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Bermuda's Museum Treasures: An Application of Collections Accessibility

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Bermuda's Museum Treasures:
An Application of Collections Accessibility

by

Britt R. Franklin

An Abstract of a Thesis
in
Museum Studies

Submitted in Partial Fulfillment
Of the Requirements
For the Degree of

Master of Arts

December 2014

SUNY Buffalo State
Department of History and Social Studies Education

ABSTRACT OF THESIS

Bermuda's Museum Treasures: An Application of Collections Accessibility

Over the past twenty years, led by large cultural institutions, there has been an evolutionary shift in the way that museums connect with visitors and make their artifacts and archives accessible. As cultural institutions face greater demands from audiences, museums are adapting and embracing technological components now fundamental to growth and success. The National Museum of Bermuda is a small institution that is in a transformative stage. This paper focuses on how the National Museum of Bermuda have integrated advanced exhibit design and components in addition to how they are implementing networking tools to invite audiences to take a deeper look at their collections.

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1. Introduction

The National Museum of Bermuda has an impressive collection that spans more than 400 years of history. It stores objects that have deep roots to the identity of the community, its patronage, and the global history that has helped shape the country Bermuda is today. At many museums, some items are never seen on display, existing only as a 'hidden treasure' known only to the museum staff. The competitive use of visitor leisure time places high expectations on a museum to exceed past experiences, and challenges an institution to offer an exciting, engaging trip and one that will be repeated in the future. Providing access to the collection, beyond seeing objects on display, is one of many ways to achieve a more engaging museum experience. This theory can be applied widely, but for the purpose of this paper, is most relevant to the National Museum of Bermuda. Through the integration of content-rich exhibits and creative use of social networking and an online presence, the National Museum of Bermuda has opened greater access to their collections and archives.

The motivation for this project stemmed from an interest in always wanting to know what else a museum had in its collection and curiosity for the stories linked with a particular object. While the weird and wonderful were intriguing, it was the everyday object and the acquisition story that would often pique greater interest. An Internship in 2011 at the National Museum of Bermuda afforded me the opportunity to be a part of the process in the development of the exhibit *Shipwreck Island: Sunken Clues to Bermuda's Past*. Reviewed in Chapter 5,

Shipwreck Island is very object-heavy and the research involved largely encouraged me to pursue this project. I believe that the question of how a museum can open access to its collection can be applied to any small museum. However, as technology continues to advance and change, museums must be malleable enough to adapt in a timely fashion.

While there are problems inherent with any museum collection, there was significant support in the literature for methods for ways to present objects in a manner that would not be harmful, but still allow visitors to engage to a certain degree. Initially, the argument for an open storage approach at the NMB was very strong as it often “reflects an ambition to increase access to the collections held as a whole.”¹ However, further research on the approach and a visit to the Luce Study Center at the Brooklyn Museum revealed that the affordability, physical, and technological demands of the approach would not be feasible in Bermuda. The Luce Study Centers, located in four museums in the United States, are solely focused on enhancing public access to stored objects and are a result of the appeal, felt by many visitors, of going behind the scenes. Coincidentally, that appeal is a significant motivating facet to this thesis.

As an open storage approach was no longer applicable, research focus was turned inward and examined what the NMB was already doing in terms of its collections access and object presentation. A highlight in this research was their careful and ultimately, successful and creative use of two key social media platforms, as opposed to a blanket-approach that the Brooklyn Museum was

¹ Graham Black, *The Engaging Museum* (New York: Routledge, 2005), 274.

criticized of doing in 2011.² This will be discussed further in Chapter 5, in addition to providing a closer look at the NMB's approach to social media platforms and online-usage.

This paper has been organized four major sections. In the first part, the reader will learn about the development of the National Museum of Bermuda and a brief history of the island of Bermuda. In the second part, the literature review will clarify the extensive research on technology and museums and the key players who have widely supported its use; it addresses the current atmosphere of the use of technology within small museums, the strengths and weaknesses associated with integrated use, and future opportunities for growth and how small museums can adapt. Additionally, the online digital collections and websites of the Metropolitan Museum of Art and the Brooklyn Museum will be introduced to demonstrate to the reader the extent of accessibility that can be achieved, and key components that are facilitated through a Museum website. The third part covers the methodology and approach for data collection and analysis, defining what a 'small museum' is and presenting a scale for comparison related to the income differential in Bermuda. Finally, the fourth part will review the exhibit *Shipwreck Island: Sunken Clue's to Bermuda's Past*, address the application of collections accessibility, and look at the key steps and future plans that the museum has begun to take.

Ultimately, this thesis discusses how the NMB has enhanced its visitors' experience through creative use of its collection and smart facilitation of

² Richard MacManus, "Social Media Case Study: Brooklyn Museum", *ReadWrite*, September 5, 2011. Accessed June 13, 2014.
http://readwrite.com/2011/09/05/social_media_case_study_brooklyn_museum

technology. By opening access to objects and information within its collection, the museum has demonstrated a competitive edge within the leisure time activities as defined by visitor-experience author, Graham Black (see Appendix 1 for list of leisure time activities). Technology is a key component in the argument for 'accessibility' and extensive discourse on the topic has demonstrated that it will remain to be fundamental for the foreseeable future. In the 21st-century, technology has become more affordable due to advancements and has been integrated into the day-to-day operations of many institutions. Even small museums have moved away from a strictly paper-based cataloguing system (although paper worksheets are preliminary steps), resulting in faster and more accurate documentation and object records of higher quality.³ In a time when visitors are placing higher demands on cultural institutions, technology has also provided audiences with more exciting, engaging museum experiences.

³ Caroline Carter et al., *The Small Museums Cataloguing Manual. A guide to cataloging object and image collections* (Melbourne: Arts Victoria, 2009), 8.

2. The National Museum of Bermuda

2.1 Introduction to Bermuda

The size of Bermuda, cost of living, and clarification for definition by the NMB as a 'small museum' was introduced in Chapter 3. A very brief introduction to Bermuda will be covered, providing a contextual background from which to view the NMB, in addition to discussion about one of the Island's most important industries: tourism.⁴

Accidentally discovered by explorers, settled by the British, and utilized as a key military outpost from the American Civil War, Bermuda's heritage and culture is deep, rich and varied. Its prolific seafaring history from the 1650s transformed the Island into perhaps the most intensively maritime colony within the British Empire, building up expansive commercial networks through the western Atlantic.⁵ Private and public historical collections, and archaeological excavations have uncovered material goods that attest to the rich commercial networks facilitated by Bermuda ships and seamen as supported by author and professor Michael J. Jarvis. The defensive land and maritime history of the Island is well researched and documented and the National Museum of Bermuda enjoys expansive collections, such as artifacts recovered from Spanish and

⁴ 579,808 visitors were recorded as having visited as of year-end in 2013, having dropped more than 5% from 2012, when 615,171 visitors were recorded.

"Visitor Arrivals Report 2013 Year End,"

http://www.gotobermuda.com/uploadedFiles/Bermuda_Tourism_Authority/Pages/2013%20YEAR%20END%20VISITOR%20ARRIVALS%20REPORT.pdf, 1.

⁵ Michael J. Jarvis, *In The Eye of All Trade. Bermuda, Bermudians, and the Maritime Atlantic World 1680-1783* (Chapel Hill: University of North Carolina Press, 2010). 5.

Portuguese shipwrecks that include silver and gold from Peruvian mines and Carib ceremonial weapons.

The Island has more than one hundred cultural and heritage institutions that help to shape the many community identities. Many items that make up the collections of historic societies and museums Island-wide have very strong maritime connections and so, before the NMB was national, it was the Bermuda Maritime Museum. A brief introduction to Bermuda, its discovery, and the topographical makeup sets the stage for discussion about the NMB.



Figure 1. Map of the 1607 Sea Venture voyage showing route and dates of departure and arrival from Plymouth to Bermuda (June - July 1609) and Bermuda to Jamestown (May 1610).

Bermuda is a small 21-square mile island located in the western North Atlantic Ocean. Rich in culture and heritage, the British Colony sits atop a volcanic seamount, isolated from the more southerly islands of the West Indies and America. Man's first contact with Bermuda was made in 1505, when Juan Bermudez, a Spanish seafaring pilot accidentally discovered it on his return

voyage from the West Indies. Spanish and Portuguese maritime and commercial activity continued past Bermuda, also known as the Devil's Isle, well before any British contact with the island. In 1609, a fleet of nine merchant ships left Plymouth, England with 150 settlers and provisions onboard; the settlement of Jamestown in Virginia was the destination (travel timeline shown in Figure 1). A bad storm separated the flagship *Sea Venture* from the fleet but all passengers survived after the captain, Admiral Sir George Somers, ran his ship aground on a reef and they were able to swim ashore. In the chapter *The Creation of the National Museum of Bermuda, 1974-2011*, these very early origins of Bermuda are described as follows:

Into that natural paradise in the century after Bermudez came both swine and men -- the result of shipwreck or exploration -- the former creating the first human-generated ecological disaster on the Bermudas; and the latter, aside from the occasional forced sojourn, coming to settle for good in July 1612.⁶

In May of 1610, the settlers sailed to Virginia on two ships, the *Patience* and the *Deliverance*, leaving behind three mutineers who remained in Bermuda but would later be returned to England in 1612 when the Island was purposefully settled.⁷ The first structures, the first Government house and church, were built in 1612 in St. George's, the first established settlement on the island. St. George's is now a UNESCO Heritage Site and is an epicenter for cultural and heritage institutions, such as The St. George's Foundation and The Bermuda

⁶ Edward C. Harris, "The Creation of the National Museum of Bermuda, 1974-2011," in *Plantation to Nation*, ed. Alissandra Cummins et al. (Champaign: Common Ground, 2013), 110.

⁷ On July 11, 1612, the *Plough* arrived in Bermuda with 60 settlers (disputed by some sources as only 50), the Island's first Governor, Richard Moore (1783-1618) and supplies on board. The Virginia Company, based in London, was responsible for sending the *Plough* to the island.

National Trust, within one concentrated area. From 1612, settlers continued to arrive in Bermuda, marking the beginning of rapid growth and achievement for both the Virginia Company and the island of Bermuda.

Geographically, Bermuda is comprised of one hundred smaller islands that make up the “Bermuda Archipelago,”⁸ but is referred throughout this paper as a singular island for continuity’s sake. A dense and hazardous ring of coral reefs surrounds the Island, contributing significantly to the large numbers of shipwrecks that have been recorded and excavated over time. Diego Ramirez first mapped the island in 1603, followed by Richard Norwood from 1616-1617; these early cartographic studies reveal divisions of land (nine tribes or parishes established in the 17th-century) that are maintained today, in addition to some of the oldest homes still inhabited today, most of which that have been ‘listed’ as Historic Monuments and are protected under Historic Preservation Areas.

The National Museum of Bermuda is to be found in the most westerly parish, Sandys, and is distinguishable by its location within Royal Naval Dockyard and The Keep. The Royal Naval Dockyard, here on out referred to as Dockyard, was established as the defensive post for the British Navy through the American Civil War, the War of 1812 and the first and second World Wars. Its purpose was to operate as a place for repair, provision, and to replace armaments and powder for the ships of the British Royal Navy and allies. Today, the fortifications that were built to defend and protect the military stationed in the

⁸ The exact number of islands is on decline with several small islands being affected by climate change or human activity, such as military activity during WWII (the construction of the US Naval Air Base, now Bermuda International Airport) to create one large piece of land. Martin L. H. Thomas, *The Natural History of Bermuda* (Bermuda: Zoological Society, 2004), 16.

West end are home to and part of arguably the most important cultural and heritage institution in Bermuda; the NMB.



Figure 2. Screenshot of an Instagram post by the National Museum of Bermuda: depicts a British convict working on the construction of Dockyard in 1848. Also presents its format for social tagging, better known as hash tagging.

The buildings still utilized in Dockyard have received extensive repair and preservation (with exception of those in the Victualling Yard that remain derelict) maintaining many of the colonial characteristics that were representative of the skilled use of locally sourced materials. The NMB chose to highlight the labor of British slaves in the construction of Dockyard in an August posting on their Instagram account; Figure 2 shows the format that the museum generally

follows, usually giving a small description, accompanied by four or five Bermuda-museum specific hashtags, and then an additional few hashtags directly related to the theme of the image. Unfortunately, no information about the acquisition, provenance, artist or collection is given, limiting the level of access the visitor has to the specific item being shown. Hashtags and the concept of social tagging used by museums will be discussed in further detail in Section 3.2.

The structures of Dockyard were built from the very hard Walsingham limestone as opposed to the soft limestone used throughout residential construction as early as the 18th century, and replaced temporary wooden-warehouses and storehouses.⁹ The large and impressive lightly-colored stone structures were constructed by thousands of British convicts as mentioned above, who were stationed at Dockyard from 1809 until they were returned home in the 1860s; the buildings now serve entirely different purposes than the storehouses and ammunition bays of the past.¹⁰

Tourism in Bermuda remains one of the island's most important industries, even in consideration of recent decreases in visitor numbers. In the National Tourism Plan, commissioned in 2011, published in 2012 and accessible through the Bermuda Tourism Authority's website, the top two strengths of Bermuda were identified as historical legacy as high end destination and unique cultural and

⁹ David L. White, *Bermuda's Architectural Heritage: Sandys* (Hamilton: The Bermuda National Trust, 1999), 118.

The hard limestone was also used as road surfacing until 1946 when tarmac and automobiles took control of the roads. The Walsingham limestone or 'gaol-rock' (named after the 'gaol-nut' prisoners responsible for quarrying the rock), was quarried from Tom Moore's Jungle in Hamilton Parrish, where it was found in abundance.

¹⁰ *Ibid*, 108.

A more extensive discussion on the architecture, construction and techniques of building the Royal Naval Dockyard can be found in: Edward C. Harris, *Bermuda Forts 1612-1957* (Bermuda: Bermuda Maritime Museum Press, 1997)

natural resources with international appeal. It was acknowledged that the “...tourism industry was declining, and [we] needed to take definitive and meaningful action to turn it around.”¹¹ The current improvements and changes that the NMB is implementing feeds directly into the key strengths of the Island as outlined above; by taking creative stances on exhibit design and successful utilization of social media platforms, the museum embraced the challenge to take definitive and meaningful action to enhance a visitor’s experience, all while presenting a unified national identity with high professional standards. Consistently positive reviews on public visitor feedback sites such as Trip Advisor over a five-month period consisting of peak-tourist season reveals that what the museum is doing, is being done well, with many people urging tourists to visit Bermuda. The increase in the capacity of airline availability not only demonstrates a “demand for Bermuda and performance in the future...”¹², but it sets the stage for the paradigm shift that currently entrenches the National Museum of Bermuda.

Dockyard currently has the largest port on the island; with the King’s Wharf and Heritage Wharf accommodating two large cruise ships at one time, carrying far more than 3,000 passengers, each in addition to all on-board staff. The museum is in close proximity to both wharves, and subsequently enjoys considerable patronage from cruise-ship visitors, shown in the map of the Royal Naval Dockyard in Figure 3. From one of the two balconies of the four-story

¹¹ “Bermuda National Tourism Master Plan,” Bermuda Tourism Authority, accessed August 7, 2014, <http://www.gotobermuda.com/bermudatourism/National-Tourism-Plan/>.

¹² Jonathan Bell, “Next Year looks promising for tourism - BTA,” *The Royal Gazette*, April 25, 2014, accessed August 7, 2014, <http://www.royalgazette.com/article/20140425/NEWS04/140429836>.

Commissioner's House, a visitor can oversee all of Dockyard, both wharves, and on a clear day, the entirety of Bermuda. Historically, Bermuda has enjoyed an even distribution of cruise ship passengers coming into one of three ports on the island; however, in recent years, ships have increased in size, limiting their docking abilities.



Figure 3. Diagram of the Royal Naval Dockyard with the National Museum of Bermuda and other key attractions named

The main city-centre of Hamilton, and the UNESCO Heritage Site of the Historic Town of St. George's enjoyed seasonal visits from smaller cruise ships for many years, but now local businesses are starting to feel the strain of the monopoly that Dockyard is enjoying. In an article published in *The Royal Gazette* in June 2014, the Chief of Tourism, Bill Hanbury, stressed that Hamilton and St.

George's business were struggling and if smaller cruise ships did not return to the island, their conditions would only get worse.¹³

Getting to the Royal Naval Dockyard from anywhere on the island can take up to an hour at most; if you drove from St. George's at the farthest end of the Island to Dockyard at the other end, it would take over an hour; leaving from Hamilton would only take half an hour. Local visitors to the museum have the flexibility of owning and relying on a car or scooter, thus eliminating the need to use public transportation. For visitors by sea or air, public transportation and moped or scooter rental are available. The Sea Express Ferry service¹⁴ and pink busses are the two forms of public transport widely available, but troubles related to local politics (such as striking) and seasonal increases in visitor volume have revealed weaknesses within the transportation infrastructure.

2.2 History of the National Museum of Bermuda

Formed in 1974 by a small group of members from Bermuda's National Trust organization, the original Bermuda Maritime

NMB Statistics

7 Employees

15.73 acres of land

50,000 annual visitors

60,000 items in Collection

\$1-million Annual Budget

\$2-million Endowment

¹³ Raymond Hainey, "More smaller cruise ships needed, says tourism chief," *The Royal Gazette*, June 27, 2014, accessed June 27, 2014, <http://www.royalgazette.com/article/20140627/NEWS04/140629740>.

¹⁴ "SeaExpress Ferry Services," Government of Bermuda and Department of Marine & Ports Services, accessed June 27, 2014, http://www.seaexpress.bm/ferries_about.aspx.

Museum was located within the ten-acre site of the largest fort on the island: The Keep.¹⁵ More than twenty years after the Royal Navy removed itself from Dockyard in the 1950s,¹⁶ the museum began as a grassroots organization with a skeleton staff, enormous restoration projects of nearly every building within The Keep, and a growing collection that expanded with exhibits and institutional research.¹⁷ This chapter will introduce the museum collection and its early development, the exhibits currently on display, and future plans for the institution.

2.3 The Collection

As this paper is greatly concerned with how more access to a museum collection is achieved, a closer look at the current museum collection is needed. From its early inception, a collection policy was put in place that was mandated by an Act of Parliament (the *Bermuda Maritime Museum Association Act 1978*) that largely established the museum with the specific aim of collecting and caring for objects that were associated with the Island's maritime history.¹⁸ This is still part of the mission of the museum. In 1975, when Queen Elizabeth II visited Bermuda, she opened the first exhibition hall (where *Shipwreck Island* is displayed) where every object in the collection was on display. They were made

¹⁵ Harris, "The Creation of the National Museum of Bermuda," 111.

¹⁶ Raymond Hainey, "Cannonball done. Museum handed new 100 year lease," *The Royal Gazette*, May 24, 2014, accessed August 7, 2014, <http://www.royalgazette.com/article/20140524/NEWS/140529833>.

¹⁷ The museum has long established itself as a research institution to generate new knowledge, reinterpret the Island's past, and public and exhibit modern scholarship. The museum's programming, exhibitions, publications and other interpretive material are all underpinned by the research that is undertaken.

¹⁸ Harris, "The Creation of the National Museum of Bermuda," 115. The mandate also required the museum to preserve the historical buildings and gun emplacements located within The Keep fort.

up of objects from a number of collections, including the Bermuda Aquarium, Museum and Zoo and the Bermuda National Trust, and they were on 'permanent loan,' to be returned if the museum was to close.¹⁹

As the museum began to enjoy patronage through financial donations, they also experienced a great number of gifts (as opposed to continued 'permanent loan' scenarios). Notable collections that were acquired included the Tucker Collection of shipwreck artifacts (that would later be purchased by the Bermuda government and given on permanent loan to the museum) and the Ruberry Collection of glass plate negatives. Items related to the Royal Naval Dockyard, passenger and commercial shipping, recreational diving and maritime activities that are succinctly Bermudian, such as piloting, fishing, and boat racing, continued to expand the collection,²⁰ offering local visitors historical narratives that are easily identifiable.

Over time, the collection policy shifted in recognition of the many items that, if not acquired by the NMB or other collecting institutions, may have been discarded. This shift has occurred on a number of occasions throughout the museum history, most recently demonstrated by the change of name discussed above. Today, the collection identifies sixteen categories of objects with many more estimated in the future and they encompass the museum site itself; extensive archaeological finds of terrestrial and underwater; archaeological records; armaments; photographs; documents; works of art and carvings; maps and plans; ship models; textiles; rare books; coins and currency; small and large

¹⁹ *Ibid.*

²⁰ *Ibid.*

watercraft; tools and equipment; furniture; medals, plaques and crests; and digital records.²¹ To date, the museum has not changed their mission but it has been identified that the broadened scope of the collection is now more in line with its adjusted national focus that has been untaken; no longer limiting itself within a requisite of a maritime-theme. Moreover, the NMB “wishes to develop into a space that provides the means to discover and construct a sense of place and identity, rather than create it.”²²

With more than 70,000 objects in the current collection, storage is a concern for the museum, projecting limitations on what can and cannot be accepted into the collection. For example, one area that has been identified as having an opportunity for expansion is the category of transportation; there is an extensive history of bicycles, early motor-vehicles and airplanes that are integral to the multifaceted development of the Island, but there is not a big enough space that could possibly accommodate such growth.²³ Many of these items are part of private collections owned by Bermudians, such as Paul Martins. In November 2014, Martins opened the doors to his museum, Bermuda’s first Vintage Transportation Museum; it presents almost 30 years of active collecting, showcasing an impressive range of the various modes of transportation used on the Island,²⁴ and intriguingly, fills a gap identified by museum staff.

²¹ *Ibid*,116.

²² *Ibid*.

²³ Elena Strong and Jane Downing, interview by author, Bermuda, April 28, 2014.

Plans for fundraising for a large storage facility are in place at the museum.

²⁴ Paul Martins’ collection was first introduced to Bermuda in 2011 in an article in the local paper, *The Royal Gazette*. Today, the newly opened Vintage Transportation Museum shares a space with a café (coincidentally operated by Martins’ twin sister, Sonia); while they do not yet have a website, they manage a Facebook page with photographs and general information.

2.4 From Maritime to National

Until 2009, the Bermuda Maritime Museum facilitated rotating exhibits, active collecting, organized underwater and land archaeological excavations and post-excavation storage and study, extensive restoration of historic buildings and most significantly, research and scholarship. From the mid-1980s, the museum published an annual magazine called the *MARITimes* and has published more than 20 books. The Executive Director has been writing a weekly column in the local newspaper for many years, culminating in three volumes of his text titled *Heritage Matters*. The museum also published two journals; the *Bermuda Historical Quarterly* preceded the current annual peer-reviewed multidisciplinary journal, *The Bermuda Journal of Archaeology and Maritime History*. Today, the museum continues to fulfill the areas outlined above, but has taken on a more national perspective that may be linked to a shift from the Bermuda Maritime Museum to the National Museum of Bermuda. Although the name change that occurred in 2009 may be attributed to museum rebranding, it is also part of a bigger, community effort of national change and identity. This will be discussed below in relation to the shift from the Bermuda Maritime Museum to the National Museum of Bermuda.

Originally, the museum incorporated the most northern portion of the Royal Naval Dockyard that was left in a derelict state until its inception in 1974. This area included The Keep and the Commissioner's House, all of which demanded extensive and immediate restoration, refurbishment and continued upkeep. In 2007, pre-restoration work on the derelict Casemate Barracks, at the

time owned by the West End Development Corporation (WEDCO), began and was carried out by volunteers, many of which were part of corporate “Days of Giving.”



Figure 4. Entrance to the National Museum of Bermuda via the original gateway to The Keep

The original concept was to clear the historic site of trees, debris, and the concrete structures, not original to the buildings.²⁵ As the project progressed and the Casemate Barracks were uncovered bit-by-bit, greater interest in the project developed; local volunteers suggested that the Casemates should be rejoined with The Keep, and subsequently the museum, tying together either end of Dockyard, becoming a “historic reality.”²⁶ The individuals who volunteered their time and effort helped to save the Casemates area, and their enthusiasm for

²⁵ Edward Harris, “Casemates Barracks goes National,” *The Royal Gazette*, May 31, 2014, accessed August 7, 2014, <http://www.royalgazette.com/article/20140531/ISLAND/140539957>. These buildings were constructed to accommodate and facilitate the Casemates during its time as the maximum-security prison for the island, from 1963 to 1994 when the facility closed.

²⁶ *Ibid.*

what started as a clean-up project, helped the Government, WEDCO, and the museum recognize the importance of the buildings and the opportunities they presented. Their effort helped to create Bermuda's first and only national museum and, as pointed out by Dr. Edward C. Harris, "...repeated in spirit and on the ground, the joining together of the community that took place in 1974, when volunteers worked to make The Keep a maritime museum for Bermuda."²⁷

In July 2009, the Cabinet of the Bermuda Government approved the proposed idea, so the Casemates area and the connecting Northwest ramparts were granted to the museum as part of a new 99-year lease.²⁸ Almost two years later, in December 2013, the Governor of Bermuda, George Fergusson, made the agreement with The Bermuda Maritime Museum Association Amendment Act 2013 that officially changed the name of the museum to the National Museum of Bermuda.²⁹ The most current lease has expanded the museum's land holdings to include almost 16 acres of grounds (15.78 acres), eight exhibit buildings and what has been acclaimed as "the most extensive historical collection on the Island,"³⁰ shifting the museum's role from a strict focus on the maritime to expanding its collections and focusing on other aspects of Bermuda's portable and built heritage.³¹ Today, the Casemate Barracks remain closed to the public as it is still undergoing extensive restoration by the museum and volunteers.

²⁷ *Ibid.*

²⁸ Hainey, "Cannonball done."

The new lease on the existing National Museum was approved by the House of Assembly in May 2014 and replaced an earlier lease of the same duration granted to the Maritime Museum and approved in 1985.

²⁹ Harris, "Casemates Barracks goes National."

³⁰ "National Museum of Bermuda. Map & Guide -- Welcome" *National Museum of Bermuda*.

³¹ Harris, "Casemates Barracks goes National."

At the moment, change is constant for the NMB. In the past four years, the museum has expanded physically with the inclusion of the Casemate Barracks, opened a new permanent exhibit, and installed an eye-catching and thematically relevant playground to continue drawing families back inside (Figure 5). On top of these physical changes, the museum is in the process of designing a new website to replace the current outdated one, and has plans for a new Collections Policy and Strategic Plan with specific focus on storage, community involvement and education.³² Although the Government of Bermuda does not currently have Privacy or Data Protection laws, the museum staff operates as per the Code of Ethics for Museums as set by the International Council of Museums (ICOM) and refuses to accept objects that go against the museum's mission or ethics³³

³² Elena Strong and Jane Downing, interview by author, Bermuda, April 28, 2014.

³³ Elena Strong and Jane Downing, interview by author, Bermuda, April 28, 2014.

For example, the museum will not accept sensitive materials, human remains, and artifacts from recently uncovered shipwrecks or endangered species.

The NMB is not currently a member of ICOM.



Figure 5. The National Museum of Bermuda's new playground, complete with a green moray eel and a scaled down replica of St. David's Lighthouse

For a potential visitor to the NMB, one of the first points of contact will most likely be through one of its online platforms. As mentioned above, the current museum website (<http://www.bmm.bm/>) is outdated, and while it presents all relevant information, it lacks the interaction and stimulating range of information and activities that is suggested for any museum to achieve an affective Internet presence.³⁴ Although the homepage identifies that it is the National Museum of Bermuda, the website largely operates under the institution's original name, the Bermuda Maritime Museum which has the likelihood for confusion. Under the heading "About the BMM," the museum clearly states its mission:

³⁴ Deborah Seid Howes, "Why the Internet Matters: A Museum Educator's Perspective," in *The Digital Museum: A Think Guide* ed. Herminia Din and Phyllis Hecht (Washington: American Association of Museums, 2007), 75.

The primary mission of the National Museum of Bermuda lies in the preservation and exhibition of its collections of artifacts and in the maintenance of the historic buildings and features of the Keep, so entrusted to it by an Act of Parliament. More generally the Museum works to explore, preserve, and interpret Bermuda's history and heritage.

One of the more impressive characteristics of the National Museum of Bermuda is mentioned in its mission: the continued maintenance and preservation on the historic buildings, ramparts and bastions of The Keep. One should consider the buildings that house the many exhibits as more than simply 'museum property' -- they are part of the wider story of the Royal Naval Dockyard and helped to create the identity of the West End then and now. Similar parallels can be made with The Buffalo History Museum and their occupation of the New York State Building, built for the Pan-American Exposition in 1901.

Considered the largest fortress in Bermuda, The Keep was once the stronghold for the Royal Naval in Dockyard. It was within the six-acre citadel that the Maritime Museum put down its roots in 1974 and it is through those same gates that tens of thousands of visitors walk through every year. The Keep was built to protect the naval base and the buildings within and was a mix of residential and utility space, with ordnance buildings located in the Lower Keep Yard, and the Commissioner's House located up on the hill. The Keep is protected by seven irregular bastions and ramparts with casemated guns integrated as reinforcements, all of which was designed by the Royal Navy's Engineers.³⁵ Below the Commissioner's House, the Lower Keep Yard is a flat and level space flanked by buildings that were constructed to be workshops and

³⁵ "Virtual Site Map - Visiting the Museum," Bermuda Maritime Museum, accessed July 14, 2014, <http://www.bmm.bm/map.htm#visiting>.

magazines,³⁶ and today, it has five active exhibit spaces, with three buildings currently closed for renovations and repairs in preparation for future plans.

Since the museum's occupation of The Keep, these buildings have served as exhibit spaces while still maintaining the architectural and cultural integrity of their original functions. The three buildings that flank the Lower Keep Yard are Ordnance Buildings built in 1850, 1852, and 1853/1890, designed to hold ammunition, with each building varying in design and current use. The 1850 building that was officially opened by the Queen in 1973 and aptly renamed the Queen's Exhibition Hall, houses the newest exhibition *Shipwreck Island: Sunken Clues to Bermuda's Past*. It has the original vaulted-ceilings and was intended to serve as a magazine, with the capacity to store 4,860 kegs of gunpowder.³⁷ The 1852 Ordnance House, named the Forster Cooper Building, is currently closed for renovations; but was used as exhibit space through the 1990's. While it shares some design similarities to Queen's Exhibition Hall, such as its vaulted ceilings, it is smaller and has three interconnected chambers. Of all these buildings, the 1853/1890 Ordnance House (also known as the Boat Loft) still accommodates a number of exhibits that were installed in the early 1990s but that will be soon be getting new, refreshing exhibits.³⁸ Today, the Boat Loft has four exhibits spread over two floors that showcase inherently Bermudian objects and artifacts: *Bermuda Fitted dinghies*, *Local watercraft*, *The Great Storehouse Clock*, and *Power of Progress - Electricity in Bermuda*. Behind the 1850 and

³⁶ *Ibid.*

³⁷ White, *Bermuda's Architectural Heritage: Sandys*, 113.

³⁸ At the Annual General Meeting of the Bermuda Maritime Museum Association in 2013, it was noted that a small exhibit on the *Spirit of Bermuda* would be installed for display. Elena Strong, *MARITimes* (2013, 26.1), 26.

1852 Ordnance Houses is the Keep Pond, the 1875 Shifting House (closed for renovations), and the Shifting House Office (closed for the construction of a children's interactive exhibit, *The Museum Playhouse*). Today, the Keep Pond is home to Dolphin Quest, offering visitors the experience of swimming with and feeding dolphins. The original purpose of the Keep Pond was to ensure safe transportation of munitions from ships at port into the protection of the citadel.³⁹

In May 2014, a playground by Monstrum, a Danish playground design company, was installed and opened in June (see Figure 5). Nestled to the right of the Shifting House Office and set back a distance from the Keep Pond, the playground has elements unique to Bermuda: a giant green moray eel wraps around a 21-foot tall replica of St. David's Lighthouse, out of which shoots a 32-foot slide. Correia Construction Company Ltd., a local construction company, supported the transport and installation of the playground (overseen by two members of the design company) and the project was sponsored by ACE Foundation-Bermuda. Mentioned above, the children's interactive exhibit *The Museum Playhouse* will be installed in the adjoining Shifting House Office building. In 2013, *MARITimes* published news that the museum was working to develop an interpretive plan with a local arts group called Fungus Collective. Not only will *The Museum Playhouse* be the first of its kind at the NMB, but it will be in alignment with the constructivist approach that the museum has taken in terms of exhibit design, focusing on family learning, group interaction and meaning-

³⁹ "Virtual Site Map - Visiting the Museum."

making.⁴⁰ The playhouse will also begin laying the groundwork for future educational programming that the museum is currently lacking.

The upper grounds of The Keep have a smaller number of buildings that display exhibits, but those that do are much larger in size. The grandest building of the National Museum sits high on the hill, overlooking The Keep and Dockyard, and West, all the way to the Casemate Barracks; in the other direction lays the island of Bermuda. Designed around 1820 by Edward Holl, the chief architect for the Royal Navy at the time, the Commissioner's House was once the home to the civilian commissioner of Dockyard, but coincidentally, was much larger than the Government House and the Admiralty House.⁴¹ It is the world's first prefabricated cast-iron residential building to be built,⁴² and has been returned to its former glory through a twenty-year restoration program. Original construction on the house, incorporating a double verandah, began in 1823 and lasted for five years, successfully installing prefabricated building materials and working with hard local Walsingham limestone.⁴³

Today, the Commissioner's House is the museum's most expansive exhibit space, 20,000 square feet of exhibit space and dedicated to themes and events from Bermuda's Defence Heritage to Slavery in Bermuda and a US Forces Collection. A complete list of the exhibits in the Commissioner's House can be found in the Appendix on page 88. The most remarkable exhibit in the

⁴⁰ Harris, "The Creation of the National Museum of Bermuda," 114.

⁴¹ White, *Bermuda's Architectural Heritage*, 109-110.

⁴² "National Museum of Bermuda: Map & Guide", Museum map and guide -- Commissioner's House.

⁴³ White, *Bermuda's Architectural Heritage*, P109.

For further reading on Walsingham limestone and local Bermuda stone, see P118.

house, however, does not contain a single artifact or object, but covers all 500 years of Bermuda's history with an eye-opening presentation. Graham Foster, a Bermudian sculptor and painter, spent four years (August 2005 to March 2009) and more than 7,000 hours of research and painting before completing the mural.⁴⁴ Foster's *Hall of History* was officially opened by Her Majesty The Queen (Elizabeth II) on 25 November 2009; it fills 1,000 square feet with Bermuda's human history, in addition to "flora and fauna, historic and contemporary personalities, milestone events from Bermuda's past, plus nostalgic flashbacks and folklore."⁴⁵

A large portion of the discussion thus far has related to the use of digital technology to reach wider audiences and open levels of access across the world. Not only is Foster's mural highly visually appealing (and very busy), but the artist has presented the painting in its entirety in a digital format on his personal website (<http://www.grahamfoster.com>). He invites visitors to look at each panel of the mural through the 'mural viewer'. Using clearly explained functions for how to manipulate and move through the panels, a visitor can zoom into certain areas to take a better look at a certain subject or highlight details. Unfortunately, like NMB's use of Instagram to disseminate the digital image of a British convict laboring (Figure 2), Foster does not supplement the digitized panels with related histories. However, a large-scale publication of the mural, *Hall of History: Bermuda's Story in Art* (2011), does do this, achieving the visual and

⁴⁴ "Epic 'History of Bermuda' Mural," Graham Foster, accessed August 10, 2014, <http://www.grahamfoster.com/pages/mural.html>.

⁴⁵ Jessie Moniz, "New book explores beauty of mural and Commissioner's House," *The Royal Gazette*, November 16, 2011, accessed July 10, 2014, <http://www.royalgazette.com/article/20111116/ISLAND04/711169996/0>.

informational fusion that is often seen with online collections. Provided Foster is supportive of an ongoing partnership with the museum, the NMB's new website poses an opportunity to link to his digitized images of the mural, presenting alternative exposure to the rest of his work as a local artist.

Staff offices and the curatorial department, artifact conservation laboratory and collection storage are situated directly behind the Commissioner's House. Nearby, the High Cave and Magazine exhibit *Prisoners in Paradise* take visitors to a subterranean level of the citadel, and the 100-year-old Bermuda yacht, *Dainty*, is exhibited in a small building towards the northwest ramparts and Casemate Barracks.

The reader has already learned that contemporary uses of many of the buildings in Dockyard are not in line with their original function. The above discussion has demonstrated that the NMB's exhibits are displayed in a range of buildings that have been restored and repurposed, at times limiting exhibit size and object-placement due to pre-existing conditions. For instance, Bermuda has a very high humidity index year-round, but particularly in the summer, which encourages the growth of mold on any material that is organic. Items and artifacts that are organic, fragile or sensitive to moisture and high temperatures cannot be displayed in a space that is not air-conditioned. However, exhibits with more stable objects, such as those about Bermuda fitted-dinghies and other local watercraft in the 1853/1890 Ordnance House (Boat Loft), are reasonably secure without air-conditioning.

3. Literature Review

“A museum is the memory of mankind as it preserves pieces of history.”
Philippe de Montebello, former Metropolitan Museum of Art director⁴⁶

The thesis of this paper asks how a small museum can give the public greater access to its collection. While there has been much theory relevant to exhibit design, the implementation of lifelong learning, and enhanced engagement between the object and visitor, it is the creation of technology that is at the root of the answer. The first part of this literature review will cover the major publications used in assessing the technological climate of American museums and libraries, discussing theories that relate to how best to utilize digitization including methods that are low in cost and upkeep, and the realistic pros and cons, such as costs associated with a ‘digital museum’.

The second part will highlight two large museums that have integrated digital technology seamlessly into their functionality. Sources with different opinions of the benefits of digital technology will be introduced and responses to digital online collections will also be reviewed. The use of online digital collections has been chosen as a format for this literature review because of the nature of the thesis and its focus on the future of the museum profession and survival of collections in a competitive age.

⁴⁶ “A History Of Museums, ‘The Memory of Mankind’,” *All Things Considered*, NPR, November 24, 2008, <http://www.npr.org/templates/story/story.php?storyId=97377145>, accessed August 3, 2014

3.1 The 21st-century Museum

Within the museum field, substantial research and discourse have been published regarding technology as an over-arching, but very important, theme. A simple request for the keywords 'technology in the museum' in a browser returns more than 21 million results. Museums are constantly experimenting with technology in order to give their visitors the most exciting and engaging experience yet, and for the National Museum of Bermuda, this is no exception. The title of this thesis refers to Bermuda's Museum Treasures and collection accessibility, emphasizing the objects that are held at the NMB, while also identifying a key access for debate: accessibility. In Caroline Lang's article "The Public Access Debate," she strongly advocates for collections to be made accessible to as many people as possible. She also makes mention of a debate on this topic that did not appear in any of the other sources used. While it is widely agreed upon that museum collections are of immense importance because of their educational, social and cultural values, amongst the national and specialist press in the United Kingdom, there has been significant debate about making them readily available. The polarizing debate essentially boils down to elitism versus popularization or 'dumb-ing down' for the masses.⁴⁷ However, this is not a debate apparent in the American sources used.

Without a more broad understanding of technology within the museum field, there is no context in which to ground this thesis. The term 'digital technology' is used in abundance through much of the scholarship published on

⁴⁷ Caroline Lang, "The Public Access Debate" (2006) in *The Responsive Museum: Working with Audiences in the 21st-century* (eds) Caroline Lang, John Reeve, and Vicky Woolard (2006), p29-30.

the topic. A report published by the Institute of Museum and Library Services defines 'digital technology' as enabling "the full range of holdings in our museums, libraries, and archives -- audio, video, print, photographs, artworks, artifacts, and other resources -- to be catalogued, organized, combined and made accessible in new ways."⁴⁸ To simplify, digital technology refers to the use of digital or computerized devices, methods and systems within the context of the museum-world. Devices such as touch-screen tablets within exhibit spaces, in addition to personal digital devices that can help to facilitate storytelling and engagement are becoming regular fixtures in museums of all sizes. At the NMB, iPads have been integrated as part of the exhibit *Shipwreck Island: Sunken Clues to Bermuda's Past* and help to facilitate further storytelling and engagement associated with the objects displayed.

Ross Parry, professor and author, has contributed to countless conferences, anthologies, edited volumes and articles over the past 15 years and has edited one of the most informative and important volumes relative to 'digital technology' in museums. His contributions alone appear to follow closely the evolution and rising importance in the uses of digital technology; he argues that the volume of research on the topic coincides with a "realignment and openness to new modes of thought" occurring at the same time as a heightened investment and advocacy,⁴⁹ representing just how integral to cultural institutions it is. In 2011, Parry edited the volume *Museums in a Digital Age* which was split into

⁴⁸ Institute of Museum and Library Services, *Status of Technology and Digitization in the Nation's Museums and Libraries*, (Washington: Institute of Museum and Library Services, 2006), 1.

⁴⁹ Ross Parry, "Digital Heritage and the Rise of Theory in Museum Computing," in *Museums in a Digital Age*, ed. Ross Parry (London: Routledge, 2010), 465.

seven areas of focus; information, spaces, access, interpretation, objects, delivery and futures. It addresses a very wide spectrum of concerns, from how to approach digital surrogacy to virtual visits at an electronic science center.⁵⁰ The volume presents more than forty chapters of discourse pertaining to more than twenty years of practice and research in museums around the world. While Parry's volume is greatly influential in support of how best to facilitate the many uses of technology within a museum setting, attention is drawn to an important warning for all institutions and museum professionals. Tomislav Šola, a Museologist from Croatia warns us of the 'technology trap' that occurs when the museum begins to pursue technology for its own sake as opposed to a guiding tool;⁵¹ most remarkably, Šola's warning was published in 1997, well before technology was rooted as firmly in museums as it is today. In 2011, the Brooklyn Museum was criticized by Richard MacManus, founder of the tech news site ReadWrite, for 'casting the social media net too wide' and ultimately falling into Šola's technology trap. The museum's web presence appeared very high, with links to a museum blog, Facebook page, Twitter account, photo sharing Flickr account, YouTube, and Tumblr blog; however, the platforms were not updated

⁵⁰ See Olivia C. Frost, "When the Object is Digital: properties of digital surrogate objects and implications for learning," in *Museums in a Digital Age*, ed. Ross Parry (London: Routledge, 2010), 237-246; and Roland Jackson, "The Virtual Visit: towards a new concept for the electronic science center," in *Museums in a Digital Age*, ed. Ross Parry (London: Routledge, 2010), 153-158.

⁵¹ Tomislav Šola, *Essays on Museums and Their Theory: Towards the Cybernetic Museum*, (Helsinki: Finish Museums Association, 1997), 225; Ross Parry, "Digital heritage and Theory in Museum Computing," in *Museums in a Digital Age*, ed. Ross Parry (London: Routledge, 2010), 465.

regularly and it was suggested that they would be more successful to focus on one or two tools as opposed to all.⁵²

Reports published from conferences in the United States and the United Kingdom identify digital technology and digitizing or computerizing items as the future for institutions to make portions of their collections more accessible; but this can only be done successfully if policy development and creative integration are implemented.⁵³ Technology is a very broad term and when applied to any cultural institution, it can cover areas related to collections management systems, artifact photographing procedures and the type of Internet speed used for day-to-day operations. Initially, the use of technology in a museum was of an administrative nature so when the field is examined broadly, the growth outside of administration is astounding. Not only has technology proved a great enhancement to the museumgoer's experience, it also allows people to return to an object or story (assuming the museum has built out the digital technology for a visitor to return to at a later date) without physically walking through the museum.⁵⁴ Furthermore, "electronic networks enable new relationships to develop between the public and their museums" and can best be demonstrated through uses of social media. For an institution that is reliant on funding from their public, like the NMB, creating relationships between the community and the

⁵² MacManus, "Social Media Case Study."

⁵³ See reports: Suzanne Keene, Bruce Royan, and David Anderson, "A Netful of Jewels: New Museums in the Learning Age," (London: National Museum Directors' Conference, 1999); Rick Rogers, "Space for Learning," (London: Clore Duffield Foundation, 2003), and; Henry Jenkins, Xiaochang Li, Ana Domb Krauskopf with Joshua Green, "If It Doesn't Spread, It's Dead," (Convergence Culture Consortium, 2008).

⁵⁴ Carol Vogel, "3 out of 4 Visitors to the Met Never Make it to the Front Door," *The New York Times*, March 29, 2006. Accessed July 24, 2014.
<http://www.nytimes.com/2006/03/29/arts/artsspecial/29web.html?pagewanted=all>

museum is very important for future partnerships and continued successes for the Bermuda.

More recently (IMLS 2002, 2006), a concentration on digitization has been specified as museum professionals have become concerned with how they are able to “provide[s] the public with new pathways to access museum and library collections.”⁵⁵ For the National Museum of Bermuda, embracing digital technologies and networking platforms have allowed them to reach wider audiences successfully, without spreading themselves too thinly.

The report *Status of Technology and Digitization in the Nation's Museums and Libraries* published in 2006 presented significant results in understanding the importance that digitization and technology played in American museums. As technology continues to become a fundamental component of the day-to-day functionality of cultural institutions around the world, the importance of determining the status of digitization and technology is invaluable in ensuring continued development.⁵⁶ The report collaborated with museums and libraries across the United States to come up with a concise definition for ‘digital technology’ in addition to presenting a measure on the technological climate within America’s museums and libraries. Most remarkable, however, was that the report received the strongest feedback and support from small museums both in size (57.9% with less than 5) and in budget (48.0% with less than \$250,000).⁵⁷

⁵⁵ IMLS, *Status of Technology and Digitization in the Nation's Museums and Libraries*, 1.

⁵⁶ *Ibid*, 9.

⁵⁷ *Ibid*, 17-18.

The initial survey, undertaken in 2001 and published in 2002, presented a contextual baseline for IMLS, revealing gaps and trends in regards to digital technology; the 2006 report compared and analyzed data from 2001 and the modified 2004 survey. The following three goals that museums and libraries hoped to achieve with digitization activities were identified.⁵⁸

1. To increase access to collections, materials, and files (56 percent of museums)
2. To preserve materials that are identified as having importance or value (48.8 percent of museum)
3. To minimize damage to original materials (33.0 percent of museums)

By identifying these three goals, IMLS identified that digitization in museums and libraries is not only crucial to the institution's growth and success, but it is also invaluable in ensuring continued development for supporting services, such as conferences, government grants and partnerships; additionally, this was particularly important to small institutions.⁵⁹ One of the requests associated with the 2002 report was for the survey to be repeated in 2004; unfortunately, no further surveys have been undertaken on this topic, but surely cultural institutions would benefit from continued research. For the future success of the developing Cultural Sector in Bermuda, using a modified survey as IMLS did, would be greatly beneficial for creating a baseline for museums and libraries in Bermuda, particularly in ascertaining a unified cultural and heritage goal for the island.

However, the digitization process is not always a realistic goal for all museums -- especially small ones -- as the cost of one capture (digital capture) has been evaluated at more than \$25. In 1998, the efforts to digitize the entire

⁵⁸ *Ibid*, 37.

⁵⁹ *Ibid*, 9.

collection of the Herbert F. Johnson Museum of Art were reported in a press release issued by Cornell University. At the time, the budget for 27,000 objects was valued at \$680,000, with \$20,000 worth of new digital photography equipment and software, in addition to the employment of five new staff members to assist the project.⁶⁰ At the time, Franklin W. Robinson, the Director of the Herbert F. Johnson Museum, recognized that in embracing the digitization technology, they would be able to construct a “museum without walls” that could be toured by anyone from anywhere in the world.⁶¹ Almost ten years later, an informal poll of three photographers at major American art museums confirmed that the \$25 capture-cost is at the low end of the average digitization spectrum.⁶² In fact, Günter Waibel, current Director of the Digitization Program Office at the Smithsonian Institution and author of the chapter “Stewardship for Digital Images: Preserving your Assets, Preserving Your Investment” (2007), suggests that the cost of widespread digitization of museum objects has actually increased over the last decade, and will continue to do so for some time. Thus, museums of all sizes should foremost consider digital preservation as the quest to protect both the investment made by the institution and key stakeholders and the digital file.⁶³ Waibel’s argument, published in 2007, appropriately reflects the more contemporary understanding of digital collections, whereby, “if the physical collections are the main building blocks of a brick-and-mortar museum

⁶⁰ Darryl Geddes, “Cornell’s Johnson Museum Launches \$680,000 Effort to Put Permanent Collection on the World Wide Web,” *Cornell Chronicle*, January 27, 1998. Accessed July 14, 2014. <http://chronicle.cornell.edu/stories/1998/01/johnson-museum-put-collection-web>.

⁶¹ *Ibid.*

⁶² Günter Waibel, “Stewardship for Digital Images: Preserving Your Assets, Preserving Your Investment” in *The Digital Museum: A Think Guide* (eds) Herminia Din and Phyllis Hecht (2007), p167.

⁶³ *Ibid*,168.

experience, digital museum objects are their equivalent in the online space. As museum staff increasingly value the impact digitized collections make on their audience, they are learning to value the digital surrogate itself as an asset worth tracking and maintaining.”⁶⁴

From the 1990s, conferences, reports and articles that were technological in nature have been published within the United Kingdom, analyzing and comparing data. Many have been published with support of governmental agencies and as proponents of national development in light of the important role that cultural institutions hold for the future. The report *A Netful of Jewels* (1999) published in accordance with the National Museum Directors' Conference, highlights three dimensions of the UK's national development: the digital media sector (in which the United Kingdom is a self-proclaimed leading player); the cultural industries, and education (lower and higher) which all come to fruition in museums and galleries, “whose resources have vast potential for development in the emerging digital cultural universe.”⁶⁵ The United Kingdom has long emphasized the important roles that the cultural sector and educational sector have for fostering a society of lifelong learners. *A Netful of Jewels* offers readers a framework for creating a digital museum, highlighting some of the requirements for creating content, professional standards, letting the public contribute, funding, training staff, and how best to maintain individual digital surrogates in addition to entire digitized collections. Most relevant to this discussion, is that the report also presents an alternative cost-breakdown for digitization, published a year

⁶⁴ *Ibid.*

⁶⁵ Keene, Royan, and Anderson, “A Netful of Jewels,” 2.

after the press release on the Herbert F. Johnson Museum. In 1999, the report projected that by 2002, there would be 400 museums in the UK offering digital on-site and online services to the public; these institutions would form the first phase of the Digital Grid at a total cost of £55 million (which comes to more than \$88 million USD).⁶⁶ It was then predicted that the creation of the 400 digital museums would increase how many people would be able to utilize the resources offered by the country's museums for the purposes of learning and enjoyments.

It should be noted that the underlying motivation for publications does tend to differ from an originating country as seen by the governmental mandated education-emphasis placed on cultural institutions in the United Kingdom. However, when used together, a global depiction of the demands for collection digitization and the call for increased accessibility is clear.

The United Kingdom's stance on the digital museum is entrenched in digitization of collections and archives for educational purposes, as discussed in relation to the Scottish Cultural Resources Access Network below, presenting how technology can be integrated into internal programming and highly interactive exhibits.⁶⁷ In comparison, the materials coming out of the United States, from the AAM and ICOM particularly, place a larger emphasis on how

⁶⁶ *Ibid*, 21.

The report broken down the first phase to 2002 of the cost of the digital museum to be as follows: Infrastructure, £10 million; Training, £8 million; Content and activity creation, £35 million, and; Maintenance, £2 million.

⁶⁷ Black, *The Engaging Museum*, 124.

In the UK, governmental policy states that education (school use and lifelong learning) must become a core function of museums. In 2005 when Black published his text, he wrote that the policy dictated all museum strategic planning, noticeable in the conditions that were being written in to capital and revenue funding allocations.

support and funding can be provided to institutions to grow current digital technology. Graham Black (2005) also writes that encouragement for Australia's "lifelong-learning policy remains focused on training for employment, developing computer skills and keeping the older population productive for longer."⁶⁸ While all three countries have extensive discourse on the topic of digitization of collections, the priorities differ.

The change in museums, often referred to as the "paradigm shift," can be traced through the readings presented in what should be considered an essential anthology, *Museum Origins*. Edited by Hugh H. Genoways and Mary Anne Andrei, both educators and founding editors of the journal *Museum History*, the collected readings broadly cover museum origins, theories on exhibition design that predate contemporary models, education and collections, and museum philosophies. Written by men and women as the museum profession emerged, Genoways and Andrei present sources that show how multifaceted cultural institutions are and how they were shaped by the social era in which they were created.

In Robert R. Janes' chapter "The Mindful Museum," he encourages museums to reinvent themselves, being wary of the changes happening in the world around them, and being responsive in their beliefs of project trajectories in order to be more conscious and thus, more effective as an institution. He advocates for a "...mindful organization that incorporates the best of enduring museum values and business methodology, with a sense of social

⁶⁸ *Ibid.*

responsibility....”⁶⁹ When all the elements of change happening at the NMB are examined, an institution that is mindful is visible, outlining clear values (in the development of a strategic plan), rapid responses to the demands of audiences, and strict internal organization.⁷⁰ The rebranding of the museum reflects a conscious staff and institution, wanting the collection and goals of the museum to mirror the physicality of change on the property, in the exhibits, and in the collections.⁷¹ One area in which the NMB is lacking is its public programming; however, a mindful museum is one that can see its areas of strengths and weaknesses. In light of minimal public programming, the museum has taken the first steps of creating a foundation for future plans. The construction of a striking and unique playground, complimented in the near future by an Interactive Children’s exhibit, will provide a key opportunity for the museum to start developing an educational program for children. Janes does call for museums to move away from collections and towards public programming with multimedia collaborators and non-museum innovators. Current thought supports the idea that objects and artifacts within the collections and exhibits truly ground the stories and linkages being made. Without them, there is no means to root the programming.

Nina Simon, a pioneer in the world of engaging museums contributes to this discussion in terms of her experience with participatory institutions. The growth and development of the World Wide Web (Internet) and technology

⁶⁹ Robert R. Janes, “The Mindful Museum,” in *Reinventing the Museum*, ed. Gail Anderson (New York: AltaMira Press, 2012), 508.

⁷⁰ *Ibid*, 512.

⁷¹ *Ibid*, 513.

through the 2000s has been heavily documented, and Simon takes note that participation at cultural institutions began to take on different and new forms. The use of interactive websites and more recently, social media outlets, has stretched the possibilities of participation to happen at any time, anywhere, and by anyone. As cultural institutions continue to grow their collections, they simultaneously expand public access by increasing their footprint on social media and online galleries/exhibits, creating digital archives for public viewing in addition to their own records. In doing so, institutions are involving themselves in “convergence culture,” a term coined by MIT researcher, professor, and author of *Convergence Culture: Where Old and New Media Collide*, Henry Jenkins.⁷² Jenkins’ convergence culture is one in which regular people, not scholars or artists, “appropriate cultural artifacts for their own derivative works and discussions.”⁷³ It is this group of what Jenkins calls ‘regular people’ that the NMB and all cultural institutions in Bermuda should aspire to engage. This will be discussed further in the final chapter of this thesis in relation to social media.

3.2 Museums Online: Digital Collections

A museum website or homepage is often the first point of contact for many people interested in a visit, especially those visiting from out of state or country. In a 2006 article published in *The New York Times*, the Metropolitan Museum of Art (New York City) reported that 15 million people visited its website in a year, totaling more than three times the visitors who actually go to the physical location

⁷² Nina Simon, “Principles of Participation,” in *Reinventing the Museum*, ed. Gail Anderson (New York: AltaMira Press, 2012), 332.

⁷³ *Ibid.*

every year.⁷⁴ Since 2006, advancements in technology, a greater understanding of what the online-visitor wants, and greater affordability of certain technologies will have greatly increased those visitor numbers. The digital age -- or information age -- has afforded people the ability to 'visit' museums and art galleries from a place of comfort, such as home or school; but they can also visit from their commute on a bus or train. Some larger institutions in the United States have observed this virtual version of a museum to be counterintuitive; David Franklin, the director of the Cleveland Museum of Art (CMA) in 2013, chose not to participate in the Google Art Project due to the danger that people would not physically come to the museum, choosing instead to visit from their homes.⁷⁵ In spite of this, the CMA is home to Gallery One, an impressive 40-foot wide interactive touch screen that displays more than 4,100 objects and blends "art, technology and interpretation to inspire you to explore the museum's permanent collection."⁷⁶ The museum has also designed a free App, ArtLens, for users of iPads, iPhones, and Android phones, that can be used before, during, and after a visit, once again offering visitors the very thing that Franklin reportedly rejected. Additionally, the CMA has links to a number of social media platforms and offers an online collection of more than 3,400 objects with various

⁷⁴ Vogel, "3 out of 4 Visitors to the Met."

⁷⁵ Fred A. Bernstein, "Technology that Serves to Enhance, Not Distract," *The New York Times*, March 20, 2013. Accessed September 17, 2014. http://www.nytimes.com/2013/03/21/arts/artsspecial/at-cleveland-museum-of-art-the-ipad-enhances.html?pagewanted=all&_r=0.

The Google Art Project has more than 40,000 high-resolution images of works of art (in various mediums) from museums from around the world. Visitors can access paintings that are of such high quality that the brushstrokes are visible. Visitors can also personalize their experience by creating a virtual art gallery.

⁷⁶ "About Gallery One," Cleveland Art Gallery, accessed October 3, 2014, <http://www.clevelandart.org/gallery-one/about>

detailed views and general cataloguing information, allowing a visitor to explore without the restrictions of opening hours or inaccessibility of stored fragile items.

For online visitors, a good museum website is fundamental to inviting people to see more of the institution, offering more than the answers to frequently asked questions like opening hours, current exhibits, and the mission statement. Today, greater access is achievable through multifaceted websites and uses of networking platforms; easily manipulated photographs of objects and artifacts, images of the museum itself (interior and exterior), sound-bites, and short video-clips are just a few options to achieve this. This section of the literature review will take a closer look at the websites of the Metropolitan Museum of Art and the Brooklyn Museum; however, it should be noted that the number of online digital collections far surpasses the length of this thesis discussion and as the support for technology and advancements continues to grow (particularly for smaller institutions), those numbers will continue to expand.⁷⁷

For many, a trip to New York City to visit the Metropolitan Museum of Art and the Brooklyn Museum simply is not feasible, let alone affordable. The same scenario can be applied to a visit to Bermuda to see the National Museum of Bermuda. Museum websites have, for many, become the first and only point of contact with a specific institution; but museums are also utilizing social media platforms creatively to further the spread of their collections and information. In the 21st-century, access to the Internet is usually quick and easy, especially in

⁷⁷ See grant, scholarship, award and conference information listed by the American Alliance of Museums; "Small Museums," American Alliance of Museums, accessed August 10, 2014, <http://www.aam-us.org/about-us/what-we-do/small-museums>; "The USFFM 2014 Small Museum Grant," Small Museum Association, accessed August 10, 2014, <http://www.smallmuseum.org/usffm-grant-opportunity-2014.html>.

consideration of how many smart-phone users exist today. Just as museums want to offer visitors stimulating and memory-making experiences, they should want that to be achieved online as well. The response to an online visit that is stimulating is two-fold: the first of which being that visitors will return to the online website; but the second, and most important, is that one day, they will visit the museum. For the Metropolitan Museum and the Brooklyn Museum, this has been reached through years of trial and error, visitor feedback on what works and what does not, and finally, through substantially large yearly budgets, raised revenue, and grants. While the NMB cannot be fairly compared to these institutions due to disparities in institutional history, financial support and staffing numbers, they present a good example of a well-executed large-scale operation.

For online Met visitors, the website is a destination apart from the building at Fifth Avenue in New York. The visitor is presented with more than twenty games and free Apps to choose from, four social media platforms to look through (Facebook, twitter, Pinterest, Instagram), more than 400,000 records in The Collection, and an online shop to buy from. The Met has capitalized on the many demands of visitors, using the tagline “See the Museum in New Ways” for the MetMedia component of their site and virtually showing the Met in new ways. MetMedia brings the museum and its digital technologies together, offering visitors videos, audio clips, apps and games, and a kid’s zone, all to interact and engage with objects and images from the collection.

The Metropolitan’s Collection Online (Figure 6) consists of 402,158 records, searchable by the following filters: Artist/Maker/Culture, Object

Type/Material, Geographic Location, Date/Era, and Department. As recently as May 2014, the Metropolitan made its complete online collection available for free download with the intention of expanding access further in support of making public domain materials *usefully* public.⁷⁸ The Met presents its collection with high-resolution images, the ability to click through to related objects and publications, and now, a visitor can download an image to use for non-commercial means.

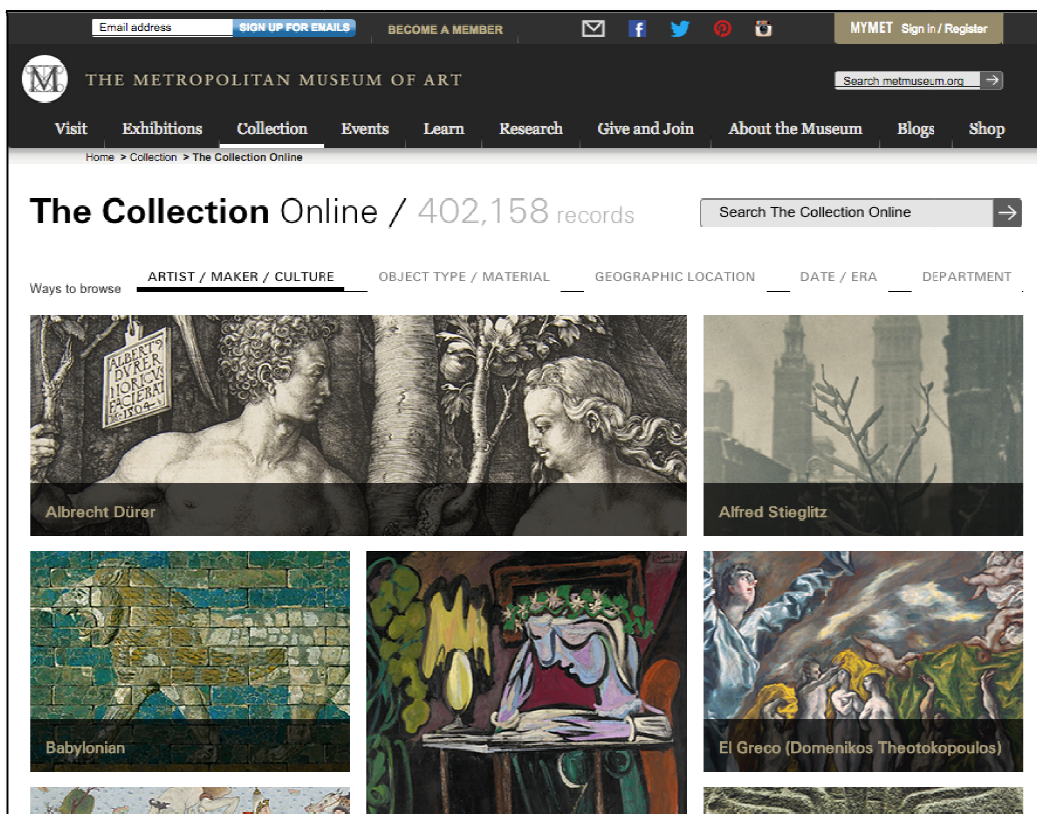


Figure 6. A screenshot of The Metropolitan Museum of Art's Online Collection.

The Brooklyn Museum of Art does not present its online collection in a manner as luxurious as the Metropolitan. In comparison, the BM's website is a

⁷⁸ Caitlin Dewey, "More than 400,000 pieces from the Metropolitan Museum of Art are available for download online," *The Washington Post*, May 21, 2014. Accessed September 29, 2014, <http://www.washingtonpost.com/news/the-intersect/wp/2014/05/21/more-than-400000-pieces-from-the-metropolitan-museum-of-art-are-available-for-download-online/>

little less visually stimulating or busy, utilizing a plain background and black or blue text, and presenting its online collection of 107,779 records in a much smaller,⁷⁹ image-concentrated format (see Figure 7) with more of a focus on related objects and Tags (see Figure 8).

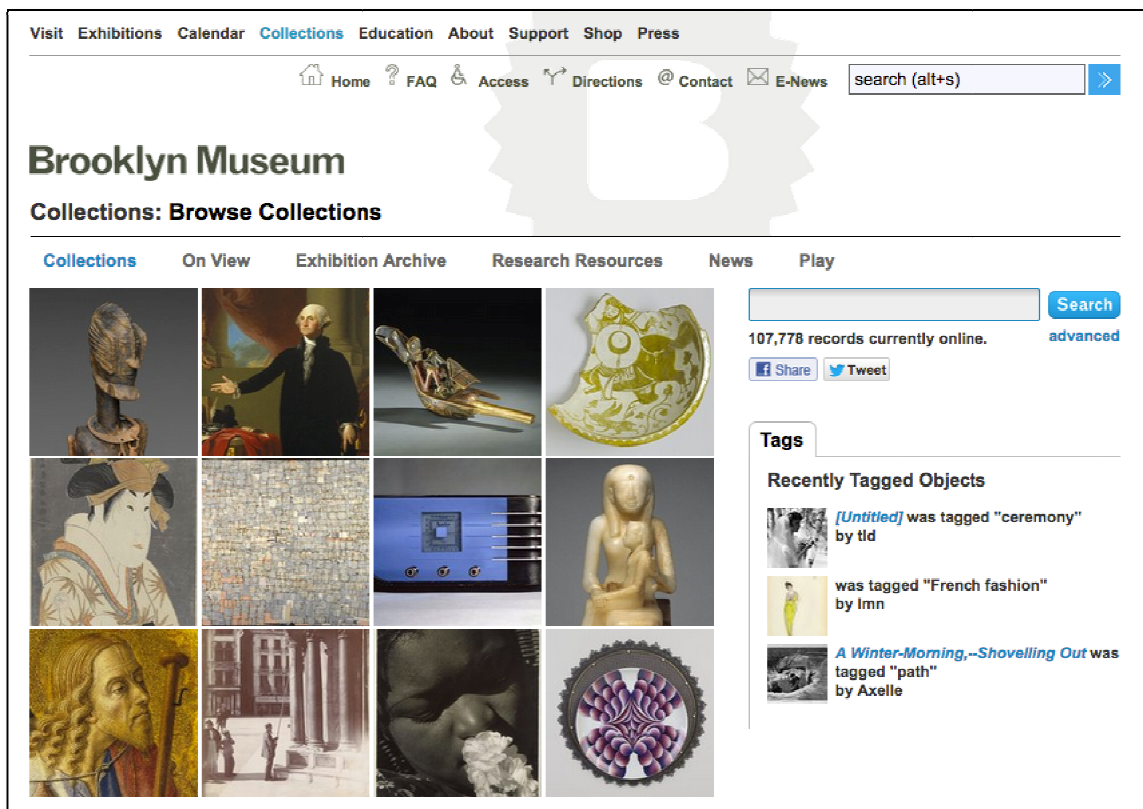


Figure 7. A Screenshot of the home page a visitor opens under the 'Collections' heading at the Brooklyn Museum webpage. The Brooklyn Museum has almost 108,000 digital records accessible through their website and the webpage presented above.

In the context of an online museum collection, tagging is the act of assigning an identifying lay-word to describe an image or object, rather than terminology assigned by cultural and heritage institutions. Most often related to American museums and the Steve Project, tagging has provided online museum collections with the language reflecting the broad range of needs and

⁷⁹ The Brooklyn Museum is constantly adding to its online records; on September 15, 2014, the museum had 107, 035 records.

perspectives of users in addition to better online exploration. The Steve Project was founded in 2005 and was created to address the concerns that art museums where identifying; their visitors were struggling to navigate their digital collections.⁸⁰ The Steve Project's collaboration amongst academics, museum professionals and digital media specialists continue to facilitate research on social tagging (discussed below in relation to the hashtag), creates open source tagging tools, and disseminates their findings to other museum professionals at conferences and through journal publications.

Collections: Egyptian, Classical, Ancient Near Eastern Art: Pair Statue of Nebesen and Nebet-ta

Collections On View Exhibition Archive Research Resources News Play

107,779 records currently online. [Search](#) [advanced](#)

[Share](#) [Tweet](#)

Tags **Related**

lovers	Nude
cena	tools
pectoral	sohent
Dahamsha, Egypt	18th Dynasty
Royal Scribe	New Kingdom
inscription	scribe
Egypt	stone
hieroglyphs	sculpture
ancient	Egyptian
man and woman	limestone
statue	couple
limestone, painted	Pair Statue of Nebesen and Nebet-ta

enter your own tags [Tag!](#)

Pair Statue of Nebesen and Nebet-ta
 Nebesen, the scribe of the royal treasury, and his wife, the songstress of Isis, Nebet-ta, wear the elaborate wigs fashionable in the later Eighteenth Dynasty. Their jewelry, painted yellow to imitate gold, was varnished to make it shine; the varnish has darkened with time. The inscription tells us that the statue was made for the couple's tomb by their son, Weserhat. In fulfilling this filial duty after their deaths, he had them depicted in the fashion of his day, rather than that current under Thutmose III, when they actually lived.

Figure 8. Screenshot of an open object entry page in the Brooklyn Museum's online collection. To the right of the image, a generated list of tags is shown with the option to enter your own

Some museums generate a Tag Cloud that highlights the more popular descriptive words, using large and bolder text, as opposed to the small, lesser-

⁸⁰ The Steve Project, "FAQ" http://www.steve.museum/?page_id=22 accessed online July 3, 2014.

used tags. Tags submitted by visitors online are then integrated into the collections search function, facilitating searches by a wide range of visitor-generated descriptive identifier; for example, the Pair Statue of Nebesen and Nebet-ta in Figure 8 offers the visitor more than twenty associated tags that vary from ‘Nude’ and ‘tools’ to more specifically thematic tags of ‘Dahamsha, Egypt’ and ‘18th Dynasty’. If interested, the visitor could then search the ‘18th Dynasty’ tag, of which the Brooklyn Museum has 292 items.⁸¹ On social media platforms, the use of the social tagging (or the hashtag), primarily through Twitter and Instagram, allows the content that cultural institutions publish to become searchable (to find related topics), as well as to advertise events and exhibit openings, and track or monitor who is talking about those topics and what they are saying. Seasonally, the Royal Ontario Museum (ROM) hosts a Friday Night Live event, at which the hashtag #FNLROM is used. When #FNLROM is searched on Instagram, more than 8,000 posts are retrieved offering snapshots into the event. Similar outcomes can be found through searching #FNLROM on Twitter where thousands of results are returned. At the Metropolitan Museum’s Teen Night (October 17, 2014) two hashtags were used; #metteens and #metmuseum as opposed to an event-specific tag like the ROM’s #FNLROM. Incidentally, a search for #metteens through Instagram returned a much smaller scale of 258 results, with the more generalized #metmuseum amassing more than 35,000 posts. The NMB’s use of hashtagging will be explored further in the subsection “Museum gets that social feeling.”

⁸¹ Items tagged “18th Dynasty”,
<https://www.brooklynmuseum.org/opencollection/tags/18th+Dynasty>

Cultivated as a byproduct of museum digitization are blogs and articles published by museum and social media professionals, sometimes taking critical positions on an institution's actions, but often drawing focus to the successes and areas for greater focus. Much of the time, they advocate strongly for more creative use of digital collections and social media, often forcing museum professionals at the helm of media and digital technology departments to re-assess their approach. What has been most apparent in the research compiled is that museums, libraries and archives are utilizing networking platforms in different, creative ways, to give visitors more. Information is widely available through features original to every institution such as the Metropolitan's "Plain or Fancy" interactive and The Huntington's *The Weekly Squint* posting on their Tumblr account.⁸²

The United Kingdom, Australia and Canada all have well-established organizations in support of digitization of objects and information for cultural and heritage institutions. The Scottish Cultural Resources Access Network (SCRAN) is one of the largest educational online services in the United Kingdom that provides educational access to digitized materials that are representative of the material culture and heritage of Scotland. SCRAN, first established in 1995, supports inquired from more than 4,000 schools, libraries, colleges and universities and upholds partnerships with more than 300 cultural institutions

⁸² The Weekly Squint is posted every Thursday and offers close-up details of small, obscure Huntington details, letting visitors take look inside the institutions' collections, books, objects on loan, and their physical space.

"The Weekly Squint -- Detail of the currently waterless fountain just north of the loggia of the Huntington Art Gallery," The Huntington Tumblr, September 11, 2014. Accessed September 12, 2014, <http://huntingtonlibrary.tumblr.com/post/97240344361/the-weekly-squint-detail-of-the-currently>.

throughout the United Kingdom. In Australia, the Collections Australia Network (CAN), which has existed as an online portal since 1997, is a collaborative organization that provides online access to cultural heritage collections in order to make digitization of collections easier.⁸³ Since the mid 1980's, the Canadian Heritage Information Network (CHIN) has been providing small museums with the support in terms of publishing guides on how to create and manage digital content and digital publishing opportunities. They have enabled small museums to participate in online initiatives that would otherwise be impossible to accomplish independently.⁸⁴ These three examples demonstrate that action related to digital collections and digitizing has had extensive support, globally, for quite some time. Although Bermuda is a very small island with no overseeing Cultural Heritage governance (yet), it would be beneficial for the cultural institutions, archives, and libraries to have access to the technology for digitization and the guiding support.

⁸³ Angela T. Spinazze, "Technology's No Tea Party for Small Museums," in *The Digital Museum: A Think Guide* eds. Herminia Din and Phyllis Hecht (Washington: American Association of Museums, 2007), 129.

⁸⁴ *Ibid*, 129 -130.

4. Methodology

4.1 Classifying NMB as a small museum

Research has demonstrated that the definition of a ‘small museum’ is organic and has a tendency to change varying on the organization. Within the United States, the American Alliance of Museums (AAM) has defined a small museum as having fewer than five staff, while also taking note that the majority of the Alliance members are small museums. The American Association for State and Local History (AASLH) is more specific in its definition, but presents it as a “rallying point” in recognition that it is not the “end-all, be-all of definitions.”⁸⁵ In 2007, the Small Museums Committee created a working definition as having the following characteristics: operating with only a ‘small staff’ but taking on multiple responsibilities, employing volunteers to carry out responsibilities usually assigned to staff, and operating on an annual budget of less than \$250,000.⁸⁶ The AASLH also noted that the physical size and collection scope and size of an institution are additional characteristics that can classify a museum as small. For the purpose of context, these final two characteristics have been addressed for the statistical overview of the NMB; however, I am of the opinion that they are not fundamental to the definition of a small museum. I believe that the general definition set by the AAM with regards to staffing size is the most important characteristic of a small museum. Regardless of physical size and collection

⁸⁵ AASLH, “What is a Small Museum?”

⁸⁶ *Ibid.*

breadth, a small staff is responsible for the successful operation of its museum, just as a museum with ten or more staff is also responsible for their successful operations.

The museum currently has seven paid staff members comprised of the Executive Director, Curator, Registrar, Facilities Manager, Administrative Assistant and two part-time ticket office employees; with local and visiting volunteers, interns and researchers supporting the staff. Financially, the museum has a \$1-million operational budget with a \$2-million endowment.⁸⁷ However, as a private organization, the museum's general operations are funded by donations and gate receipts from 50,000 annual visitors.⁸⁸ In terms of physical size and collection breadth, the museum incorporates 15.73 acres of fortifications with a number of historically significant structures, and its collection surpasses more than 70,000 items.⁸⁹ Additionally, the Board of Trustees of the Bermuda Maritime Museum Association oversees the institutional operations and the minutes of the Annual General Meeting is published annually in the museum's *MARITimes* magazine. At first glance, the statistics presented for the NMB surpass the characteristics set by the AASLH and the AAM. While they do have a small staff of five full-time and two part-time employees, they also have a substantial annual operating budget and endowment.

⁸⁷ Charlotte Andrews, "Community uses of Maritime Heritage in Bermuda: A Heritage Ethnography with Museum Implications." (PhD diss., University of Cambridge, 2010), 10, footnote 20.

⁸⁸ Elena Strong, *MARITimes* (2013, 26.1) 2.

⁸⁹ Elena Strong, "Annual General Meeting of Bermuda Maritime Museum Association, 2013," *MARITimes* (2013 26.1) 26.

Bermuda, however, is not on the same scale as the United States. Although the NMB has an annual budget of \$1-million, placing it within the 'medium' museum range by definition, the average income of a museum employee would be 70% higher per capita than in the United States. While the island is small in physical size at 21 square miles, it has a population of 65,020, and has an extremely high cost of living (more than three times that of the United States).⁹⁰ Remarkably, Bermuda also has the fourth highest per capita income in the world, about 70% higher than the United States, despite four years of hard recession and a public debt of \$1.4 billion.⁹¹ These statistics justify the disparity between the operating budget of an American-defined 'small museum' and that of which the NMB has been defined as 'small'.

4.2 Approach, Data Collection, Research methods

In April 2014, I visited the NMB and had the opportunity to interview Curator Elena Strong and Registrar Jane Downing about the current climate of the museum, its collection, its blooming use of social media and realistic relationships with technology in the institution. Additional interviews were held with Dr. Charlotte Andrews, Director of The St. George's Foundation (SGF) and staff at the St. George's Historical Society, to gain a better understanding of collecting activities and cultural engagement at other institutions on the Island.

⁹⁰ Total population calculated as per 2013.

"Data-Bermuda," The World Bank, accessed October 10, 2014.

<http://data.worldbank.org/country/bermuda>.

The average cost of a single-family home in Bermuda is \$1.1 million per year (calculated in 2012).

"Bermuda. Economy - overview," CIA, accessed October 10, 2014,

<https://www.cia.gov/library/publications/the-world-factbook/geos/bd.html>.

⁹¹ Bermuda. Economy - overview."

The data collected helped clarify the thesis and it moved from a vague question of 'how can a small museum make its collection more accessible to the public' to discussion of how the NMB has begun making its collection more accessible, yet still operating on its current budget and meeting the demands of its local audiences.

Over a five-month stretch (June to October 2014), data was collected on the two social media sites that the museum maintains to ascertain both the institutional usage and engagement from visitors. The NMB maintains an Instagram account and Facebook page that the museum's homepage almost immediately directs to visitors. It should be noted that in the data collection for October 2014, there is a substantial increase in engagement with the museum Facebook page that is related to the direct hit that Bermuda sustained from Hurricane Gonzalo on October 17, 2014. The museum informed its followers that the Port Bermuda Webcam was located on the second floor of the Commissioner's House, which was active for the duration of the storm; that posting experienced more engagement than most other posts with twenty-seven 'shares', twenty 'likes' and four comments.

Additional data was tracked from Trip Advisor in recognition that seasonal tourists from abroad would make up a considerable percentage of the 50,000 annual visitors. Statistically, the data from Trip Advisor did not contribute greatly to a deeper understanding of the web presence and audience engagement with the museum, but reading through visitor comments revealed strengths and weaknesses as picked up by tourists. For example, a large percentage of

reviewers through the period observed were left by Americans who were also Cruise Ship visitors to the island. Key feedback from reviews agreed that the \$12 admission charge for adults (free to those under 16) was very reasonable for an activity in Bermuda, that the hilly geography of the site made disability access difficult, and many recommended visitors to spend several hours at the museum as there was a lot to take in, particularly the views from the Commissioner's House.

All data collected will be presented below in two tables. The first table gives a general overview of the data collected for Facebook, Instagram and Trip Advisor and the second table is specific to Facebook.

Table 1 displays all data accumulated over the five-month period from June to October. It shows that the museum experienced gradual growth on both of their social media platforms and maintained steady feedback through their Trip Advisor page, but saw only sixteen new reviews from June to October. The NMB's Instagram account had an increase of 30.10% in followers, with the largest growth occurring from August to September with a 12.76% increase.

An analysis of the data in Table 2 shows that the museum experienced an overall increase in 4.29% in 'likes' or followers on their Facebook page, with month-to-month expansion growing by increments smaller than 2%.⁹²

⁹² From June to July, 0.91%; from July to August, 0.60%; from August to September, 1.36%, and; from September to October, 1.34%

Table 1: Accumulated data collected from June 2014 to October 2014

	Facebook	Instagram	Trip Advisor
June 27, 2014	2,304 likes	338 posts 289 followers	97% thumbs up 49 Reviews #4 of 8 Attractions
July 29, 2014	2,325 likes	357 posts 310 followers	96% thumbs up 53 Reviews #4 of 8 Attractions
August 25, 2014	2,339 likes	375 posts 329 followers	96% thumbs up 59 Reviews #3 of 8 Attractions
September 25, 2014	2,371 likes	401 posts 371 followers	96% thumbs up 62 Reviews #3 of 8 Attractions
October 20, 2014	2,403 likes	408 posts 376 followers	95% thumbs up 65 Reviews #3 of 9 Attractions

Table 2: Data collected from the institution's Facebook page

	Likes	Talking about this Page
June 27, 2014	2,304 likes	43 people talking about this page
July 29, 2014	2,325 likes	17 people talking about this page
August 25, 2014	2,339 likes	7 people talking about this page
September 25, 2014	2,371 likes	48 people talking about this page
October 20, 2014	2,403 likes	108 people talking about this page

5. An Application of Collections Accessibility

5.1 Review of Shipwreck Island: Sunken Clues to Bermuda's Past



Figure 9. A view of the *Shipwreck Island*, showing the design of the 1850 Ordnance Hall and the exhibit panels and cases (at the far end of the hall)

One of the first steps to increasing visitors' access to a small museum collection is integrated in the concept and design of physical exhibits, which is outside the realms of possibility for many small institutions. In Graham Black's text *The Engaging Museum*, he asks the reader, "Are the collections at the heart of this process or are they there, from the outset, to support and illustrate a storyline?"⁹³ For *Shipwreck Island*, it is very clear that the objects are indeed at the heart of the process. Enhanced by a number of iPads throughout the exhibit, shown in Figures 10 and 11, the integrated technology in the exhibit space allows

⁹³ Graham Black. *The Engaging Museum*, 272.

for a full range of visitor learning-styles, but they do not detract the focus away from the objects that are individually illuminated under bright spotlights.

As a frequent museumgoer and a student of the field, I have always had a strong preference for exhibits and displays that have a ‘Cabinet of Curiosities’ feel to them; visually appealing and very full. However, for many museumgoers (including those that have entrenched negative perspectives of a museum), this neither looks good nor is interesting. Instead, it can have a “mind-numbing effect” similar to that associated with the visual- or open-storage approach mentioned in the introduction.⁹⁴ Museum fatigue is a real challenge all institutions face; thus, exhibit design is not only crucial in telling stories and addressing important themes, but it’s also very important in drawing a visitor in and keeping him/her engaged. *Shipwreck Island* achieves a symbiotic balance between the object heavy display cases and content-rich panels paired with interactive iPads and two monitors that loop different videos. These will be discussed in greater detail below.

Shipwreck Island is the museum’s most recent permanent exhibit and strikes the perfect balance between lots of objects and considerable interaction. When visitors enter the museum, they have two options; the first is to explore the exhibits of the Lower Yard, the new playground, and Dolphin Quest or they can head up to the Commissioner’s House. Bringing the museum full-circle in its relatively young but busy history, *Shipwreck Island* is located in the Queen’s

⁹⁴ J. H. Falk and L. D. Dierking, *Learning from Museums: Visitor Experiences and the Making of Meaning*, Walnut Creek, CA: Altamira Press, (2000), 126

Exhibition Hall, also known as the 1850 Ordnance Building, where the museum coincidentally began.



Figure 10. (left) Front view of the sponsored Sea Venture Gallery with visible iPads mounted.

Figure 11. (right) View of the Alvin T. Ferreira Family Gallery showing sunken cases and mounted iPads.

This chapter reviews the exhibit, drawing upon firsthand experience in addition a personal assessment, museum publications on the exhibit and recent related integration of social media by the museum⁹⁵ to try to present a complete image of *Shipwreck Island*. It should be noted that visitor feedback submitted to Trip Advisor from June to October 2014 was also analyzed for integration in this chapter; however, the responses were very general and did not recognize the iPads, new to the NMB, suggesting that perhaps interactive have become commonplace in museums and are now expected by visitors.

The exhibit invites visitors to view the exhibit through the lens of shipwrecks from the 16th- and 17th centuries. Displaying objects that were recovered from many shipwrecks that are found in Bermuda's waters not only demonstrates that relationship of Spanish and Portuguese ships with the rest of

⁹⁵ Related integration refers specifically to more current posts on Facebook and Instagram about the exhibit.

the world, but it also presents a material record of the Island's interaction with the Atlantic World.⁹⁶ The discovery and subsequent excavation of many of the shipwrecks and their recovered artifacts are of great importance both to the island and to the institution's collection. The exhibit displays more than 1,500 artifacts of international and local significance including a number of Spanish pieces of eight, a set of graphite crucibles used for melting and pouring gold, and a very small die made of bone. Visitors are invited to learn about the early discoveries of Bermuda, the *Sea Venture* and the eventual settlement of the island, and the history of the island from 1505 to 1684.

The exhibit space itself is a darkened hall, with panels and cases illuminated purposefully with spotlights. Four beautiful German-made museum grade cases are object-laden, allowing the museum to showcase even the more fragile objects.⁹⁷ The exhibit space itself is very spacious, giving a visitor the freedom to make his or her own path through *Shipwreck Island*. Unlike the U.S. Holocaust Memorial Museum in Washington, DC, visitors are not forced to view the exhibit on a specific path; instead, a suggested route is presented at the entrance, but there are no colorful lines or illuminated arrows to show the way.⁹⁸ Although there is currently no seating provided inside the exhibit space, multiple benches flank the exterior of the building, and are shaded for most of the day.

⁹⁶ Elena Strong, "Secrets of Shipwreck Island," *MARITimes* (2012, 24.1), 17.

⁹⁷ The cases are light sensitive and climate controlled and were provided through a US supplier.

⁹⁸ Nina Simon talks about a "fixed march" format (that is purposefully used at the USHMM), which sends every visitor on the same linear path throughout the exhibit space. The format was increasingly popular in the 1990s and early 2000s and was used increasingly in history museums when presenting a chronology; it also helped visitors find the 'right' path back to the exhibit through the chronology set by the institution.

Nina Simon, "Should Museum Exhibits Be More Linear? Exploring the Forced March in Digital and Physical Environments," *Museum 2.0*, January 9, 2013, accessed August 26, 2014, <http://museumtwo.blogspot.com/2013/01/should-museum-exhibitions-be-more.html>.

What is most exciting about *Shipwreck Island* is its impressive number of objects on display and the seamless integration of technology into the exhibit itself. In the twenty-fifth volume of the *MARITimes* magazine, *Shipwreck Island* was highlighted as a bold new exhibit and the institution's biggest project yet. In a ten-page spread, the exhibit is introduced to readers through its historical context, taking a chronological approach to the objects and their related.

Shipwreck Island is relevant to other 21st-century exhibits by its use of technology to enhance the experience of the visitor. The integration of interactive iPads in the exhibit is constructivist in nature and has been designed so that visitors are provided with the opportunity to interact and to construct their own meanings.⁹⁹ Not only is the exhibit extremely collection-focused (as demonstrated by the sheer number of objects on display), but the curators have added a further layer of engagement by offering the visitor the opportunity to learn more, and to do so in a discreet way. Fourteen iPads are mounted throughout the exhibit space, with the offered information corresponding to their location in the building. Even with the variation of materials available on each iPad, visitors are invited to take a closer look at selected objects (usually small and more difficult to see when on display), with the function of zooming in on certain object images in addition to providing contextual information about a related shipwreck, theme or narrative for the case.

Rather than a specially designed interactive App on the iPads, the interaction occurs through a pre-loaded PDF file. The interaction is quite basic; visitors can use the integrated Apple zoom function to look at details of selected

⁹⁹ Black, *The Engaging Museum*, 104.

images, and they can scroll left and right through the file. There is also an option to jump through the file to specific selections. However, for all the positives associated with the iPads, there are as many, if not more, negatives. Cost, relevance, and disruption on behalf of the visitor are the three main problem areas that the museum has encountered in its integrated interactive experience. The main cost-related concerns are the creation of high-resolution professional photographs for the PDF, design of the PDF, and the purchase of fourteen Apple products and their mounts.¹⁰⁰ There is also pushback from a small percentage of visitors who choose to be disruptive with the iPads; as a result, the museum has faced problems such as damage to cases and ‘hacking’ the tablet for undesignated uses.¹⁰¹ It should be stated, however, that regardless of the negative characteristics associated with using tablets, they do enhance most visitors’ experiences. Additionally, part of creating the most ideal interactive is trial and error, so as the first integrated form, the museum has executed the process very well. A measure of just how much tablets enhance visitor experience would be an interesting study, particularly for a developing institution like the NMB.

While the iPads let visitors take a closer look, there is a stronger argument for the museum opening more access to its collection through expansive object display. Although displayed objects are very visually appealing on their own, they are a static presentation surrounded by text panels on flanking walls. Without any direct supportive media, the exhibit would look like expensive

¹⁰⁰ Elena Strong and Jane Downing, interview by author, Bermuda, April 28, 2014.

¹⁰¹ Elena Strong and Jane Downing, interview by author, Bermuda, April 28, 2014.

window-dressings, looking past visitors' many predisposed learning styles, and would not be demonstrative of a 21st-century exhibit common today. The integrated iPads offer interaction between the museum-chosen object and story, layering information, high-resolution photographs, and supplementary materials so visitors can select the depth of their exploration of a particular concept or theme."¹⁰²

The exhibit's multisensory approach has kept the collections as a primary focus, using the media and integrated iPads to support visitor engagement. When you consider that the NMB serves a small population and experiences high volumes of seasonal visitors (American tourists are most common), the fact that the museum offers other means of engagement and interaction within *Shipwreck Island* is highly reflective of the changing institution. Not only does it represent the museum's in-house professional standards for future exhibits, but *Shipwreck Island* also propels itself into the comparative field of other 21st-century exhibits that have integrated digital technologies and media. In Black's chapter on applying the principles of interpretation to a museum display, he presents the following seven points that should be taken into consideration by the museum interpreter or exhibit designer:

- Keep collections as the primary focus; support visitor engagement through media and other means
- Highlight collection contents with strategic display layout
- Break down material in a structured and prioritized way; will layer content to enable visitors to select the level of material they want
- Meet different needs of visitors by using range of interpretive media

¹⁰² Black, *The Engaging Museum*, 206.

- 'Pace' the exhibit to retain visitor interest and attention
- Offer visitors the chance to participate where possible
- Use short, active and inclusive texts

Of the seven points, *Shipwreck Island* takes into consideration all but one, leaving room for further development with regards to giving visitors the opportunity to participate wherever possible and in a variety of ways, such as the chance to touch.¹⁰³

Unfortunately, there is no measurable or formal way to provide feedback (to the museum) to the effect of the iPads in the exhibit, other than through posting on social media and Trip Advisor, or casual commentary at the front desk. Again, this feeds into the notion that technology -- such as tablets or interactive -- are commonplace for museum's and exhibits today, and many visitors expect their integration; rather, it is the absence of their inclusion that stands out more, often being understood as an institution being outdated.

5.2 "Museum gets that social feeling"

In a 2008 publication on creating value in a spreadable marketplace, social media was identified as one of the most important digital trends for shaping online identifies and creating contact with differing media content in the past five years.¹⁰⁴ danah boyd (2006) is a leading researcher and author on understanding social networks who argues that platforms such as Facebook (and MySpace) have changed the social organization of the web and are moving users towards an "egocentric" network. These networks are what help small

¹⁰³ *Ibid*, 206-7.

¹⁰⁴ Henry Jenkins et al., "If it Doesn't Spread, It's Dead. Creating Value in a Spreadable Market," *Convergence Culture Consortium* (2008), 37.

museums to reach more people, sharing interests that are spread through “the power of personal ties and trusted recommendations.”¹⁰⁵

This paper has strongly advocated for the digitization of objects in order to give people and other cultural institutions the option to experience more of a museum’s collection and the information that is integral to understanding the items. However, the financial data presented by the Herbert F. Johnson Museum in relation to its digitization project reveals the prohibitive cost for such initiatives. Günter Waibel (2007) even relates the activity of digitizing an entire collection over a large time-span to be similar to painting the Golden Gate Bridge in San Francisco; when you are finished, you have to start over because the original digital file created may become unusable or obsolete in the interim.¹⁰⁶ Taking these points into consideration, it has become increasingly obvious that small museums must begin exploring more cost-efficient options to reach wider audiences and give visitors more to explore at the museum, and at home. The review of *Shipwreck Island* attempted to show the reader one of the approaches that the NMB has achieved deeper engagement with its physical visitors to the exhibit, but what about the people at home and those who cannot afford to visit the Island?

Being able to share content in open-source programs and through free online platforms is currently the most realistic approach for a small museum to give visitors more online-access. As the final part of this paper, the NMB’s use of two social media platforms is discussed in addition to a short discussion on

¹⁰⁵ *Ibid.*

¹⁰⁶ Waibel, “Stewardship for Digital Images,” 168.

convergence culture and how it is portrayed over social media platforms that currently exist. There is also discussion related to what the NMB can do better to grow its current audience base through social media platforms while continuing to build a digital image database.

5.3 The social feeling: Facebook and Instagram

In 2013, the NMB appealed to their members and subscribers to their magazine, *MARITimes*, to help them realize a goal of reaching as many people as possible through social media. In a single-page spread, the museum introduced their Facebook page to the public stating that their intention was “to connect with a wider audience, improve community engagement and promote [our] work”.¹⁰⁷ These intentions are representative of how the museum planned to utilize its Facebook page and subsequently, reflect the very thesis of this paper. Sharing digital copies of archival documents, collection highlights, video footage of museum projects, historical facts relevant to current local events, photographs of community and volunteer days, recent donations, and the promotion of events and new publications are just some of the things that the NMB wanted to share with the public. Upon inspection of its page, I found that the museum does in fact maintain regular postings, relating historical images and objects to local holidays and events, as well as providing basic information such as open hours and admission prices. The museum also linked its Facebook page with Instagram (a photo sharing website that integrates the use of social

¹⁰⁷ Strong, *MARITimes*, 26.1, 3.

tagging through the use of hashtags), creating duplicity in content and often generating more engagement but reaching different media users. Additionally, thanking stakeholders and volunteers and recognizing Corporate Days of Giving maintains a level of transparency and accountability for the institution; however, an area that the NMB could use their social media account to generate enthusiasm is fundraising. After all, they are only able to complete ambitious project, such as the preservation of the Casemates area, through the hard work and enthusiasm of their volunteers. While this is not an exhaustive list of what the museum shares with its 'followers', it demonstrates that the staff of the museum want to share as much as possible within the parameters of best practices that they set for themselves.¹⁰⁸ It may be suggested that use of social media by cultural and heritage institutions in Bermuda correlates with the worldwide demands of transparency with regards to institution operations. By projecting content into the public sphere, the NMB is able to draw attention to itself and its events largely free of cost as a supplement to sending email blasts, paper-mailings and printed publications like *MARITimes*.

One of the most beneficial elements of social media is the connection to immediacy. People like to see what is going on behind the scenes of a cultural institution in addition to the processes that occur in relation to exhibit development and collections management. The St. George's Foundation,

¹⁰⁸ The abundant use of social media by cultural institutions particularly, can be directly linked to its ease in navigation and its multifaceted and highly personalized nature. By generating interest and 'followers', it can be suggested that social media is helping some cultural institutions to do more with their collections, adjusting their professional standards in reflection of the changing platforms that they engage with.

located in the Historic Town of St. George's, is in a situation similar to the NMB's; it has a website that is difficult to navigate and so a redesign is on a growing list of proposed actions. However, it also facilitates a Facebook page and Instagram account to connect with its visitors. When Dr. Charlotte Andrews was hired as the Director of the SGF, the foundations Facebook page had 175 followers. Today, it has more than 500 and is used as the most informative portal for communicating with the community,¹⁰⁹ sharing both the good and the bad, but generating purposeful content and engaging with people nonetheless. For example, Hurricane Gonzalo made contact with Bermuda on October 17, 2014 and was terribly destructive to the Island, damaging hundreds of homes and businesses. One of the most iconic attractions in the old town of St. George's for locals and tourists is the replica of the ship, *Deliverance*. Figure 12 reveals the extent of the damage that the replica sustained, most visible in the single remaining mast (reduced from three). This image was posted to the SGF's Facebook and Instagram accounts and was shared by many others, updating their community on the outcome of the storm.

¹⁰⁹ Dr. Charlotte Andrews, interview by author, Bermuda, April 29, 2014.



Figure 12. The replica of the *Deliverance* that sailed from Bermuda to Jamestown, Virginia alongside the *Patience* in 1610, was badly damaged during the October 17, 2014 hurricane. This image was posted on The St. George's Foundation Facebook account and Instagram account.

The NMB also makes Collection Highlights on Facebook periodically, and are usually more informative than pictures of objects posted on Instagram. One of the benefits of Instagram is the hashtag function, discussed previously in relation to digital collections at the Brooklyn Museum. By choosing to tag images with certain key descriptive words, the museum is involving itself in a global social tagging activity, making that image, and subsequently the institution, accessible to more than 200 million active users of the platform. However, the museum is only providing basic information for visitors; the stories behind the objects and basic cataloguing information are not included in many of the Collection Highlights and object posts on both social media platforms. This is an area that can be suggested for improvement.

The statistics available for both social media platforms are astounding, placing in context the breadth and reach that seem somewhat endless. Launched three years ago, in October 2010, Instagram use has exploded. In addition to having 200 million monthly active users, the platform is used by more than 65 percent of people outside the United States, more than 20 billion images are shared with more than 1.6 billion daily 'likes', sharing more than 60 million photos on average per day.¹¹⁰ Facebook is the better-known platform and is used far more prolifically around the world. As of June 2014, Facebook had 1.32 billion monthly users, of which 1.07 billion of those were mobile users, with approximately 81.7 percent located outside of the United States and Canada.¹¹¹

As the limestone-and-mortar National Museum of Bermuda continues to take the steps towards greater engagement with its community and visitors, its utilization of social media will gain credibility and authority. For the time being, the platforms discussed act as the museum's online version and will continue to develop alongside the institution. However, there are some changes that the museum could implement in an effort to grow its 'follow' size and reach wider audiences, including integrating more specific object-information and planning creative initiatives with the help of the community.

Kirstie Beaven, the producer of Interactive Media for all Tate institutions in the United Kingdom, asks herself and readers "Should museums be using social media more creatively?" She highlights the recommendations from gurus about how to best manage a museum's profile through social media; and how to use

¹¹⁰ "Stats," Instagram Press, 2014, accessed October 5, 2014, <http://instagram.com/press/>.

¹¹¹ "Statistics," Facebook newsroom, 2014, accessed October 5, 2014, <http://newsroom.fb.com/company-info/>.

heavy promotion to acquire followers and achieve a good return on investment.¹¹² Two of the suggestions generated included partnering with other cultural entities (local photographers for example) to host exhibits not usually displayed at the institution, and doing a weekend weather forecast using a work from the collection each week, not unlike the Burchfield Penney Art Center's "In His Own Words," featuring a daily quote from artist Charles Burchfield in Buffalo, New York. However, Beaven really distills this down to the fact that social media is essentially ephemeral and it is up to the museum to balance self-promotion with creative, exciting initiatives.¹¹³ For the NMB, social media platforms are primarily used for self-promotion, which does not yet fully embrace the creative initiatives that are utilized by other institutional users. With educational programming that is also in very early stages of development, the NMB has started to build a solid and consistent foundation for continued uses of its social media platforms.

In the literature review, the concept of convergence culture was introduced within the context of regular people using cultural artifacts to inspire related works and generate discussion. The following example not only demonstrates convergence culture directly related to Bermuda, but it also presents a scenario where it is occurring prolifically on a social media platform. The group "Old Bermuda: Our Island, Our History" is a growing community with 5,826 members

¹¹² For more on return of investment, see: Leonard Steinbach, "Analyzing Return on Investment: Process of Champions" in *The Digital Museum* ed. Herminia Din et al. (Washington: American Association of Museums), 109-120.

¹¹³ Kirstie Beaven, "Should museums be using social media more creatively?" *TATE*, September 1, 2011, accessed October 9, 2014, <http://www.tate.org.uk/context-comment/blogs/should-museums-be-using-social-media-more-creatively>.

as of October 2014. It is a closed group that has two administrative moderators and it invites members to upload photographs, multimedia videos, and documents to add to the growing virtual collection on Facebook.¹¹⁴ Started in 2009, the 'about' portion of the group was updated in 2012, and outlines the group as "an original photo album and discussion website about Old Bermuda, [and] our historic past. How lovely it was way back when! Our Precious Bermuda."¹¹⁵

As with most social media platforms, some people are more comfortable sharing than others, and in the 'Old Bermuda' group, some members are far more active than others. While some members will make linkages with prominent figures from Bermuda's history, others share personal stories and memories, often beginning their comments with "I remember...". Jenkins' convergence culture is best demonstrated in the object interactions amongst strangers from all over the world. For some, a mere comment on the beauty of a photo suffices but others have become regular contributors to the group, uploading scans of old post cards, photographs, and restored film footage. As an observer, I think the most exciting form of engagement carried out through this platform is when questions are asked and answers are given in abundance, usually supported by links to articles online or photographs. For cultural institutions in Bermuda, this group poses a multitude of beneficial opportunities. Not only does it create exposure for the contributing members of the group, but it

¹¹⁴ Individuals can request an invitation, which will allow them to engage with the content being posted on the page. Even without an invitation, members can search for the group and read through content.

¹¹⁵ "About," Old Bermuda Facebook page, May 2, 2012, accessed August 2, 2014, <https://www.facebook.com/groups/OldBermuda/?fref=ts>.

has also generated substantial new content (original photographs, maps, souvenirs) and information that could be used by museum's and libraries to grow current collections. It could also be argued that enthusiastic -- contributing -- members of "Old Bermuda" are key candidates for a community partnership with the NMB; both virtually (through Facebook) and physically (with volunteers).

On 16 September 2014, a member posted a photograph of an old Bermuda charm bracelet (Figure 13). Three days after the original posting, the photograph had 44 comments and 104 'likes' and more than a month later, the same posting had 74 comments and 115 'likes'.



Figure 13. Bermuda Charm Bracelet posted to the community group. Photograph used with permission of owner, Gerri Crockwell-Sequeros.

The engagement with the image, shown above, varied from members mentioning they were gifted a similar bracelet for their 21st birthday while others discussed how they could replicate the bracelet locally and which artisan they would use. The group 'Old Bermuda' demonstrates extensive visitor participation with

minimal administrative moderation and without the scaffolding that Nina Simon suggests to help people feel comfortable engaging.¹¹⁶ 'Old Bermuda' also presents the reader with an interesting case study and, it could be argued, a basic framework from which all cultural and heritage institutions in Bermuda should aspire to reproduce on the very basic basis of sharing information within the parameters of their mission and ethics.

Bermuda does not currently have a Cultural Heritage Act (2002) like the island of Malta that would address policy and procedures in addition to setting objectives that would allow the Island to "embrace its culture and allow the next generation to develop their own avenues of self-expression."¹¹⁷ Until the National Cultural Heritage Policy is unveiled (it is currently in the planning stages), cultural and heritage institutions will continue to operate under their own auspices, without overseeing policy and procedure to support successful platforms for global engagement and accessibility. For the NMB, the importance of self-regulated professional standards is continued in its management and facilitation of its social media platforms.

For the NMB, the cost associated with digitization is prohibitive, but slowly, a digital database is being built as a by-product of other projects, internally and externally. Through fulfilling research requests and substantial publication work, the museum has started to increase the number of professionally photographed

¹¹⁶ Nina Simon. *The Participatory Museum* (Santa Cruz: Museum 2.0, 2010), 13.

¹¹⁷ The Minister of Community, Culture and Sports, Wayne Scott, has stated that the National Cultural Heritage Policy will be revealed before the end of the 2014 financial year. Owain Johnston-Barnes, "Govt planning policy to guide cultural evolution," *The Royal Gazette*, May 24, 2014, accessed August 21, 2014, <http://www.royalgazette.com/article/20140524/NEWS/140529832>.

images that can be edited and manipulated for future digital uses. The museum has plans to continue developing its digital database in order to continue offering visitors exciting content through social media platforms. However, building community partnerships with active groups that are generating content (such as 'Old Bermuda'), virtually and physically, could offer cultural institutions alternative means for volunteers, research projects, and exposure.

6. Conclusion

21st-century museums must be exhausted from keeping up with ongoing changes in the profession and technological advancements that have taken root at thousands of institutions. The National Museum of Bermuda, a small museum tasked with helping visitors explore cultural identity and foster a sense of place and belonging, has embraced the digital trend that has been spreading through the field for more than twenty years. This thesis explored how the NMB has creatively provided visitors (physically and online) with greater access to its extensive collection in light of the many changes they are currently experiencing. *Shipwreck Island: Sunken Clues to Bermuda's Past* has integrated a constructivist learning approach, integrated iPads through the exhibit in response to different methods of learning, and produced an object-rich, content-heavy exhibit. The museum's successful utilization and maintenance of two key social media platforms, Facebook and Instagram, has reached wider audiences and supported engagement with people in a multifaceted approach, facilitating a convergence culture that is sharing content constantly. An area for growth whereby social media platforms can be very beneficial is through fundraising; for the NMB, this could be highly advantageous for future projects, particularly with regards to digitization.

To ground the discussion of the current position of the NMB in its paradigm shift, the literature review covered scholarship from the past twenty years that has focused on the shift from administrative technology to creative and

integral implementations. Reports from the United States, United Kingdom and Australia have demonstrated differing views of the importance of digital technologies in the museum world for education, for engagement, and for widespread accessibility to collections and information. With so many museums digitizing their holdings, online collections are most often seen on websites belonging to major institutions with extensive histories of collecting and impressive financial support. Discussion pertaining to the relative cost of digitization per capture of a single image (U.S.) and for a widespread initiative (U.K.), made it clear that for the NMB, without the support available to small museums through the AAM, digitization was not entirely feasible. Building up a digital database internally, in response to research requests and publications, has helped the museum to generate a digital image database slowly; but widespread digitization is not currently feasible.

Uses of tagging at the Brooklyn Museum drew parallels with how museums have realized that controlled terminologies utilized for most content management systems are not always transferable for public interaction. Instead, tagging has allowed the public to contribute to building content, in addition to generating information for the institution about how visitors view certain works. The Steve Project has greatly contributed to a museum-wide understanding of tagging and has ultimately changed how some museums, like the Brooklyn Museum, have chosen to engage with their physical and online visitors. Social tagging, currently seen with global uses of social media platforms, may be viewed as a byproduct of museum tagging, and allows users of certain platforms

to search by a descriptive word as opposed to strict terminologies. Online collections at the Brooklyn Museum and Metropolitan Museum of Art were presented as examples of digitization executed well. For the NMB, use of social media acts as a platform for its virtual museum and corresponds well with its growing digital database.

Defining the NMB as a small museum contained challenges related to the parameters that the AAM and the AASLH set. The day-to-day functions and small staffing numbers of the museum fit into the small museum structure, but what seemed a considerable annual budget and endowment put it within reach of medium and large museums in the United States. Again, contextualizing was necessary for the small museum definition. The differential in cost of living and institution operations provided reasonable justification for the designation of small museum to be applied to the NMB. Additionally, access to funding and grant programs for small museums have greatly aided in the development of digital museums specifically throughout the United States, Australia and the United Kingdom. Considering a Cultural Heritage Policy and overseeing procedure for the cultural sector does not yet exist on the Island; no grant or additional funding support is available to the museum and other cultural institutions.

For the future of online digital success through social media platforms, the museum would greatly benefit from long-term tracking, particularly in reference to following the growth of the cultural sector on the Island. It will be particularly rewarding to take a closer look at the museum once the updated collecting policy and strategic plan is implemented. Furthermore, the new website and continued

efforts on exhibits and public programming will reflect the manner in which the museum will continue to respond to global trends and changes in the museum field. Growth is undeniable, and the NMB is implementing as many tools as it can to achieve positive growth in a professional manner, reflected in everything it publishes and the people and organizations it engages. For other small museums and cultural institutions in Bermuda, the NMB could be observed as a leader in the island-specific field as a good case study and framework. They have recognized the shifting sands in the museum field and utilized cost-efficient methods for increasing accessibility. The National Museum of Bermuda is historically resourceful and is supported by a hardworking staff and passionate volunteers. This thesis has tried to capture a clear image of the institution and it is the hopes of many that it will continue to flourish and grow in light of the global technological changes in the field.

Appendix 1

Graham Black, author of *The Engaging Museum*, discusses leisure-time activities in relation to understanding current audience and attracting future audiences. The top ten activities and results from American and Overseas visitors he presented are from the National Assembly of State Arts Agencies (NASAA); they can be found on their website.

Activity	USA	Overseas
Shopping	34%	87%
Outdoor recreation	17%	n/a
Historical places/museums	14%	31.2%
Beaches	11%	23%
Cultural events	10%	19.6%
National/state parks	10%	19.6%
Theme/amusement parks	7%	31.4%
Nightlife/dancing	8%	n/a
Gambling	8%	n/a
Sports events	6%	n/a

Source: Graham Black, *The Engaging Museum* (New York: Routledge), 43, Table 1.6.

Appendix 2

As of August 2014, the following exhibits are on display at the Commissioner's House at the National Museum of Bermuda:

Ground Floor

Bermuda's Defence Heritage - defence & fortifications, Bermuda home front, Women at War, Censorship, Local forces, Local forces (First World War), Local forces (Second World War) and Artillery.

Pillared Hall: Hall of History mural (Starts on the Ground Floor and goes up to the First Floor; can be accessed from either direction)

First Floor

Banknotes of Bermuda

Coins of Bermuda

Bermuda & the West Indies

To Bermuda: A History of the Bermuda Race

The Slave Trade

Slavery in Bermuda

The Azores & Bermuda

Destination Bermuda: History of Tourism

70 years of British Airways

Second Floor

Maritime Art (*Commissioner's Room*)

Longtail Photographs by Dr. Reg Grundy (*ACE Room*)

Royal Navy Collection (*Malabar Room*)

US Forces Collection, Capture of U-505 (*US Navy Room*)

Historic Bermuda Collections (*Elliott Room*)

Rare Bermuda Books (*Dodson Room*)

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