equal contribution of knowledge from museums and source communities alike. By making the web an environment of dialogue and communication rather than a one-sided outpouring of information, they are intended to mitigate some of that intimidation. However Walsh (1997) argues that we are instead seeing a situation in which that authoritative, patronizing voice is being carried over into the digital realm. Consequently, non-museum professionals are just as intimidated to contribute their opinion on a digital database as they would be in a physical art exhibit. My analysis of GRASAC suggests that this may in fact be the case. While I would suggest, given my analysis of the aforementioned case studies, that there is more affecting the lack of comments than intimidation, it is likely a contributing factor and thus worth exploring.

In my recent conversation with Dr. Aaron Glass, we discussed his experience digitizing a portion of the Kwakwaka'wakw artifact collection at the Etnologisches Museum in Berlin and the subsequent challenges soliciting community comments in the digital environment. Exploring the possible explanation of intimidation introduced by

Peter Walsh (1997), Glass suggested several factors may be at work. First, many individuals feel that the information they have to offer about the object is question is in some way not good enough to contribute. While anthropologists are often interested in hearing stories or seemingly trivial anecdotes about collections, members of source communities could possibly feel that their knowledge is inconsequential. Additionally, knowing that in the digital space other community members can then see their comments may make them even more hesitant to contribute information out of fear that they will somehow be harshly judged by their peers. The most likely explanation explaining the intimidation of virtual museum spaces, however, is the generational issues surrounding the web on a whole. While members of the younger generation are often accustomed to the idea of sharing their personal feelings and experiences with the world through social networking sites, elderly individuals may still be hesitant at the thought of exposing their opinions so publicly. Since it is often members of the older generation who possess the cultural knowledge which sites like GRASAC are meant to elicit, it could be that these individuals are simply not yet comfortable enough with the internet to contribute their perspective on the digital objects. This issue could perhaps be addressed through a change in interface design or maybe a pre-populating of comments to encourage further postings, but that is a topic somewhat removed from my primary research question.

While intimidation is likely a chief factor hindering the sharing of comments on sites like GRASAC, I would argue that it is not the only factor. Considering my analysis of the previously mentioned case studies and scholarship regarding viewer response to surrogation, it is also likely that the digital nature of the objects is affecting the amount of knowledge sharing taking place around them. While sites like GRASAC are successful in

making the information that is available in physical museum records digital, primarily aiding researchers, they do not seem to elicit the sharing of personal knowledge by community members to the same degree as what occurs in the physical environment. It could thus be argued that while digital repatriation makes *curatorial* information and images available that otherwise would not be, the sharing of *indigenous cultural* knowledge and stories is really only encouraged when one has access to the original objects.

Conclusion

My analysis of GRASAC revealed that while the site facilitated the sharing of important contextual information by the museum institutions housing the digitized collections, there was little feedback from members of the objects' source communities. Looking then at the two case studies in which members of indigenous groups visited their cultural heritage objects in the physical museum space, it is clear that seeing original objects elicited a sharing of exactly the sort of cultural knowledge that is missing from sites like GRASAC. In so far as "digital repatriation" projects are intended to reunite community members with scattered objects of their heritage, I would conclude that GRASAC does serve the purpose of making tribal members aware of where their cultural items are located and what contextual information is available on them in museum records. However, as of now, the digital surrogate does not appear to be the appropriate vessel for the sharing of cultural knowledge. It seems, rather, that the physical item is needed to truly elicit a community member's memories or stories.

In speaking with Aaron Glass about his experience digitizing Kwakwaka'wakw heritage objects in the Etnologisches Museum, he said that he was accompanied in Berlin by a Kwakwaka'wakw artist who interacted with each object while Glass documented what he said. He told me simply that he and the artist could not have done it without each other. This concept is, at its most basic level, the very definition of collaboration. Without Aaron Glass the Kwakwaka'wakw artist would likely not have traveled to Berlin to see the collection, and without the artist Glass would not know what photos to take of each object and what information was relevant for the digital record. Considering my own difficulties digitizing the basket collection given the fact that I am not a basket maker, it seems as though working with an indigenous Great Lakes basket maker could have helped to solve some of my limitations. While I am not naïve and impractical enough to suggest that everyone photographing their collections to include in GRASAC should be accompanied by an artist from the object's source community, I am proposing that collaboration be employed at more stages of the process. Currently, GRASAC is attempting to act as a collaborating force in itself by bringing tribes together with museums to share information in the digital space. I would suggest that this collaborative knowledge sharing should occur not just in the post-documentation phase, but in every step of the process. Though I acknowledge the difficulty, museums should solicit the consultation of local native artists in digitizing their collections whenever possible.

Considering the limitations of the digital database outlined above, I would argue that sites like GRASAC should be viewed not as the end goal of collaboration, but as a stepping stone for future collaborative endeavors. GRASAC is an excellent resource in identifying where scattered heritage items are currently housed. It also serves to preserve

provenance and contextual information in a medium that is protected from all future dangers of damage to the physical record. Yet individuals do not seem to be connecting to the objects, primarily though the sharing of stories, to the same degree as in the physical realm. I would therefore suggest that GRASAC be utilized as the networking site it was intended to be, to facilitate the forging of connections between tribes and museums which could possibly lead to physical visits in the future. By using the site in such a way, it is possible for the virtual space and the physical museum visit to work in tandem, ultimately improving the entire concept of collaborative knowledge-sharing.

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