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Megan E. Goldsworthy
James Madison University

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Repatriation: The Convergence of Cultural Heritage and Technology

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An Honors College Project Presented to

the Faculty of the Undergraduate

College of The Honors College

James Madison University

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by Megan E. Goldsworthy

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Accepted by the faculty of the Honors College, James Madison University, in partial fulfillment of the requirements for the Honors College.

FACULTY COMMITTEE:

HONORS COLLEGE APPROVAL:

Project Advisor: Wren R. Stevens, Ph.D.
Interim Associate Dean, College of Visual and Performing Arts

Bradley R. Newcomer, Ph.D.,
Dean, Honors College

Reader: Stephen Chappell, Ph.D.
History Department, Associate Perfessor

Reader: Julie Solometo, Ph.D.
Anthropology Department, Associate Professor

Reader: ,
,

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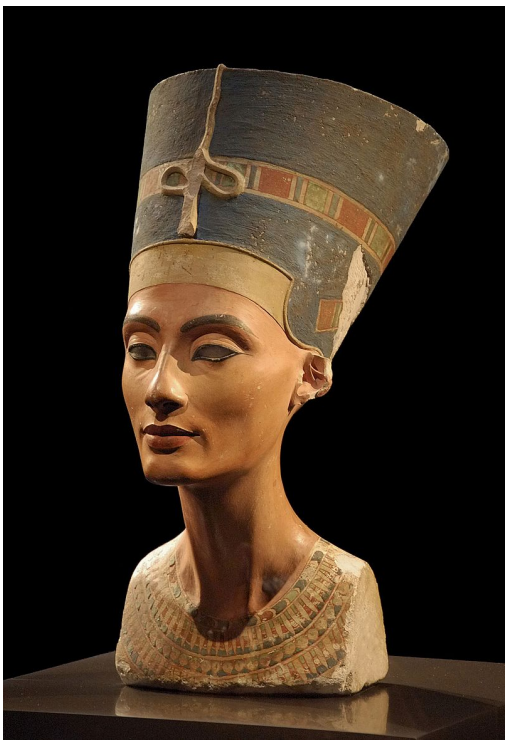

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Abstract

This thesis aims to explore how the use of developing technologies in the field of cultural heritage preservation can be applied to the debates of the repatriation of antiquities. By acknowledging the complex and often multifaceted factors that underscore arguments for or against the repatriation of antiquities housed in Europe's most prestigious museums, we can uncover how technology can be applied to help resolve the underlying concerns. Exact modeling, laser scanning, and virtual reality projects are being developed in the museum and cultural heritage fields to be used for specific projects. These growing technologies can be adapted and applied to repatriation cases to help address concerns about the condition of artifacts, public education and access, and the role of national identities in these discussions.

Introduction

Repatriation of cultural heritage refers to the return of an artifact, human remains, or art back to its country of origin from another country that claims ownership. Repatriation usually occurs in situations of stolen materials but also applies to those in which a country has acquired artifacts through an imperial agenda, particularly during times of war or conquest. As countries dominated by the nineteenth and early twentieth-century imperial powers of America, France, Great Britain, and Germany establish their independence, calls for the repatriation of cultural property have become more common.

Many cases of repatriation today involve indigenous nations and cultural groups asking museums to repatriate meaningful artifacts and human skeletal material that were taken from their lands. For example, tribal groups in North America seek to reclaim the human remains of ancestral tribe members, as well as the art and artifacts that were taken when European settlers entered their lands. In 1990, the Native American Graves Protection and Repatriation Act (NAGPRA) was passed by the United States to give Native populations a way to legally obtain remains and sacred objects from the museums that held them. This process has limitations, however, and a direct connection must be made from the original owners of the property to the people requesting their return.

Countries all over the world are increasingly requesting that artifacts originating in their countries currently held in museums be returned.[1] Often these demands come from countries that

[1] Louise Tythacott and Kostas Arvanitis, *Museums and Restitution: New Practices, New Approaches* (London: Routledge, 2017), 59.

were previously under the rule of European nations during the Age of Imperialism in the eighteenth through early twentieth centuries. Though looting and plundering have been in practice since ancient times, the scope of this paper is restricted to those antiquities taken by European countries who used an Imperialistic claim to power to justify the taking of objects for their own uses.

Colonialism and Imperialism helped to drive the creation of archaeology as it was viewed as a field that could document or even reconstruct, histories. The practice of archaeology was used to create collections of artifacts found in the foreign lands claimed by European nations. An extensive collection of artifacts came to symbolize political power because it was seen to prove existing stories of racial supremacy and religious destiny. Particularly when the British and French empires began to expand control of global territories, collections of objects became synonymous with knowledge about the past and was used to justify the removal of art and other objects from their colonies.

As Britain and France expanded their archaeological digs and retrieved excavated artifacts, national museums were created to house those collections, and to curate them into displays that promoted a nationalistic message.[2] These museums, generally open free to the public, shaped the way Europeans saw themselves in opposition to the non-European societies they vanquished and assimilated. By placing objects from other cultures behind glass and presenting them as oddities, Europe viewed itself as civilized and knowledgeable as compared to the uncivilized and barbaric peoples in the colonies.[3] These presentations of antiquities further

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[2] Fiona McLean, "Museums and the Construction of National Identity: A Review," *International Journal of Heritage Studies* 3, no. 4 (January 1998): 245, https://doi.org/10.1080/13527259808722211.

[3] Tythacott and Arvanitis, *Museums and Restitution: New Practices, New Approaches*, 3.

served a second Imperial purpose; antiquities from ancient Greece, Rome, and Egypt were used to reinforce the image of greatness given to Europe as the inheritors of these ancient "great" civilizations. This message, in turn, helped to continue to justify the practice of colonization as Europeans saw themselves as continuing the imperial traditions of ancient Greece and Rome.

After World War II, when European powers relinquished control of many colonies, these previously subjected cultures reasserted their histories and identities.[4] It became important for them to reclaim their past by requesting the return of significant objects that had been removed from their lands. Because there are so many different ways that these antiquities were discovered and used by Imperial powers, the process of successfully repatriating artifacts is often very complex and controversial. Often the countries claiming ownership and the countries that hold the objects typically both believe that they have legal rights to the object. The burden of proof usually falls to the country who is asking for the return of the artifact to demonstrate that the object was stolen. Public opinion often plays a role in the perception of these debates, too, as the morality of keeping the object is also questioned. The complexity in this lies with the distinction between legality and ethicality.

There are differing opinions concerning the question of whether large national museums that draw global audiences, such as the British Museum or the Louvre, should be forced to repatriate artifacts. Arguments against repatriation often rely on the belief that the artifacts are a part of collective human history and should be available for everyone to experience. Large national museums are often seen as institutions that promote learning and understanding while engaging with the public. People can attend these museums and learn about cultures all around

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[4] Tythacott and Arvanitis, *Museums and Restitution: New Practices, New Approaches*, 4.

the world through their artifacts. These arguments also frequently site the availability of the artifacts to the public in large museums. The British Museum and the Louvre are located in large metropolitan cities and are visited by millions of people each year. It is through these museums the artifacts housed inside are given the opportunity to be enjoyed by these millions of people.

Opponents of repatriation often question the strength of the connection between the artifact and its country of origin. In the case of the Parthenon Marbles, Greece claims they rightfully own the marbles on the basis that it was the ancient people of Greece who built the Parthenon. Proponents of keeping them in the UK, however, doubt the relevance of this claim, suggesting that the current residents of Greece have a fragile connection to the ancient civilization that existed approximately 2,000 years ago. The marbles have been kept in the British Museum for almost two hundred years, and some believe that this is enough time to form a deeper connection with the people of Britain.[5] Ideas of identity and nationalism play heavily into these beliefs.

On the other hand, arguments in support of repatriating antiquities often cite the immoral practices used in the formation of national museums as a reason to return items. These famous museums are based on collections obtained from often dubious practices. The argument is that a foundation based in Imperialistic agendas taint the reputation of those museums. Many people recognize the problems inherent within the creation and display of national collections, believing that these European countries have a responsibility to return what was taken as spoils of war or colonization.

[5] Tiffany Jenkins, *Keeping Their Marbles: How the Treasures of the Past Ended up in Museums ... and Why They Should Stay There* (New York, Ny: Oxford University Press, 2016), 214.

The context of the artifact is also often cited as a significant reason to repatriate artifacts. Its context often enriches the experience of visiting a significant monument or work of art. After being removed from their original locations, artifacts lose original meaning and impact. Returning artifacts to their countries of origin would restore the context of the artifacts. Repatriating artifacts is also returning a piece of history to its original location allowing local communities to experience a piece of their own culture.

The repatriation of antiquities continues to be an essential issue as identities of nations are formed around tangible connections to the past. Influenced by the imperialistic history of Europe, cases of repatriation of antiquities often present concerns that go beyond the object. In recent cases, ideas of national pride and identity, concerns for public education, and concern for object preservation are often cited as reasons to either repatriate or not.

In today's ever-changing world of technology, I believe that new technologies can be applied to the discussions of repatriation to begin addressing the underlying concern in these debates to facilitate productive conversations and compromise. Recent projects of exact replications, laser scanning, and the development of virtual technologies have helped researchers and conservationists solve problems of availability and access, preservation, and educational use in particular circumstances. With the proper adaptations, these technologies could be applied to the cases of repatriation to help address the underlying concerns that motivate arguments in order to facilitate discussions.

Section 1: Imperialistic Histories

The complex history of Europe led to the development of ethnocentric ideals. These deeply help beliefs were encouraged by the desire to expand in territory and conquer new lands. As a result of the practice of imperialism, archaeology was formed as a discipline. Archaeology served as a way to collect items from places that interested Europeans and claim them as their own. As a result, large national museums were formed in Britain, France, and Germany to display these objects and use them to further present an ethnocentrism. Many objects taken during the period of colonization are now being asked to be returned by the country of origin, but they still reflect traces of the colonization under which they were taken. In the debates surrounding the repatriation of antiquities, the formation of nationalistic messages surrounding the artifacts can still be seen.

Europe's desire to claim the ancient cultures of the Greek and Roman Empires traces back to the Italian Renaissance and the revival of classical thought. After the long period of the Middle Ages, between the fall of the Roman Empire and the Renaissance, much of Europe had declined. Feudalism and serfdom were the prevailing social structures, and the Christian church was crucial to all aspects of life. The increase in the study of Ancient Greek and Roman art, literature, and science during the Renaissance sparked new thought and innovations in art, science, and politics that challenged the control of the Church. Many Renaissance Europeans saw this period as a rebirth of great civilizations.

New ideas about empire began with a period of exploration beginning in the fifteenth century, in which European countries conquered much of the newly discovered territories of the world. The first global empire arose in the sixteenth century as Spain conquered much of the

Americas. Britain and France challenged the empire during its reign, and later the German Empire emerged. The growing empires flourished due to the new forms of trade and government that developed out of the growth. Mercantilism became the vehicle for wealth accumulation in European countries.

The Reformation, beginning in the sixteenth century, had profound effects on Europe. The differing opinions held by Catholics and Protestants created conflicts between countries with different views. Wars were fought for the dominance of religious views, and Catholicism lost the support of several powerful monarchies. During this period, the idea of European superiority developed. This idea held that modern European civilization was taken over from the ancient Greek and Roman civilizations, and non-Europeans were judged heavily for their perceived lack of civilization. This principle influenced eighteenth and nineteenth-century ideas about Social Darwinism and prejudices surrounding race. Social Darwinism describes the principles of Darwin's Natural Selection theories of evolution as applied to groups of people, including other nations. The theory that weaker nations were destined to fall to stronger ones was used to justify the practice of Imperialism and domination of non-European peoples. Racist beliefs held by Europeans against non-Europeans also played into the theory of Social Darwinism and justified the oppression of foreign civilizations. They saw other cultures as being less civilized, and therefore weaker, than the more industrial European societies. As a result, Europeans saw themselves as the inheritors of the great classical cultures.

The following eighteenth-century Age of Enlightenment was focused on intellectualism and philosophy. Reason and science-based on observation were used by philosophers who favored the ideas of ancient Greek society, and the ideas of separation of church and state

became more accepted.[6] Science prevailed over religion as free speech and thought were more widely accepted. Philosophy of politics, criminal theory, and economics changed ideas about society and emphasized Greco-Roman principles.

This resurgence of Greco-Roman thought developed into a new movement of European art, architecture, and literature known as Neoclassicism. This movement drew its inspiration from the decorative style of classical antiquity that was being observed as European students traveled on their Grand Tour, which had become the culmination of an upper-class European education at the time. Art began moving away from the highly decorative Rococo style and began favoring the highly idealized, simplified, and symmetrical style of ancient Greece and Rome. This revival can be traced to the beginnings of formal archaeology, which was first developed during this time.

Archaeology began as a way to study the cultures of the past through the collection and analysis of material culture left behind by peoples of the past. First, beginning as antiquarianism, it served as a way for kings and queens who wanted to glorify and display the past of their respective nations. Ancient artifacts were first stored in cabinets of curios and used as representations of a country's prestige and importance in history. Our idea of archaeology began with the excavations of Pompeii and Herculaneum in the eighteenth century. The discovery of these ancient cities sparked an interest in archaeology and developed into a more scientific practice with the techniques developed soon after.

Excavations of Pompeii, beginning in 1748, and Herculaneum, beginning in 1738, had substantial impacts on the resurgence of Greco-Roman ideas during the Enlightenment. Their

[6] Brian M Fagan, *Brief History of Archaeology: Classical Times to the Twenty-First Century.* (New York, NY: Routledge, 2017), 48.

discoveries led to a growing interest in the archeology of ancient sites, and the collection of material remains. The two cities were very well preserved throughout history due to the eruption of Mount Vesuvius in 79 AD, which left the two cities in Naples almost wholly covered in ash. Ancient writings of the two cities and the catastrophic event kept the interest of the sites in the minds of scholars, and building projects initiated by European monarchs helped rediscover the locations.

Excavations of Herculaneum began in 1738 under Charles of Bourbon, the King of Naples, at the site of the theater. Artifacts of great value were placed in the Herculanense Museum as a part of the Palazzo Caramancio so that visitors of high importance and wealth could visit and see the findings.[7] This museum later became the Italian Museo Archeologico Nazionale under the unified state of Italy. Excavations of Herculaneum stopped in 1780 in favor of excavations in Pompeii, which were less difficult due to a slightly smaller layer of volcanic material covering the site.[8]

Pompeii was first excavated by the engineer Rocco Gioacchino di Alcubierre in 1748 under the patronage of the King of Naples, Charles of Bourbon.[9] The discoveries found at the site made Naples famous with the grandness of the archaeological finds. Later excavations under Ferdinand I would uncover the Temple to Isis, and subsequently increased interest in Egyptology.[10] When the French occupied the site, it would be further excavated for the purposes of the French government.

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[7] Maria P Guidobaldi and Domenico Esposito, *Hercvlanevm: Art of a Buried City* (New York, NY: Abbeville Press, 2013), 22.

[8] Guidobaldi and Esposito, *Hercvlanevm: Art of a Buried City,* 22.

[9] Filippo Coarelli, ed., *Pompeii* (New York, NY: Riverside Book Company, Inc, 2002), 16.

The European interest in archaeology grew after Johann Joachim Winckelmann published a book about ancient art history. Winkelmann was a German archaeologist and art historian whose masterwork, *Geschichte der Kunst des Alterthums*, or "The History of Art in Antiquity," published in 1764, further propelled archaeology of antiquities into the minds of Europeans. This work was the first to systematically separate the art of different cultures in the ancient world, and further classify them by time period.[11] This work included the art of ancient Greece, Rome, the Etruscans, and Egypt. It outlined the evolution, interconnectedness, and cultural significance of the ancient art of different cultures, and provided a source that is still used by scholars today.

Winckelmann's publication helped archaeology to become a more systematic and common practice. Campaigns launched by European nations (namely Britain, France, and Germany) discovered and claimed ancient artifacts and sites to increase the value of the holdings of national collections. Napoleon completed one such campaign in 1798 during his time in Egypt. This campaign was the first major archaeological expedition overseas and was famous for the discovery of the Rosetta Stone. Another expedition of note was made by Thomas Bruce, Seventh Earl of Elgin, to Athens, where he removed marble statues from the Athenian Parthenon and brought them back to London. After bringing the statues to Britain, Elgin sought to sell them to the British government.

Once the collection of art and artifacts of ancient civilizations was firmly established in the minds of Europeans, the discipline of archaeology as we know it today developed. Auguste Mariette, a French archaeologist, became one of the most influential archaeologists of Egypt.

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[10] Coarelli, *Pompeii,* 16.

[11] Johann Joachim Winckelmann and David R Carter, *Johann Joachim Winckelmann on Art, Architecture, and Archaeology* (Rochester, NY: Camden House, 2013), 12.

Mariette became a member of the Egyptian department of the Louvre, in Paris, France, in 1849. He began his Egyptian excavations in Saqqara, where he found the ruins of the Serapeum. In 1851, Mariette made his famous discovery of the Avenue of the Sphinxes. During his initial time in Egypt, he found many treasures and shipped them back to France to become a part of the Louvre's collection. After a time working as an academic in the Louvre, he returned to Egypt in 1858 and continued his excavations for the Egyptian government. Mariette believed that his discoveries made in Egypt should remain in the country, and with the support of the Egyptian government, he helped establish the Egyptian Museum in Cairo.[12] This helped stop the illicit trade of Egyptian artifacts due to the Egyptian government giving Mariette exclusive privileges to excavate in Egypt. As one of the most famous Egyptian archaeologists of the time, Mariette was instrumental to the spread of fascination with ancient Egypt. His work revealed much about the early periods of Egyptian history and provided a wealth of knowledge to be built on by Egyptologists to follow.

The English archaeologist Sir Flinders Petrie became famous for his subsequent discoveries in Egypt during the 1880s. He is also known for his development of archaeological methods to prove the dating of objects.[13] He asserted that objects found in layers of soil deeper in the ground could conclusively be classified as older than objects found in layers closer to the surface. This principle, known as stratigraphy, is now fundamental to the field. His first project in Egypt consisted of inspecting the Great Pyramids of Giza to investigate how they were constructed. Later, he excavated burial sites at Fayum, where he discovered many tombs and

[12] Bruce G Trigger, *A History of Archaeological Thought* (New York, NY: Cambridge University Press, 1989), 39.

[13] Trigger, *A History of Archaeological Thought*, 197.

mummies. By the request of Mariette, half of the burial portraits Petrie discovered were sent to the museum in Cairo, and the other half was sent back to London. In 1869 Petrie conducted excavations at Luxor, where he found the famous Merneptah Stele.[14] In 1923 Petrie was knighted for his contributions to British Egyptian archaeology.

While Petrie was working in Egypt, Heinrich Schliemann, a German archaeologist, became famous for his archaeological excavations in Greece in the 1870s. He primarily focused on the Aegean civilization during the Bronze Age and advocated for the existence of legendary cities in the works of Homer. He is credited for the discovery of the city of Troy and excavated nine layers of cities located at the same site.[15] He used Petrie's theory of stratigraphy to conclude that the ruins at the bottom of the site, known as Hissarlik, were that of the legendary Troy. During his time in what he believed to be Troy, he famously made his discovery of "Priam's Treasure." This treasure included golden artifacts and a collection on jewelry he dubbed "The Jewels of Helen."[16] These jewels were sent to Berlin to be housed in the Pergamon Museum. The removal of the treasure became a problem for the Turkish government, who had control of Greece during this time, who claimed that the treasure was smuggled out of Greece without permission. As a result of this, Schliemann's permission to excavate in Greece was temporarily taken away. Though his discovery of Troy may not have been the actual city of legend, his work uncovered many new findings about other places such as Mycenae. The publication of his work

[14] Trigger, *A History of Archaeological Thought*, 103.

[15] Trigger, *A History of Archaeological Thought*, 197.

[16] Trigger, *A History of Archaeological Thought*, 197.

and discoveries of great treasures sparked a fascination with archaeology and attracted young scholars to the field.

Europe's history of cultural and intellectual movements and colonization, along with the development of the field of archaeology, brought about a desire to collect artifacts in the seventeenth, eighteenth, and nineteenth centuries. Collections of ancient art began to form during the Renaissance as the interest in Classical culture became a focus for wealthy individuals. These collections served as status symbols indicating that the people who owned them were wealthy enough to buy them, as well as cultured enough to appreciate them. During the Age of Enlightenment, the disciplines of anthropology, natural history, and archaeology began to develop, encouraging the practice of collecting objects. It was during this time that royal courts were commissioning archaeologists to explore the Mediterranean for classical artifacts and acquire them as the property of the country.

Once European nations, specifically Britain, France, and Germany, began to spread their empires, cultural artifacts from the colonies were collected as symbols of dominance. These artifacts were displayed in Worlds Fairs to show off the far reach of the empire, and to emphasize the foreignness of non-European cultures further. This practice was fueled by the prejudices Europeans felt toward non-Europeans due to their lack of civility. European cultures valued a sense of the "learned society," and the elevation of collections fed the idea of the accumulation of knowledge. These ideas can be linked to the Renaissance and Enlightenment returns to classical philosophy.

At the beginning of the development of these collections, they were known as cabinets of curios. Objects in these cabinets were usually valued for their unique or exotic, appearances or their connection to the past. A combination of curiosity and a desire for prestige motivated

private collectors and European nations to grow these collections. As time went on, a desire for more encyclopedic collections developed and collectors wanted to fill any gaps of knowledge in their collections. This was made possible by the increasing exploration and industrialization carried out by Europe.

In time, the biggest and most powerful empires created large national museums to educate its people and to support an international identity. Two of the most important institutions that still exist today are the British Museum in London, England, and the Louvre in Paris, France. The British Museum was the first public national museum, and today it holds approximately eight million objects. The museum was established in 1753, as a collection of multiple cabinets of curios.[17] As the collection grew, more antiquities were acquired as archaeologists began excavating in Egypt and the Mediterranean. By contrast, the Louvre was formed when the people of France called for a public gallery to show the royal collection in the mid-eighteenth century, and during the French Revolution, it was turned into a museum.[18] Under the rule of Napoleon, archaeologists began collecting for the museum, and a collection of Egyptian artifacts was created.

By the nineteenth century, public museums had become popular across Europe. Museums became commonly presented as places that would educate the public and increase the civility of society. The collections of artifacts held by the state were put on display to proudly show off the conquests of imperialistic nations, which were taken through archaeological looting, as war

[17] "History," The British Museum (British Museum, 2019), https://www.britishmuseum.org/about-us/british-museum-story/history.

[18] "History of the Louvre | Louvre Museum | Paris," Louvre.fr, October 25, 2016, https://www.louvre.fr/en/histoirelouvres/history-louvre#tabs.

spoils, or otherwise taken. These national museums served national agendas and had the function of promoting the state and presenting it as a grand colonial power. By connecting the nation's past to its present, people were able to create a narrative for themselves through cultural artifacts that represented the culture of the nation.[19]

[19] Fiona McLean, "Museums and the Construction of National Identity: A Review," *International Journal of Heritage Studies* 3, no. 4 (January 1998): 244.

Section Two: Notable Cases

Though many groups make repatriation claims for objects and artifacts from many different periods and areas of the world, the ownership of antiquities is of particular interest due to their connections to the complex history of Europe. Centuries of philosophy and art inspired by the ancient Greek and Roman civilizations, combined with a tradition of archaeology, and the creation of a national identity connected European counties to the ancient Mediterranean World. The scale and notoriety of some national museums in Europe provide a rich area to discuss the history of repatriation. Cases such as the Parthenon Marbles, the Bust of Nefertiti, and the Goddess of Morgantina shed light on the complexity of claims of ownership, and differing attitudes that exist. These cases show the effects of the nuanced history of Europe on archaeological collections that institutions are questioning. Seeing how colonialism and its related practices have contributed to the current ownership of artifacts can reveal the underlying points in debates surrounding repatriation that go beyond the object itself. Revealing the underlying concerns can highlight the issues that will need to be resolved during discussions of ownership.

Perhaps one of the most infamous disputes of ownership of ancient artifacts is the case of the Elgin Marbles (figure 1). Most recently known as the Parthenon Marbles, these objects encompass a collection of marble sculptures and reliefs taken from the Athenian Parthenon and the Erechtheion. Half of the original frieze, fifteen metopes, and seventeen fragments of pediments belonging to the Parthenon and a column from the Erechtheion now reside in the

British Museum in London.[20] First created in the fifth century BCE, the Parthenon (figure 2) was a temple on the Athenian Acropolis dedicated to the goddess Athena (or the Roman goddess Minerva), who was considered the patron god of the Athenian state.[21] The art that decorated the Parthenon features gods and goddesses, heroes, and citizens worshiping their gods.

Thomas Bruce (1766-1841), was the seventh Earl of Elgin and the British ambassador to Constantinople from 1799 to 1803. During this time, Greece was under the control of the Ottoman Empire. Elgin traveled to Athens to improve his knowledge of what he thought to be the most exceptional art and architecture in the world.[22] He hired artists to accompany him to Athens and create drawings, etchings, and models of the art and architecture they saw on the journey. With permission of the Ottoman government given in the form of a *firman*, or a royal decree, paid for by Elgin, he removed the marble works of art from the Parthenon. The line of the *firman* that Elgin believed permitted him to remove so much from the Parthenon reads:

> No one [Ottomans] shall meddle with the scaffolding or implements, and if the said painters wish to take away any piece of stone with old inscriptions, or sculptures therein, no opposition shall be made.[23]

[20] Yannis Hamilakis, "Stories from Exile: Fragments from the Cultural Biography of the Parthenon (or 'Elgin') Marbles," *World Archaeology* 31, no. 2 (October 1999): 305.

[21] Elazar Barkan and Ronald Bush, *Claiming the Stones / Naming the Bones: Cultural Property and the Negotiation of National and Ethnic Identity* (Los Angeles, Ca: Getty Research Institute, 2002), 51.

[22] Theodore Vrettos, *The Elgin Affair: The Abduction of Antiquity's Greatest Treasures and the Passions It Aroused* (New York, NY: Arcade Publishing, 1997), 7.

[23] Vrettos, *The Elgin Affair*, 50.

With the official permission of the government in control of Athens, Elgin began removing sections of marble from the Parthenon and surrounding structures, damaging the structure and statues in the process. Gradually, from 1800 to 1802, he moved them by the ship's load from Greece to London, England. Once in London, Elgin put the marbles on display in a makeshift museum on the corner of Piccadilly and Park Lane.[24] After molding in his basement while Elgin tried to sell them for a large sum, in 1816, the Elgin Marbles were sold the state of Britain for £35,000. The acquisition of the Marbles by the British government was a defining moment in the history of the British Museum. Having these important fragments of the Parthenon created a strong desire for British citizens to see them. This increase in notoriety created a sense of new responsibility for the museum that included becoming "a source of scholarly materials and an inspirational center to the growing British Empire and to conceptions of Englishness itself."[25]

While the Parthenon Marbles have been instrumental in the formation of the British identity centered around the prestige of the British Museum, the Greek government has called their ownership by the United Kingdom into question. When they first arrived in the United Kingdom, some believed the incident to be comparable to vandalism and destruction of art. Elgin appears to have been given permission to remove the important artifacts by the Ottomans.[26] Though, to many people, the terms of the agreement appear ill-defined and are often disputed. It

[24] Barkan and Bush, *Claiming the Stones / Naming the Bones,* 51.

[25] Barkan and Bush, *Claming the Stones / Naming the Bones,* 52.

[26] Tiffany Jenkins, *Keeping Their Marble: How the Treasures of the Past Ended up in Museums ... and Why They Should Stay There* (Oxford; New York, NY: Oxford University Press, 2016), 95.

is also important to note that the agreement was not made with Greece, but with the Ottoman Empire, their occupiers.

After Greece gained independence from the Ottoman Empire in 1832, they began a campaign to restore ancient Greek sites and find its looted art.[27] Since then, the Greek government has been pushing for the return of the Parthenon Marbles. In 2014, UNESCO, world heritage and peace organization, offered to mediate discussions between the British Museum and the government of Greece for the return of the marbles. The British museum declined the offer, stating that they believed the discussions would ignore their rights of ownership.[28] The British Museum insists that the marbles were acquired legally and that they have the right to ownership of the artifacts.

The case of the Parthenon Marbles is very complex and brings up multiple questions surrounding its circumstances. The first question is the legality of the procurement of the art. Though Elgin, and others, cite a legal document as the basis of the removal of the marbles, the original document no longer exists.[29] All that is left is a translated copy of the agreement, which raises suspicions of those who believe the marbles should be returned. Another qualm held about the agreement is that it was made previously with an occupying government rather than Greece itself.

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[27] Jenkins, *Keeping Their Marble: How the Treasures of the Past Ended up in Museums ... and Why They Should Stay There,* 101.

[28] "UK Turns down Mediation over Marbles," *BBC News*, April 8, 2015, sec. UK, https://www.bbc.com/news/uk-32204548.

[29] Jenkins, *Keeping Their Marble: How the Treasures of the Past Ended up in Museums ... and Why They Should Stay There,* 95.

A second point within the debate centers on the education and context of the artifacts. The British Museum argues that their continued possession of the marbles will allow more people access to see them. With millions of people visiting the British Museum a year, the opportunity to educate more people and allow them to experience the Acropolis outside of Greece serves as a reason to keep them were they are. The other side of this reasoning, however, states that one cannot experience the art to the fullest while it is no longer in its original context. Being able to see the marbles within the Acropolis would allow visitors to experience what the ancient Greeks saw and gain a fuller understanding of the purpose of the art.

As a result of this question, both Britain and Greece have built museum spaces specifically designed to house the marbles. Joseph Duveen, a prominent British art dealer, paid £100,000 over ten years from 1929 to 1939 to fund the building of a gallery in the British Museum to hold the Parthenon Marbles (figure 3). Duveen believed that the marbles were "primarily works of art" and that they should be displayed as such.[30] He aimed to use the display of the marbles to convey the prestige of Britain. The result is a gallery that presents the marbles as merely pieces of art. In response to the claims that Greece had no suitable location for the marbles to be displayed, the New Acropolis Museum was built in 2009, only 280 meters away from the Acropolis (figure 4). The primary purpose of the museum is to provide a safe place for the artifacts found on the Acropolis. It is also necessary for the artifacts to be cared for while remaining within view of the architectural site to preserve the context of the objects. Built to help

[30] Elisabeth Kehoe, "Working Hard at Giving It Away: Lord Duveen, the British Museum and the Elgin Marbles," *Historical Research* 77, no. 198 (October 28, 2004): 503–19, https://doi.org/10.1111/j.1468-2281.2004.00220.x.

facilitate the return of the marbles to Greece from Britain, space has been left intentionally for the missing artifacts within the museum.[31]

A third point in the debate is the issue of cultural heritage. The Greek government has called for the return of the marbles. They believe that the marbles serve as a link between the culture and people of the ancient Greeks and the Greeks of the modern-day. They claim that the Parthenon is beloved as a critical piece of Greek identity that is being held by a foreign institution.[32] The British argue that because they have held the marbles for the past two hundred years, which is longer than the modern Greek state has been around, that the marbles have also become a vital part of British identity.[33]

The Parthenon was built as a symbol of wealth and power during the fifth century BCE. It was a symbol of triumph over the Persians, whom the Greeks had just defeated at the time of its construction.[34] After a period of occupation by the Ottoman Empire, the Parthenon Marbles were removed from the temple. They were then brought to Britain to serve as symbols of the strength of the nation. Once in Britain, the marbles represented the county's connection to the idealized Greek civilization. While holding meaning for two separate nations, the calls for their return to Greece have, so far, been denied.

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[31] James M. Beresford, "Museum of Light: The New Acropolis Museum and the Campaign to Repatriate the Elgin Marbles," *Architecture MPS* 7, no. 1 (March 1, 2015), https://doi.org/10.14324/111.444.amps.2015v7i1.001.

[32] James Cuno, *Who Owns Antiquity: Museums and the Battle over Our Ancient Heritage* (Princeton, NJ: Princeton University Press, 2008), xi.

[33] Cuno*, Who Owns Antiquity: Museums and the Battle Over our Ancient Heritage*, xii.

[34] Jenkins, *Keeping Their Marble: How the Treasures of the Past Ended up in Museums ... and Why They Should Stay There*, 91.

Though the most well-known example of disputed ownership is that of the Parthenon Marbles, the case of the Bust of Nefertiti is also notable. The bust of Nefertiti, a painted limestone sculpture of the head of a woman, is thought to have been created in 1340 BCE representing the wife of King Akhenaten (figure 5).[35] The bust of Nefertiti is thought to be the perfect depiction of the female face due to its symmetry and geometrical regularity. Though found in the studio of an ancient sculptor, Thutmose, by a team of German archaeologists in 1912, the bust can be identified as Nefertiti because of the unique headdress that she is wearing, which has also been in other representations of the queen.[36] The bust of Nefertiti has been in Germany at various museums since 1913, when it was first brought to Berlin under an agreement with Egypt.[37]

Since its official unveiling to the public in 1923, the bust of Nefertiti has attracted hundreds of thousands of visitors each year, and it has been featured on German postcards and stamps. The bust was located in the Berlin Neues Museum on Museum Island until its closure during World War II. During this time, it was reportedly kept in a shelter in a bank and other various locations.

A deal was almost reached in 1929 for the return of Nefertiti in exchange for two other highly valued, life-sized statues of prominent Egyptian figures from the same period. However, a negative public opinion in Germany ended the discussions, and the deal was never completed.[38]

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[35] Jaromir Malek, *Egypt: 400 Years of Art* (London: Phaidon Press Limited, 2003), 190.

[36] Malek, *Egypt: 400 Years of Art*, 190.

[37] Tristana Moore, "Row over Nefertiti Bust Continues," *BBC News*, May 7, 2007, http://news.bbc.co.uk/2/hi/europe/6632021.stm.

[38] Joyce Tyldesley, *Nefertiti's Face: The Creation of an Icon* (London: Profile Books, 2018), 139.

Having lost their royal family at the time of the bust's discovery, the people of Germany began to associate their national identity with the image of the beloved queen. A sense of pride was felt in the incredible archaeological discovery, and the public began to see the bust as a representation of a new German queen.[39]

After the war, the bust was moved to various German museums before being returned to the Neues Museum upon its reopening in 2009 (figure 6). The reopening, and increased attention, prompted the increased pressure to return the artifact to Egypt by the head of the Supreme Council of Antiquities of Egypt, Zahi Hawass.[40]

The Egyptian government has long advocated for the return of the bust of Nefertiti, but successive German governments have refused, insisting that the deal was indeed legal and known by Germany. Hawass claims that the bust was smuggled out of Egypt by archaeologists in 1913 by disguising the bust in a layer of clay and deliberately hiding its value from the Egyptian government.[41] Hawass has also called for the return of other Egyptian artifacts from major Institutions, including fragments of a tomb from the Louvre and the Rosetta Stone from the British Museum, but he has only secured the return of the tomb fragments.[42]

The first question brought up by this case is the question of national pride and identity. National pride and identity are deeply engrained in many instances of disputed ownership of

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[39] Tyldesley, *Nefertiti's Face: The Creation of an Icon*, 140.

[40] Moore, "Row over Nefertiti Bust Continues".

[41] "Germany Refuses Nefertiti Return," *BBC News*, December 22, 2009, http://news.bbc.co.uk/2/hi/europe/8427269.stm.

[42] "Germany Refuses Nefertiti Return,".

highly valued artifacts such as these. Societies that are living where the artifacts are found feel connected to the deeply rooted past of the object. The artifacts also serve as a physical connection to the ancient ancestors of the region.[43] The objects representing aspects of the past cultures that are highly valued create a sense of pride for the present people who can trace their roots to where it originated.[44] Similarly, the people who take on ownership of these highly valued objects also feel a cultural connection to it. The recognition of ancient cultures as remarkable or exceptional can also make the people who hold their material remains feel connected to that power. In the case of Germany, the Nefertiti bust filled a newly opened void of a royal family. The sense of appreciation and respect of the artwork created a strong sense of pride in the German identity, which helped strengthen the bond the people felt to their archaeological discovery.[45]

The second point, in this case, is focused on the safety of the artifact. Egypt has asked Germany for a temporary loan of the Nefertiti bust, but German experts claimed that the artifact is too fragile to be transported such a distance. The delicate layer of stucco covering the limestone of the statue is susceptible to "vibrations, shock, and changes of temperature."[46] The preservation and conservation of artifacts are often cited as one of the foremost goals of museums, and the transport of objects can often be a risk. Delicate artifacts usually require

[43] John Alan Cohan, "An Examination of Archaeological Ethics and the Repatriation Movement Respecting Cultural Property (Part One)," *Environs: Environmental Law and Policy Journal* 27, no. 2 (2004): 383.

[44] Cohan, "An Examination of Archaeological Ethics and the Repatriation Movement Respecting Cultural Property (Part One)," 383.

[45] Tyldesley, *Nefertiti's Face: The Creation of an Icon*, 140.

[46] Moore, "Row over Nefertiti Bust Continues".

particular conditions, including temperature, moisture, and stability, and an object that is almost 3,500 years old is especially fragile.

The third point within this case is the legality of its acquisition. Due to the agreement between the governments Germany and Egypt when the bust of Nefertiti was first discovered, the German government maintains that the acquisition of the bust was completely legal. Though Egypt continues to request that the artifact be returned, it remains in the Neues Museum in Berlin. The identification of the queen with the identities of both countries certainly makes the discussions of rightful ownership tense, but ultimately, it seems the safety of the bust is Germany's primary concern.

Another notable case of the repatriation of art back to its country of origin is that of the Getty Aphrodite (figure 7). This case is unique because it resulted in the return of the artifact to Italy, where it was found. The Getty Aphrodite is also known as the Goddess of Morgantina. This case has highlighted the practices of museum curators purchasing artifacts that might not have a clear provenance. The statue was brought into the Getty Museum in Los Angeles, United States with suspicion from multiple parties, and subsequently investigated. The persistence of the Italian government ultimately overcame the persistence of the Getty Museum, and the goddess was brought back to Sicily (figure 8).

The statue that has become known as the Goddess of Morgantina is a seven-and-a-half-foot tall marble and limestone statue of a goddess believed at different times to be either Aphrodite or Persephone. The statue is believed to have been excavated outside of a small town in Sicily. Outside of the town, Aidone, the archaeological site, is known as Morgantina. The statue is dated to the 5th century BCE, during the period of occupancy of the site by Greeks. The local myth of Persephone holds that she was taken by Hades from Lake Pergusa and brought to

the underworld. She would return for three months out of the year, bringing with her fertility and growth that allowed for a prosperous harvest in the volcanic soil of the area.[47] The ancient artifacts found at the site show a tradition of worshiping Persephone and her mother, Demeter, with the presence of many statues and votive figures made in their likeness, and their honor. The recent connections made between the statue and the site of Morgantina suggest that she is a representation of Persephone, rather than Aphrodite.

Investigations conducted after the purchase of the statue by the Getty Museum in 1988 have revealed more about the statue's controversial history and has led to its return to Italy in the spring of 2011.[48] The statue now resides in a seventeenth-century Capuchin monastery in the town of Aidone, Sicily. The building has been converted into a museum that holds about 150 people at a time. It also houses other locally excavated artifacts.

When the statue was first considered for purchase by the Getty, the curator at the time was told multiple times by experts not to purchase the statue due to a total lack of provenance associated with it. The dealer who sold it to the Getty could only speak of one previous owner of the statue.[49] Signs of looting were also present on the statue including recent breaks in the figure and dirt in the folds of the body, which suggested illegal transport of the statue.[50] The Getty

[47] Jason Felch, "She's No Longer the Getty Goddess, but Statue Is Still a Puzzle," *Los Angeles Times*, May 29, 2011.

[48] Felch, "She's No Longer the Getty Goddess, but Statue Is Still a Puzzle."

[49] Ralph Frammolino, "The Goddess Goes Home," Smithsonian Magazine, 2011, https://www.smithsonianmag.com/history/the-goddess-goes-home-107810041/.

[50] Frammolino, "The Goddess Goes Home."

ignored these warning signs, and the sheer magnitude and value of the statue caught the attention of Italian officials when it appeared in the museum.

The effort made by Italy to reclaim the statue had very little evidence at first, to prove that the goddess originated in Morgantina, or that it was stolen. In 1994, Italy filed a request for a chip of the limestone from the statue so that they could hopefully match it to the stone found near Morgantina to prove that it originated there. The limestone was a match, but the Getty refused to give the statue back because the sample could not prove that the statue was stolen.[51]

In a massive siege of a middleman in the illegal antiquities trade in 1995 by the Italian government, photos of recently excavated artifacts were found in the thousands. Investigators then matched the photos of looted artifacts to specimens in some of the most well-known institutions in America, including forty different specimens in the Getty Museum.[52] Some of these artifacts had been acquired by the same curator who purchased the Goddess of Morgantina. This connection provided enough evidence for her to be linked to the illicit trade of antiquities, and she was ultimately convicted by the Italian government. In 2006, an art dealer from Sicily came forward about pieces of the statue being offered to him.

Photos of the statue broken into pieces were found in possession of the only previous owner of the statue. The pictures found during an investigation into the origin of the statue showed the pieces to be in a warehouse covered in dirt. Similar to, but not connected with, the photos taken from the known illicit antiquities dealer, the photos proved to be enough to

[51] Frammolino, "The Goddess Goes Home."

[52] Frammolino, "The Goddess Goes Home."

convince the Getty to return ownership of the statue to Italy, along with the forty works seen in the polaroid photographs.[53]

Now that the statue has been rehoused, the accessibility of the museum has been brought into question. While the statue has been reported to be seen by about 400,000 people a year at the Getty, it now only receives about 17,000 visitors in its current location.[54] The remote nature of the Aidone Museum is believed to be the cause of this. The local Sicilian community hopes for the increased publicity of Aidone and the expansion of its economy as a result of the museum. Others believe that the move has hindered the ability of tourists and scholars to view the work. Without easy access to the statue, many feel that the public loses the opportunity to see the statue and learn about her story. Another problem that has been sited is the quality of the museum in which she currently resides. The Getty has an endowment of multiple billions of dollars, but the Aidone museum is a part of a small, rural town. Caring for such a large statue becomes much more difficult without the availability of resources the Getty has.

Though these concerns have been voiced, it is also valuable to consider the impact returning the statue has on the people of Italy. During the celebrations held by the local community for the return of the statue to Aidone, it is said that the residents in attendance felt a deep sense of patriotism.[55] For the local community and people of Italy, the return of such an impressive work of art represents the return of a piece of their culture and heritage. As an expression of the ancient religion of the people living in the same place as the current population,

[53] Frammolino, "The Goddess Goes Home."

[54] Felch, "She's No Longer the Getty Goddess, but Statue Is Still a Puzzle."

[55] Frammolino, "The Goddess Goes Home."

the statue is something that can physically connect the two groups and provide insight into the daily lives and cultural traditions that have long been out of practice.

These three distinct and important cases of the debated legality of ownership of ancient artifacts help highlight the many factors that influence cases of this nature. Many times a deep connection between the modern countries that hold the artifacts are developed through time. The celebration and attention these artifacts receive are often associated with the institutions that hold the artifacts. Countries where the artifacts likely originated have begun to gain more autonomy over time, and they are now increasing pressure on major European institutions to return pieces of material culture identified with their countries that they believe are stolen. The collective identities of nations play large roles in the discussions of repatriation of artifacts. Other factors in such discussions include the legality of the agreements authorizing removal, the availability of the object to the public, and their safety. No case is merely black and white, and these three significant instances of repatriation claims help us begin to explore the complexity inherent to each case.

Section 3: Deeper Meanings

The questions brought up in these discussions of the repatriation of antiquities have left many institutions questioning the ethicality of both keeping and returning objects. Navigating complex claims of identity, legality, and the safety of artifacts has prompted the need for severe conversations and creative solutions. Professionals are developing technology to help answer questions related to these claims and encourage the public to engage with artifacts of shared cultural heritage both inside and outside the museum setting.

Many institutions are incorporating new virtual and augmented reality technology into the conservation, curation, and education departments of their museums. This technology has inspired interactive exhibitions, guided tours, and companion apps to help visitors interact with exhibitions. Technology is not only becoming more incorporated into the exhibition facet of museums, but it is also becoming more widespread in the field of preservation of heritage sites and artifacts. Projects such as the Factum Foundation's work with Egyptian burial tombs, Rome Reborn a digital facsimile of the ancient city, and Cyark's work digitally recording heritage sites are helping to preserve these important pieces of history, as well as make them more accessible to the public.

Projects such as these are pushing the bounds of today's technology and are also allowing us to digitize history that takes the shape of physical objects. While not capable of completely solving the problem of repatriation, developing technology may be able to help assuage issues that prevent artifacts from being returned. With the application and adaptation of these technologies, we can incorporate them into the preservation of antiquities. With models, digital replicas, and virtual and augmented realities, we can further share access to significant works of

cultural heritage throughout the world and increase the educational value of the artifacts. These projects are helping to preserve, share, and increase engagement with artifacts.

An example of how researchers are using models and replicas to preserve ancient sites is the recreation of Egyptian tombs. The Factum Foundation for Digital Technology in Conservation, led by Adam Lowe, has spent the last twenty years developing the technology necessary to recreate exact facsimiles of elaborate Egyptian burial tombs. The company uses 3D scanning and printing to accurately recreate the walls of the ancient burial tombs of the Pharaoh Tutankhamen and Pharaoh Seti I. The Factum foundation completed the tomb of Tutankhamen in 2014, and it is now displayed in the Valley of the Kings as a tourist attraction located close to the original tomb. The exhibition showing the first facsimiles of Seti I's chambers was held in Basel, Switzerland, and was called, "Scanning Seti: The Regeneration of a Pharaonic Tomb."

The tomb of Pharaoh Seti I was found in 1817 by Giovanni Belzoni, an Italian explorer, and is "considered the largest and most lavishly decorated tombs in the Valley of the Kings."[56] The tomb had been looted before Belzoni rediscovered it, and only fragments and casts of the walls have made it into museums around the world. The tomb had become a sensation of the day, but the lack of artifacts found due to looting kept it from reaching international fame. The tomb of Pharaoh Tutankhamen, however, was found in 1922. The discovery of his tomb became more famous and widely known due to the number of grave goods found inside. Archaeologists discovered his tomb relatively undisturbed, and the objects found inside include his death mask, gilded chariots, and thousands of other artifacts.[57] These artifacts have subsequently been

[56] "Egypt Rebuilds Ancient Tomb," BBC News, July 2002, http://news.bbc.co.uk/2/hi/technology/2153329.stm.

[57] Nick Glass, "Master Replicators Resurrect an Ancient Egyptian Tomb in Switzerland," CNN, 2018, https://www.cnn.com/style/article/details-pharaoh-seti-tomb-replica-egypt/index.html.

exhibited around the world, increasing his notoriety and the intrigue of the ancient Egyptian culture.

The tomb of Seti has been closed since the 1980s due to structural damage and damage incurred by tourists. The recreation of the site would allow a large number of tourists to see the tomb without damaging it. The project aims to bring the tomb back to the glory it is believed to have once had before looting, harsh techniques of recording its art, and years of tourist visits damaged the structure and decorations of the tomb.

The practice of scanning and recreating sites was also used for the preservation of the Lascaux Cave paintings in France (figure 10). Found during the Second World War, the paintings in Lascaux are said to be the best example of prehistoric art.[58] Because of this claim, the site became very important for researchers and tourists alike. The site was sealed from the public due to carbon dioxide damaging the paintings that came from the breath and sweat from large numbers of people. The new near-perfect replica sits close to the caves and aims to give visitors an authentic experience of entering the real caves. Its creators replicated sounds, temperature, and light to resemble that of the real caves. More than 6,000 paintings and etchings can be seen in the replica that is nearly identical to the art found inside Lascaux.

The replica was created through the use of 3D digital scanning that is precise down to three millimeters.[59] The original entrance to the cave was made larger to accommodate the growing number of visitors as the site grew in popularity. In the replica, the original hole can be

[58] Eleanor Beardsley, "Next to The Original, France Replicates Prehistoric Cave Paintings," NPR.org, January 17, 2017, https://www.npr.org/sections/parallels/2017/01/02/507549682/next-to-the-original-france-replicates-prehistoric-cave-paintings.

[59] Eleanor Beardsley, "Next to The Original, France Replicates Prehistoric Cave Paintings,"

seen, presented as it was at the time of the discovery. This change demonstrates the attention to detail that was taken while creating the opportunity for tourists and researchers to experience the caves as untouched by modern people.

Recreating exact replicas of important heritage sites is not the only way 3D scanning and photogrammetry are being used for museums and cultural heritage preservation. The non-profit organization, Cyark, is also using these techniques to create exact digital representations of UNESCO World Heritage sites all across the globe. The project began in 2003 after the destruction of the Bamiyan Buddhas in Afghanistan. With partners including Google Arts and Culture, International Council on Monuments and Sites (ICOMOS), and the National Park Service, Cyark has recorded over 200 sites worldwide.[60] Scanning the interior and exteriors of heritage sites using photogrammetry, LiDAR, and laser scanning, Cyark can put together a digital model that contains both accurate measurements and detailed surface models.[61]

Cyark uses these models in different ways. Once the model is created, they can turn it into useful data for site managers and conservators in the form of engineering drawings, cross-sections of the structure, and elevation information. This data can then be used when making decisions about conservation plans. A second way Cyark uses this data is by creating detailed and impressive interactive digital models available to the public through their website. Teaming up with the University of South Florida and Historic Environment Scotland to form the Open Heritage Alliance, Cyark has created a public portal to access the 3D data of the sites.[62] Cyark also stores all of their data in an archive in order to be accessible in the future.

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[60] "CyArk," CyArk, 2020, https://www.cyark.org/.

[61] "CyArk," CyArk, 2020, https://www.cyark.org/.

[62] "CyArk," CyArk, 2020, https://www.cyark.org/.

The digitization of artifacts and sites are also being used to create virtual and augmented reality facsimiles that are used within museum exhibitions and online. One large-scale example of a virtual reality project is the Rome Reborn Project. Housed in the Virtual World Heritage Laboratory at the University of Virginia, Rome Reborn is a reconstruction of the entire city of Rome as it was in 320 CE at the time of Constantine and the height of Rome's urban development. The reconstruction is based on a previous model of Rome called the "Plastico di Roma Antica" that was completed in the 1970s.[63] This model was then combined with the knowledge of specific sites of Rome, including the position and type of building, and nonspecific sites, which are buildings only known in a general sense.[64] The project uses data collected from commercial 3D databases to form the knowledge of the specific buildings, and late-antiquity catalogs of types of buildings characteristic during the period to form the knowledge of the more general buildings, which include apartments, shops, and houses.[65]

A team of fifty-five researchers, artists, and developers from all over the world have used the project to continue to develop applications. The 3D virtual model of the city can simulate a "flight" over the city to allow for the project to be viewed in its entirety.[66] The program also offers smaller-scale tours of specific sites, including the Colosseum and the Forum. According to

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[63] Andrew Curry, "Rome Reborn," Smithsonian Magazine, July 2007, https://www.smithsonianmag.com/history/rome-reborn-157825055/.

[64] K. Dylla et al., "Rome Reborn 2.0: A Case Study of Virtual City Reconstruction Using Procedural Modeling Techniques," *Computer Graphics World* 16, no. 6 (2010): 62.

[65] K. Dylla et al., "Rome Reborn 2.0: A Case Study of Virtual City Reconstruction Using Procedural Modeling Techniques", 62.

[66] Andrew Curry, "Rome Reborn," Smithsonian Magazine, July 2007.

the Rome Reborn website, the project is compatible with VR headsets and personal computers, which can be used on personal devices outside of the traditional museum setting.

The program has the potential to help researchers gain a better understanding of the structure of the city and the function of its design. Rather than assuming relationships from what is conveyed in books based on ruins of structures, researchers will be able to use the program to see how the buildings would have looked as if being there. Bernard Frischer, head of the department at UVA in charge of the project, was able to use the program to confirm that the 125-foot-tall Column of Trajan would have indeed been able to be seen throughout many neighboring squares.[67] The recreation of Rome as it was in 320 CE has allowed for a better understanding of the city that can help shed light on specific questions involving its urban design that might be impossible to learn from the modern city in its place now.

The Venice Time Machine is a similar project that uses the digitization of documents to create a virtual city. Unlike Rome Reborn, however, Venice Time Machine compiles over 1,000 years of historical documents, architecture, and art to create a simulation that can move through time and space. This project not only represents the city virtually, but it also includes information about the growth of the city, its business development, and connections between its people. Initiated by École Polytechnique Fédérale de Lausanne (EPFL) in Switzerland, and Ca' Foscari University of Venice in 2012, the project has collaborated with many extensive archives of the city, including the State Archive in Venice, the Marciana Library, and The Instituto Veneto to digitize almost 80 km of shelves of archival documents.[68] Modern historians have not viewed a

[67] Andrew Curry, "Rome Reborn," Smithsonian Magazine, July 2007.

[68] "VTM – Venice Time Machine," EPFL, 2020, https://www.epfl.ch/research/domains/venice-time-machine/.

large sum of the collection of archives. The city proved to be an ideal subject for the project due to its vast array of detailed, organized, and well-preserved records keeping track of everything from "who lived where, the details of every boat that entered the harbor, and every alteration made to buildings or canals."[69] Combining records of building projects, maps, trade, personal finances, and genealogical information, researchers can create a virtual model of the city that uses data found in these sources to replicate the city at many different periods. Researchers can cross-reference records of different natures to recreate social and political dynamics, family trees and biographic information, and urban development to create a holistic representation of the city throughout the 1,000 years.

The Venice Time Machine project has developed artificial intelligence to help researchers sort through the extensive collection. The project has helped to create technology that can transcribe handwritten documents in several different languages and dialects found in Venice, as well as scan books without opening them using x-ray technology.[70] Both processes have the potential to expedite the digitization of records and create searchable texts. Machine learning can be developed to allow machines to recognize the vast differences in letter shapes written by different people and across time while using x-ray technology builds a 3D picture of the contents of the book and can decipher the pages layer by layer.[71] Having the ability to read books without opening them helps to preserve the delicate documents by reducing the amount of interaction necessary to extrapolate its information.

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[69] Alison Abbott, "The 'Time Machine' Reconstructing Ancient Venice's Social Networks," *Nature* 546, no. 7658 (June 14, 2017): 341–44, https://doi.org/10.1038/546341a.

[70] "VTM – Venice Time Machine," EPFL, 2020.

[71] Alison Abbott, "The 'Time Machine' Reconstructing Ancient Venice's Social Networks."

Developers intend to add an augmented reality feature to the program to allow the virtual simulation to be directly overlaid on top of the actual city. This feature would allow people to utilize the program to look back into the past while experiencing the city in the present. In conjunction with this expansion, the Venice Time Machine also hopes to include the archives of many major cities in Europe. The breadth of intricacies revealed in the records analyzed suggests more can found between city centers. Much can be learned about different social and political styles found in Europe and their interaction throughout history. Including other major cities will help researchers uncover information about trade, political alliances, and the development of Europe. This technology will allow scholars to understand the complexities of Venice as an evolving city as well as within a more extensive network of trade and diplomacy.

These projects focus on developing technology that can help us answer questions about artistic accomplishments and past societies. They also center around the goal of preservation. The development of creating exact physical replicas, databases, and virtual reality facsimiles has significant implications for the future of the humanities. Recreating objects and sites can allow access to them for more people while also reducing the amount of damage possible to the site. 3D scanning and the process of digitizing sites can preserve images of them for future generations. Digitization can then allow for the collection of data to be used for monitoring future damage and for reference when making decisions for future conservation measures. The digital files can be used to create virtual recreations of sites that can be experienced in several ways. How researchers are putting together digital projects are opening up the opportunity to ask new questions. With the development of a new area of exploration in the Digital Humanities, technology can be applied to many different fields, as can be seen already in the field of cultural

heritage site conservation and research, including online platform, museum exhibitions, and potentially even to help resolve repatriation of cultural artifacts debates.

The application of these technologies to the field of cultural heritage and to repatriation debates can help address and some of the concerns that prevent artifacts from being returned to their countries of origin. The previous sections have shown that the arguments surrounding debated ownership can include deeply rooted problems, such as the formation of a national identity. New technologies can allow for the opportunity to initiate creative solutions to help bring artifacts to wider audiences and mitigate concerns going beyond the artifact.

Conclusion

As technology advances, cultural heritage professionals have increasingly incorporated it into museums and cultural heritage programs. The potential benefits of the uses for this technology include the access to closed heritage sites due to damage, the increase in accessibility and awareness of the artifacts or sites, and the opportunities it creates for research. These outcomes not only benefit the preservation of cultural heritage, but they can also be directly applied to cases of debated ownership of artifacts. Nations have used the ownership of antiquities to promote nationalistic agendas and to enrich the museums and palaces of imperial countries in the 19th and 20th centuries. Today as many governments seek to compensate and recognize past injustices, issues of repatriation have featured prominently in museum collections and, subsequently, their mission of outreach and education. Developing technology has the potential to be utilized in discussions of possible solutions in order to reach mutually beneficial outcomes.

Many debates concerning ownership of antiquities, such as the cases of the Elgin Marbles, the bust of Nefertiti, and the Goddess of Morgantina, are rooted in more profound issues. The debates go beyond just the ownership of the artifacts. In the cases discussed previously, the debates include issues of identity, cultural value, accessibility to the public, educational value, and the preservation of the artifacts. It is possible to incorporate the developing technologies of digitization, recreating exact facsimiles, and virtual and augmented realities to help address some of these underlying concerns.

Of the three innovations discussed, digitization has the greatest breadth of possible applications to the issue of repatriation. These applications include improving education about the artifact, monitoring damage, and the use of digital records to create models of the artifact.

Access to the artifact was cited as a reason for keeping the Parthenon Marbles at the British Museum. Millions of people encounter the Parthenon Marbles every year, and the number of visitors would likely be significantly less if the marbles were given over to Greece to be held in the New Acropolis Museum in Athens. In the case of the Goddess of Morgantina, the number of visitors decreased by thousands per year after its return to Italy. Digitization of collections may provide a potential solution to this. Many museums have begun creating online databases to represent collections and allow people to access them digitally. The digital collections allow people to see and learn about the object in a museum setting, but without being inside a museum. Traveling may not be possible for some people, and having the option to experience the work online may be the only way some get to learn about the object. Having a way to access artifacts online also benefits scholars and students researching certain artifacts they may not be able to visit.

The creation of digital records can also be used as a frame of reference to monitor the condition of the artifact. The use of photogrammetry and other such scanning techniques used, as in the case of Cyark, can produce digital records that reflect the current state of the object, including any anomalies on the surface and any points of fragility within. Having this information can help museum professionals and conservators gather information, such as exact measurements, and make informed decisions about the care and use of the artifact.

The role that the digitization of objects can play in the discussions of the repatriation of ancient artifacts is one of increased availability and information gathering. Access to the artifact may increase if people can access it online. Online access can allow people from all around the world to interact with the object with ease. The information that is gathered during the scanning process can also be beneficial to the caregivers of the artifact. Understanding the structure of the

object can, in turn, lead to better care and protection of the object, a goal in which many cultural institutions should be invested. The institution relinquishing the object in question may have the exclusive right to create an online interface allowing the public to view the artifact in an online exhibit. While this option is not the same as having the actual artifacts within their possession, this possibility allows the institution to create a dialog surrounding the issue of repatriation. Curators can design exhibitions to engage the public while demonstrating the importance of collaboration of cultural institutions and correcting the wrongdoings of the past.

The second technological innovation that was discussed previously is the creation of exact models and replicas of artifacts. Models and recreations are potential solutions to the problem of repatriation in that they can be used for accessibility as well as for gaining a better understanding of the artifact. Models can take the place of the original artifacts, demonstrated by the replicas of Egyptian burial tombs created by the Factum Foundation and the replica of the Cave of Lascaux.

The creation of models has many possible benefits. They can be used within exhibitions to allow direct interaction with visitors and artifacts, and exhibitions can feature copies of objects featured to allow visitors to touch the object and experience it up close while still protecting the original. Also, the process of recreating artifacts can reveal new information about them, and they can become a point of reference for the original when monitoring for new damage and degradation. Having a direct connection to artifacts can create a stronger connection between the viewer and the object, which can make the information presented with the artifact more engaging. This can also be a beneficial tool in exhibitions geared toward children. The large scale recreations of the Egyptian tombs and the cave of Lascaux allowed for the increased visitation of the public. Both sites had become damaged due to a large number of tourists

interested in viewing the incredible sites. Having the exact recreation close to the original sites allowed tourists to continue to be able to experience them while reducing the damage to the original.

In the case of the Parthenon Marbles, and others similar to it, exact recreations can be created to take the place of the originals at the institution that holds them. This practice would allow for the return of the artifacts to their original owners. In cases that revolve around the identity created around the possession of particular artifacts, this can initiate compromise. Both parties would have the ability to show the artifacts, a more considerable sum of visitors would be able to see them, and the issue of ownership would be addressed. Exhibitions highlighting the new technology of exact facsimiles can be used to address the issue of repatriation, looting, and colonial imperialistic dynamics while still exhibiting representations of the artworks.

One example of a virtual exhibition focused on stolen art is the Museum of Stolen Art. Put together by a student at NYU, the project presents artworks that have been stolen in a virtual format similar to a physical museum setting.[72] One exhibition that was presented focused on the works stolen from the Isabella Stewart Gardener Museum in 1990. Another exhibition, focused on the stolen works taken from the Afghanistan National Museum is being planned as well. The goal of the project was to shed light on the vulnerability of artworks as well as to present them in a creative and engaging way.[73]

Virtual and augmented reality technologies can be used in similar ways. They can provide opportunities for more individuals to interact with recreations of artifacts, and they can

[72] Kyle VanHemert, "See the World's Greatest Stolen Artworks in This Virtual-Reality Museum," Wired, January 16, 2015, https://www.wired.com/2015/01/see-worlds-greatest-stolen-artworks-virtual-reality-museum/.

[73] VanHemert, "See the World's Greatest Stolen Artworks in This Virtual-Reality Museum."

help researchers answer questions that might otherwise be hard to investigate, as seen through the Venice Time Machine project. Like the online databases that museums are creating for their collections, virtual reality technology can be utilized both inside and outside of museum settings. Projects such as Rome Reborn have adapted their program to function on personal computers to allow the public to engage with it. They have developed a format that incorporates the participant into the created environment. The interactive and engaging formats of virtual reality can make the subject come to life for participants.

Virtual reality environments can be created to simulate artifacts in their original contexts to create an engaging and immersive museum experience that focuses on a more holistic experience. Reestablishing the context of artifacts by returning them to where they were found has become a featured argument for the proponents of the repatriation of artifacts. One way to do this could be the creation of an augmented reality program that interacts with the exhibition space in the museum showing the object. The environment could include a recreation of the site where it was found, voice-overs that help explain facts about the artifact, or it could include other artifacts that would have been used alongside it. The program could be developed in an infinite amount of ways to include any information relevant to contextualize and explain the artifact in a way that would excite and engage audiences.

This technique may be particularly beneficial to the exhibitions of the Parthenon marbles and the bust of Nefertiti. The Acropolis Museum in Athens was designed to showcase the Parthenon and recreate its structure to contextualize its sculptures. The British Museum, however, has been criticized for its lack of contextualization for the marbles. By utilizing augmented reality technology in the form of small handheld tablets, or a similar method, visitors could travel through the gallery with the ability to see the objects in their original positions on

the Parthenon. Similar to the virtual tour technology already being utilized in museums, augmented reality programs could be used to give visitors more information about the objects in museums while helping to create a story for audiences to follow.

The bust of Nefertiti has been deemed too fragile to be transported, whether to be loaned or permanently returned. Creating a virtual exhibition featuring the bust could be a creative and engaging way to display the bust. The flexibility provided by the virtual nature of the exhibition could allow it to be shown in any building around the world, or through a compatible computer. The flexibility of virtual programs can also be expressed through a wide range of viewing options. Audiences may be able to interact with the programs as a part of a structured exhibition in a museum, a traveling exhibition put on by multiple institutions, or as a program that can be viewed through personal devices outside of a museum setting.

The potential uses of technology are endless due to the flexibility of the medium. As new technology is continuing to be created, museums are steadily incorporating them into their exhibitions and conservation practices. Digitization, 3D modeling, and virtual reality technologies have begun to become a more common practice for cultural heritage site conservation, and with their continuing use and development, they can become a more frequent presence within the museum.

Projects such as the Factum Foundation, Cyark, Rome Reborn, and the Venice Time Machine have made significant strides in uncovering the possibilities of the use of technology in the context of cultural heritage. These projects can be adapted and applied to current cases of debated ownership and calls for the repatriation of antiquities. By utilizing similar technologies, institutions can come up with creative exhibitions to help mediate conversations about repatriation and begin reaching solutions that satisfy both parties.

The complex history of the Western world has shaped present-day culture in many ways. The fascination with ancient art that began during the Renaissance continues as present-day countries tie their identities to the great civilizations that ruled the ancient world. The art of the Greek, Roman, and Egyptian civilizations represented power, knowledge, and prestige to those who claimed it and still symbolizes great civilization to us today. The ideology of colonialization that has been a part of Western nations for centuries fostered the "us vs. them" mentality that emboldened nations to claim the property of the societies they conquered. Artifacts were put on display in museums designed to convey the message of the importance and status of nations to their people. Even after the practice of imperialism has decreased, many of these artifacts remain in museums to this day.

The development of the field of archaeology has helped perpetuate the ideology of possessing the art and artifacts of the ancient world under the guise of collecting knowledge. This practice also helped develop the status of national museums as they began to become filled with the artifacts of others. As wealthy nations began exploring the globe and traveling with ease, the museum collections continued to grow.

As globalization gradually becomes the predominant system connecting the world and as many previously dominated countries have gained their independence, collaboration and diplomacy have become ever more necessary. Newly established countries are increasingly demanding their art and artifacts back from the Western countries that have held them for so long. Notable cases include the Parthenon Marbles held in the British Museum in London, UK, the bust of Nefertiti held in the Neues Museum in Berlin, Germany, and the Goddess of Morgantina held in Aidone, Italy. The three cases represent debates that hold a significant amount of meaning to both parties involved in each case. Similar to many other cases that call

for the repatriation of artifacts, each debate is framed by issues of national identity, legality, and ethical responsibility. Debates involving such concerns are often complicated and tricky to navigate.

With a growing range of technology being applied to cultural heritage sites, as well as being more commonly used in the museum setting, using technology to help mediate compromises in the discussions of repatriation becomes a possibility. While technology will not be able to solve the deeply rooted issues inherent in repatriation debates entirely, technology can be used to help placate the underlying concerns felt by either side of the debate. The previously discussed technological projects can help parties feel more confident in the safety of the artifacts with a detailed understanding of the structure and condition of the objects. The context of artifacts can also be recreated to help better convey information to audiences. Virtual exhibitions of artifacts can be utilized to help widen the ability of access to the artifact, and information presented with it. Technology may help artifacts travel between museums and other institutions to allow more visitors to interact with the artifact. With these adaptations in mind, parties may be able to begin productive dialogs that can lead to productive compromises.

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