



Exhibiting Unseen Collections

A Museum Exhibition Planning and Design Thesis
by Margaret C. Bullock

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requirements for the degree of Master in Fine Arts.

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In satisfaction of thesis requirements for the Master of Fine Arts in Museum Exhibition Planning and Design in the Department of Museum Studies, The University of the Arts, Philadelphia, Pennsylvania under the Directorship of Polly McKenna-Cress.

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ABSTRACT

This thesis looks at ways museums can exhibit more of their unseen collections and how they can inform visitors about the objects they do not see. For many institutions, a larger percentage of their objects are stored than on display. This study analyzed ways museums do exhibit from the variety of objects they hold and the reasons certain objects are kept in storage. The application is a multi-optioned project so that museums can decide which best works for them. Though the percentage of objects on exhibit may not need to increase, this thesis recommends museums rethink what their collections means to their institutions and if there is a way to bring out the objects that have been in storage for decades.

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NOMENCLATURE

Collection Advocate

> Anyone in the museum field who works with and cares for collections, such as curators, keepers, registrars and conservators.

Ethnographic Collections

> Objects that are identified by a specific cultural, ethnic, or regional group of people.

Medium vs. Large Museum

> Size of museum is determined by collection size. Large museums are any museum with 100,000 or more objects, while medium sized museums have less than 100,000 but greater than 10,000 objects.

Museum Type

> Used to define case study museums. Though a museum could be described in multiple ways (researched-based, low percentage of objects on display, etc.) how it is defined is based on how the museum was specifically used in analyzing different ways museums view/use their collections.

Objects

> The term objects includes all items of a collection, e.g. artifacts, specimens, taxidermy animals, rocks and minerals, fossils, etc.

Specimens

> Any animal object when speaking in general terms, which includes full or partial skeletal remains, taxidermy animals, and fossils unless otherwise stated, e.g. botanical specimens.

[Definitions as understood and used by author.]

ABBREVIATIONS

Cleveland Museum of Art	CMA
Cleveland Museum of Natural History	CMNH
Metropolitan Museum of Art	MMA
Museum of Fine Arts, Boston	MFA

I. INTRODUCTION

The mission of this thesis and application project is to encourage museum staff to be more transparent with visitors about the objects that are not on display and why. The goals were to create a bridge between collection advocates and exhibit development and design and to look at what museums are currently doing to exhibit a variety of objects from storage. Other goals were to find out visitors' curiosity level about a museum's whole collection, and to develop an exhibit plan to inform visitors about the reasons for not displaying certain objects and to rotate usually stored objects into galleries.

Museums typically have their permanent exhibitions and then their temporary exhibit gallery spaces. Visitors can enjoy seeing a new exhibition every few months or every year; however, how often are new exhibitions chosen for the purpose of bringing out objects that have not been on display for, possibly, decades? Temporary exhibits are a way for museums to educate their visitors on new and interesting topics, which also is a way to encourage repeat visitors. It is also, however, an opportunity for different objects to be brought out of storage. Although, exhibitions are regularly developed around a theme, not necessarily objects, and usually as the exhibition is designed objects are cut for different reasons. Permanent exhibits can stay up for years, so any objects which relate to the ones already on display stay in storage.

According to the American Association of Museums definition, a museum is "an organized and permanent non-profit institution, essentially educational or aesthetic in purpose ... which owns or utilizes tangible objects, cares for them, and exhibits them to the public on some regular schedule."¹ Moreover,

museums are "places of ideas - places where knowledge is given shape through the use of objects and exhibitions."² If this is true, then museums should have an obligation to exhibit on rotation the variety of objects they hold since, for many institutions, only 5% of their collection is on display.³ There is no law or even guideline that states museums have to display their whole collection (and frankly, it would be overwhelming to see the millions of objects large museums have); however, what is the point of acquiring and keeping so many objects if they simply sit in the basement?

The purpose of this thesis is not to urge institutions to exhibit more of their collection, but to think about ways to bring out more objects from storage. It also aims to help visitors understand why certain objects are not and cannot be exhibited. The case study museums used, the Cleveland Museum of Natural History, the Museum of Fine Arts, the Cleveland Museum of Art, the Bruce Museum of Arts and Science, and the Luce Foundation visual storage galleries, are to show different ways medium to large museums with ethnographic, scientific, and art collections display their objects. A front-end survey was conducted for visitor research, and the project application was designed for museums of different sizes and budgetary limits so they could adapt one of the options of exhibiting more and/or a way of informing visitors that best fit their institution.

II. EVOLUTION OF COLLECTION DISPLAY

People have collected and placed value on objects since antiquity. The ancient Egyptians arranged objects in tombs so the deceased would have what they needed in the afterlife.⁴ The ancient Greeks placed precious objects in temples in honor of their gods, and collected objects from their conquests and displayed them for all to see. The first museums, Greek temples of the Muses, were also places of discussion and experiment with natural phenomenon.⁵ Throughout history people displayed their wealth through objects and showed off exotic items they collected from different countries and cultures. These objects acted as status symbols. Early Christian churches also had object collections in the form of relics, which people traveled on pilgrimages to see. By the 16th century, church collections were transferred to nobility ownership to form the first Cabinets of Curiosities, which were rooms filled with objects of all types: rocks, botanical specimens, animal specimens, and artifacts. Royal residences already had grand halls as painting galleries, which were expanded to include these object collections.

With advances in preservation techniques came the ability to maintain a variety of organic objects. This allowed for collections to greatly increase in number. Objects started to be arranged by theme, much like many exhibitions today. Collectors would exchange ways to organize their natural history collections to the point of making rules.⁶ It was common for royal families to have their own private collections, which only the people of high society could admire. In many cases, royal collections became public museums, such as the Louvre in 1753 and the British Museum in 1759. Upon his death in 1754 a physician, Sir Hans Sloan, bequeathed nearly 80,000 objects, ranging from botanical specimens to ancient artifacts, to King George II. The collection founded the British Museum, to which public



Early 20th century Cabinet of Curiosity.

access was approved by application and usually only if the person was of noble birth. This was done to keep away the lower classes so only the highly educated and elite society could view the magnificent objects.

The first example of chronicle display through the discipline of art history was the Royal Collection of Vienna. After the collection became property of the Austrian government, the paintings were exhibited at the Belvedere Palace. The curator, Christian von Mechel, arranged the paintings by artist chronologically and they “hung in clearly labeled, uniform frames.”⁷ Museum collections across Europe and America expanded with artifacts from archaeological excavations and from souvenirs of voyages to foreign lands. Master plans of gallery expansions were designed and carried out over the next few decades. New finds in science and geology caused the reordering of collections and gallery layouts to follow evolutionary theory. By the late 18th century, museums began to open to the general public.

However, there was a problem: The working class did not have the educational level to understand the arrangement of objects or the objects' context since literacy was not relatively common. If museums were to grow into cultural institutions as resources for public education, interpretation of the collections needed to be more comprehensible. To evolve, museums needed to redefine their missions as to whom they wanted to serve. For natural history institutions, the scientists and scholars who ran them needed to decide if their collections of specimens were for the general public or for research purposes only. It took the Academy of Natural Science in Philadelphia nearly fifty years after its founding for its study collection to be open to the public. It would not be until the late 19th century that curators translated what world fairs did with life-group displays into exhibit design, which created more comprehensible exhibitions [see photo to right]. On the other hand, an art museum in Berlin had already begun thinking about designed exhibitions in terms of important artwork being more prominent in the main galleries and lesser known or less important pieces in the smaller galleries.⁸

In 1891, Newton H. Winchell, a professor of geology, had this to say about museums: "The true museum is that which approaches nearest to the cardinal idea of the Grecian museum. Its aim is not to amuse, nor to instruct, but to afford that inspiration which shall enable the visitor to instruct others."⁹ He seemed to understand that a change was indeed needed in exhibition design. Winchell also classified museums into three types. The first were the entertainment museums or cabinets of curiosities where visitors were awed by the variety of artifacts and specimens. The second type were museums of instruction, which sometimes overlapped with the third type, research museums. Visitors who wanted to learn from museums, if they truly wanted to study, could become students of research.



Japanese Hoo-den exhibit at the Columbian Exposition of 1893 in Chicago.

The last two types continued the thought behind the first museums: the temples in which knowledge of the natural world was sought.

It was typical for museums in the 19th century to display their whole collection. "Their goal was not to tell a dramatic story ... but rather to show off sheer numbers of objects."¹⁰ Author Steven Conn argues that in late 19th century exhibition practice there was a "faith in the power of objects to convey knowledge, meaning, and understanding."¹¹ By the 20th century, people had lost the faith that objects alone could tell whole stories. However, as Conn sees it, museums are not just reference books and objects do tell stories, just without words. In the Western world, museums began to rethink how they approached exhibitions, wanting to be more educational, and with pressure from the public to display less, they decided to show more central larger objects with more appeal, much like fairs and theme parks of the time.¹²



Preserved cabinet of curiosity: The Wagner Free Institute of Science, Philadelphia, PA.



Carl Akeley's *The Muskrat Group*, America's first diorama at the Milwaukee Public Museum.

Taxidermist Carl Akeley created America's first habitat dioramas at the Milwaukee Public Museum and others soon followed suit. There was a desire amongst curators to show their objects in their original settings, to not just display the objects but to create a whole environment. Anthropologist Franz Boas at the American Museum of Natural History did not believe these early dioramas accurately translated the different cultures they represented and made sure his objects were correctly displayed with labels based on actual field research.¹³ Dioramas, nevertheless quickly became staples in natural history museums.

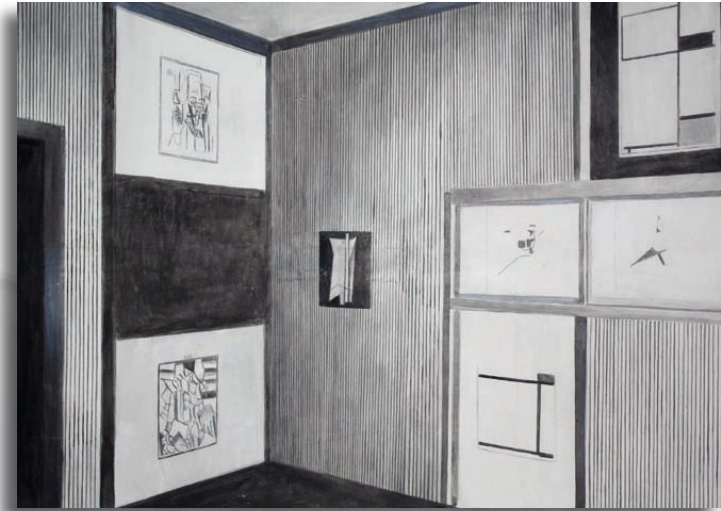
The development of new disciplines in areas of science and history led to a change in museums as well. With the spread and public popularity of dioramas, the fields of anthropology and taxidermy grew. Staff numbers grew with the number of students wishing to intern at museums, and more donations provided funds to expand collections. In art museums, the diorama concept transformed into period rooms. Both dioramas and period rooms could inform visitors in a whole new way that was more effective than objects could simply be in cases. Dioramas and period rooms were a window into the past and different cultures. Objects were no longer things without a purpose; they were elements of material culture and existed as part of an environment in which visitors could imagine people actually using them. Visitors could walk room to room, traveling from ancient Egypt to colonial America.

The number of objects being displayed started to change as museums were thinking more about design and interpretive exhibitions. If permanent exhibitions were going to hold primarily the famous, more important/interesting objects, then the rest of the collections had to be stored elsewhere. Temporary exhibits would be developed around themes in which stored objects could be used or objects borrowed from other

institutions.¹⁴ All objects were no longer in open storage-like galleries or the cabinet of curiosity design layout for everyone to see. Actual storage areas were needed to house the collections which only museum curators and researchers could access on a regular basis.

In the 1920s modern exhibition design began to look as it does today with more interpretation. New installation exhibits were created using the artwork and artifacts. Alexander Dorner at the Landesmuseum in Hanover, created *Abstract Cabinet*, in which visitors could rotate cases to see different objects, and, at the Rhode Island School of Design's Museum of Art, Dorner created atmosphere rooms for artifacts from five different places and times. Unlike traditional period rooms, these exhibits had one plain wall color, architecture transparencies on the windows, and only objects that reflected the window's architectural element in the case in front of it.¹⁵ Today, artists are still utilizing objects in their installation exhibitions, such as Virgil Marti's *Set Pieces* exhibition [see photo to bottom left]. Katherine Sophie Drier at the Brooklyn Museum in 1926 placed only a few pieces on the walls, wanting "the show's design to reflect the spirit of modern art."¹⁶ Albert Barr Jr. at the Museum of Modern Art and Everett 'Chick' Austin at Harvard University also separated the artworks with more space between them, which is still the relative norm in art museums today.

At the end of World War II, "Steven Weil chides American museums to use their collections for 'the public good', rather than simply placing them in protective custody. . . . The American museum — notwithstanding the ringing educational rhetoric with which it was originally establishing and occasionally maintained — has become primarily engaged in 'salvage and warehouse business.' . . . To the extent that some further benefit might be generated by providing the public with physical and intellectual access to the collections and information . . ."¹⁷



Alexander Dorner's *Kabinett der Abstrakten* (Abstract Cabinet), 1928.



Virgil Marti took objects from the Philadelphia Museum of Art to create his own story and only had very simple labels for each object that were almost hidden on the dark colored walls.

Collections of many history museums were (and some still are) for academic research, and objects were stored until needed for study, with no need to be on regular display, or they were on exhibit with minimal information. As stated by Hilde Hein: “It was the obligation of museum staff to care for, preserve, study, and (sometimes exhibit) these culturally enriched things.”¹⁸ Museums changed in layout and design, from private to public collections, and in how they approach exhibiting objects. In the United States particularly, museums evolved from cabinets of curiosity with rows of object filled cases to more interpretive, organized, educational, and designed exhibitions. The number of objects displayed was decreased in order to create more coherent exhibitions. Museum professionals, from curators to exhibit designers, have different opinions on how and what should be on exhibit. For instance, as stated by Randolph Starn:

“In the conventional wisdom, ‘the object’ is primary material that museums convert into a lasting cultural good through collection, classification, conservation, and exhibitions. A move that the new museum studies share with recent histories of material culture is to de-materialize objects as mere semiotic indicators or to re-materialize them in social, political, and economic contexts, or to do both. One way or another, objects are not supposed ‘to speak for themselves’ but are spoken for.”¹⁹

That said, many museums today do have only about five percent of their collection on display and exhibitions stay up for decades. Permanent exhibitions truly being permanent has been a tradition for the past century. William Henry Holmes, a curator at the Smithsonian, stated in the early 1900s that permanent exhibitions would teach for generations.²⁰ He was right; however, without any change (knowing there are financial reasons why they are not) exhibits teach the same ideas and stories even when what is known about science and history changes. Some museums do update graphics and fix casework wear and tear in permanent galleries, although objects could be ‘updated’ as well.

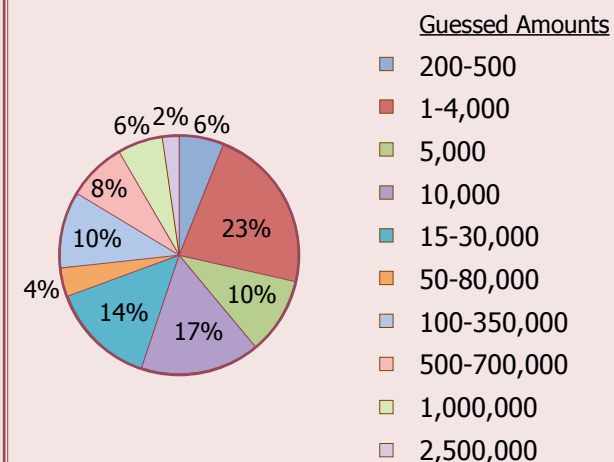
III. WHAT'S (NOT) ON EXHIBIT Visitor Front-End Survey

The goals for conducting this visitor survey were to gauge visitor curiosity level about collections, and determine if they knew why certain objects are not on display. Surveys were carried out at only one institution because of the time frame of this thesis and availability to visit the other museums discussed in the following case studies (see Areas for Further Research section). Evaluations were conducted on January 7 and 8, 2011, at the Cleveland Museum of Natural History in Ohio.²¹ Given available time to conduct the survey and being informed that it was one of the museum's lowest visitorship weeks of the year, the goal sample size was set at 30 surveys. The best place determined to approach visitors was in the lobby area of the main entrance. The museum's first floor galleries are all connected in a circle layout which allowed the surveyor to ask visitors who had already experienced at least one exhibition. Knowing not many people were expected, especially since Jan. 7th was a Friday during the school year, it was decided to do a census of visitors and approach anyone who walked out of the *Humans and Nature* exhibition [see map to top right]. The demographic was typically couples, small groups of family members or friends, or one adult with young children. Realizing it would be difficult for an adult to conduct the survey while watching their children, any adult with more than one young child was not asked. The sample size for the 2 days over a total of 6 hours was 54 surveys. [See Appendix A for survey used.]

Some of the most interesting observations were gained by watching and hearing visitors' reactions to the answer of the first question: Do you know how many objects this museum has in total (on display and in storage)? The largest number of people, at 23%, guessed between 1,000-4,000 objects, and the second largest group, at 17%, guessed 10,000 [see chart to right].

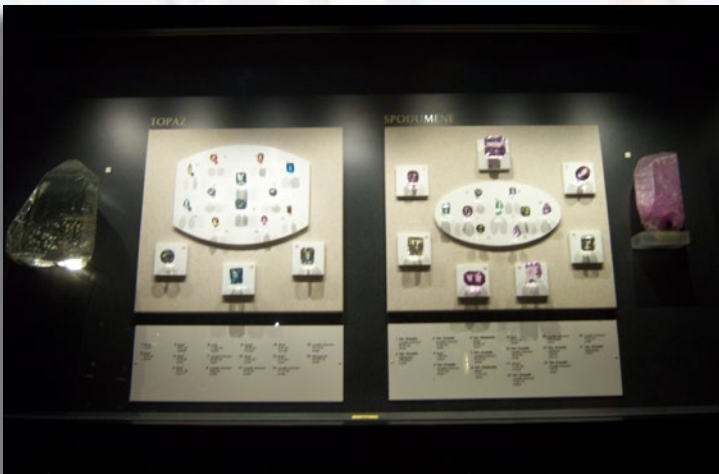


Question 1: How many objects are in the museum's collection?





Part of the *Human and Nature* exhibition.



Case from the *Jewels and Gems* exhibition.

Out of the 49 surveys in which people gave an answer, only 4 guessed in the millions, the answer being approximately 5 million objects. (Two people wrote 'many' instead of a number, two others did not give an answer, and one was excluded since he had overheard the correct answer and wrote it down.) When told the answer, most people were very surprised and shocked to hear that there were so many objects and that they were only seeing a very small percentage of the museum's whole collection.²² Some people stated that they did not notice the question included 'in storage' as well; however, that would still mean only 1 person answered correctly guessing 50,000 objects on display.

The point of this question was not to see who could actually guess the closest, but to figure out if people really knew they were seeing only a very small portion of the collection. Having 39% of the visitors guess fewer than 10,000 says a lot, being far from 5 million. If asked, the CMNH (and typically other museums as well) will tell visitors how many objects are in their collection and it is stated on their website. Moreover, it is the percentage on display that visitors do not realize.

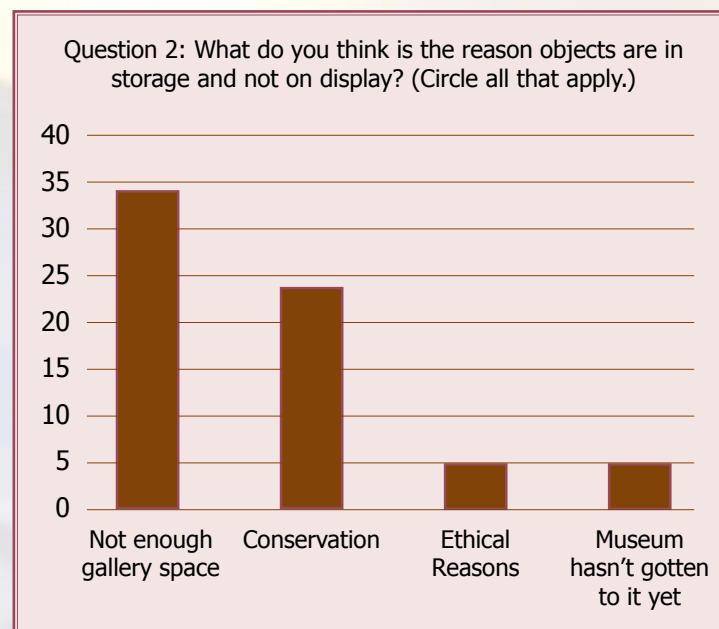
Another reason the survey was given outside the *Humans and Nature* exhibition was because of the case layout in the first gallery and how it would reflect answers to the first question [see photo to top left]. There are large diorama-like wall cases with dozens of artifacts and specimens inside each, as well as larger taxidermy animals above the cases. In that gallery alone there are probably thousands of artifacts and different types of specimens. Asking visitors as they exited was a sure way to know they had just seen a lot of objects in only one gallery. As people were trying to make a guess and could not decide what to write down, the example of the *Jewels and Gems* exhibition was also given [see photo to bottom left]. When they thought about the number of objects in that smaller gallery, they

seemed to guess higher than they were originally thinking (though still few guessed close to the correct answer).

Question number two asked visitors what they thought was the reason objects were in storage and not on display. As the chart shows, 34 visitors thought it was because of the amount of gallery space and 24 visitors believed it was also because of conservation. Visitors could circle more than one answer as the question stated “circle all that apply”; however, no one thought it was solely for ethical reasons or that the museum had not gotten around to displaying the objects yet. Only 2 people circled all four answers (if there was a correct answer, that would be it) and 7 visitors circled more than one answer.

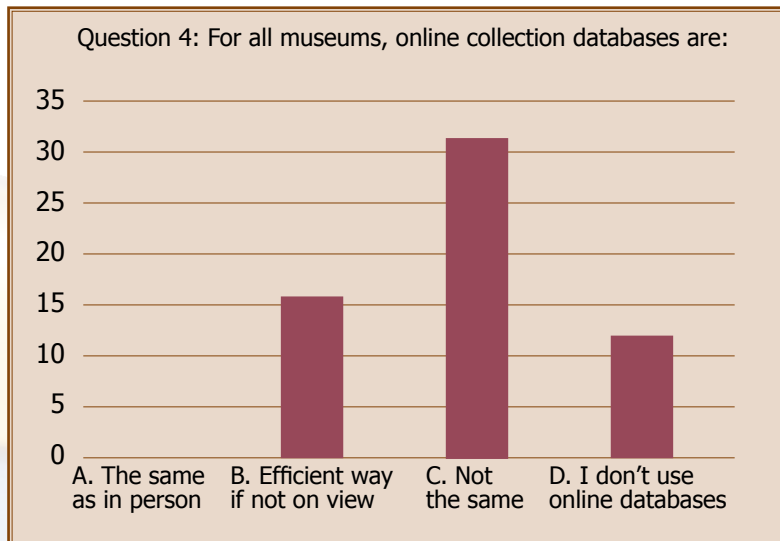
Perhaps it was the wording of the question or that visitors chose ‘not enough gallery space’ since it was the first choice given; nevertheless, the majority of visitors believed there was only a single reason objects are not on display, either for conservation or gallery space. What can be concluded from this question is that the average visitor understands there are reasons behind why certain objects are not exhibited, and given that no one circled only ‘D’ — Museum just has not gotten around to it yet — proves this.

In question three, when asked if they would be interested in learning about why certain objects are not displayed, 74% of visitors did answered ‘yes’, and, when explaining why, they said that the objects had to be significant if the museum was holding on to them. One person asked in their answer, “how do they choose what to display and when?” and another even wrote down, “rotating displays” without any knowledge about this thesis. Another visitor stated bluntly that “that’s why I’m here to see things.” Most of the other ‘yes’ answers wrote they would be interested to learn more. Therefore, the curiosity of wanting to know more about the whole collection is there.



The visitors who answered ‘yes’ to question 3 were compared with question 4, ‘For all museums, online collection databases are. . .’. It showed that out of those 40 people, 13 circled that online databases were an efficient way to see objects that are not on view at the museum. No one, even the people who were not interested in learning more, circled that online databases were the same as seeing the objects in person [see chart to right]. The greatest number of people said it was not the same, with answer ‘C’ totaling to 32 visitors. (Three people did circle both ‘B’ and ‘C.’) Online databases are great tools and do allow access to more objects; however, it is still not the same (see Reasons Objects Are Not Displayed section).

Out of the 13 people who answered ‘no’ to being interesting in learning more about collections, only 4 had never been to the CMNH before. One person even said they visit museums at least 20 times a year with the CMNH being 5 of those times. There were 4 other repeat CMNH visitors



and other museum goers that also answered 'no'. Though it is only a few visitors, it could be assumed that people who enjoy museums would be interested in learning more about collections. This shows that even if people are repeat visitors, they may still be content with what the museum chooses to share with them. The last questions were optional demographic ones (see Appendix B) that were passed onto the CMNH; however, did not become relevant while analyzing the data.

Conclusions

What this survey shows the most is that visitors are unaware of the depths of museums' collections and of the amount of the collection they are actually seeing. This is not meant to imply museums are trying to hide objects from visitors by not giving them access to a whole inventory list or putting everything on exhibit, and is not a direct reflection on the CMNH. Frankly, it can probably be assumed that no visitor would want to flip through a

5-million-page book of object after object. It is for museums to think more about why they collected these objects and are studying them — to learn. Scientists and researchers learn from artifacts and specimens every day and get very excited about even the tiniest of new information. People come to museums to be entertained, yes, but also to learn. It is wonderful to come back anywhere for the nostalgia of it all when things are exactly the same, but in any history museum what we know about the past changes all the time. If an exhibition has been up for 20 years, there is a good chance that what they knew then is different than what they know now. Think about any solar system exhibit with Pluto still as a planet. Artifacts and specimens all have their own stories to tell, and who is to say visitors will not find that story just as interesting as the researchers?

When developing exhibitions, "Who will be the audience?" is a typical question. If you know the exhibitions that have been done in the past 10 years and what is in the permanent galleries, then maybe a question should be, "What have our visitors not seen yet?"

CASE STUDIES Museum of Fine Arts

Museum Facts

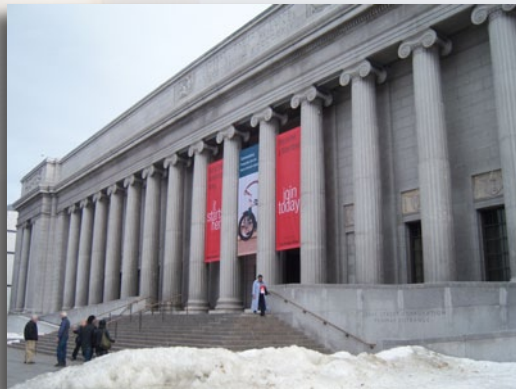
TYPE: Large art museum with online database and new wing expansion.

COLLECTION SIZE: 450,000 objects

AMOUNT ON DISPLAY: 4%

MISSION STATEMENT: The Museum of Fine Arts ... aspires to serve a wide variety of people through direct encounters with works of art. ... It serves as a resource for both those who are already familiar with art and those for whom art is a new experience. Through exhibitions, programs, research and publications, the Museum documents and interprets its own collections. It provides information and perspective on art through time and throughout the world...²³

LOCATION: Boston, Massachusetts



The Museum of Fine Arts was founded in 1876 with a collection of 5,600 objects and it reopened at its current location in 1909.²⁴ In its first sentence, the MFA's mission affirms that collections are its main focus. It further states that they use exhibitions, programs, and research to interpret their objects. Though the mission statement is a few paragraphs long, it clearly outlines how the museum views their objects and sees "conservation as a primary responsibility which requires constant attention to providing a proper environment for works of art and artifacts" (see Appendix C for full mission statement).

The MFA collection comprises nearly 450,000 objects with 18,000 currently on display, which are stored on and off-site. The galleries are divided into five collection groups: Contemporary Art, Art of Asia, Oceania and Africa, Art of Europe, Art of the Ancient World, and Art of the Americas. There are three special exhibition galleries among the four levels of the museum [see maps on page 13]; however, smaller galleries throughout the different collection areas are changed every few months. The Exhibits department has 18 employees, six of whom are project managers. There are also designers and graphic designers. The project managers organize the budgets and schedules for special exhibitions, renovations, and touring exhibits. All of their work is done in-house from concept drawings to fabrication. Exhibits are developed from an Exhibit Strategy Team made up of directors, curators, and the communication department. Curators can propose exhibition ideas that then have to gain approval from the Strategy Team on the basis that the exhibition relates to the museum's mission. Exhibition ideas also have to fit into the budget and schedule. The Exhibits budget differs from year to year; however, it does have the largest operating budget of any department



Part of the Arts of the Americas wing.



An Art of the Ancient World gallery.

in the museum. This is probably due to all in-house exhibition fabrication. The museum also takes in traveling exhibitions.

The MFA does have a master plan in place to organize their galleries by ethnographic and regional sections instead of by subject matter, as the galleries have been set up. This started with the recent opening of their Art of the Americas Wing in October 2010. An architect came in to see how they could better use their spaces. Suggestions of how to better organize the galleries and how to display more artwork were given. A big change the museum made was to move their main entrance. When it was in the west wing of the building, people did not seem to go to the east side of the museum very often. Now with two main entrances at the north and south sides, visitor flow seems more balanced in all the galleries. The move of the main entrance also took into consideration the new Americas wing. The Art of the Americas wing “doubles the number of objects from the collection on view, including several large-scale masterpieces not displayed for decades.”²⁵ The wing has 53 new galleries, more than 5,000 works of art, 133,491 square feet for the courtyard and galleries, and cost \$504 million. The Contemporary Art galleries also are currently being renovated, which are scheduled to reopen in September 2011. The new wing will have an 325% increase of gallery space.

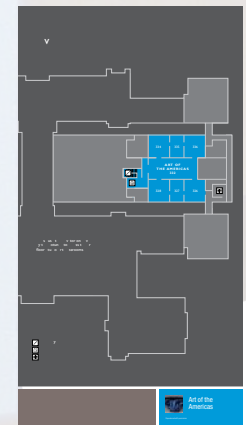
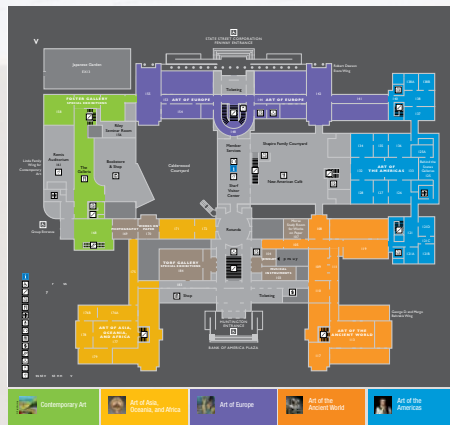
The MFA has programs for all ages around a variety of topics utilizing exhibitions currently on view. An online database on the museum’s website includes most of the museum’s holdings, though not all objects have photographs. Visitors do inquire about certain pieces of art; however, the museum does try to market only what is currently on view. The MFA also has in-house conservation departments which are divided into six areas; paintings, artifacts, Asian, textiles, furniture and frames, and paper objects. All the different areas and recent projects are laid out in the

Conservation and Collection Care section of the museum's website. The Exhibits department works closely with Conservation to see how long certain objects can be on view. For example, in the Japanese galleries there is an exhibition on woodblock prints, *Flowers and Festivals: Four Seasons in Japanese Prints*. Though the exhibit is up for only eight months, the prints are rotated regularly to preserve them from light exposure. A computer is set up in the corner of the gallery so visitors have the opportunity to view all the prints in the collection. Another example is the MFA's past exhibition, *Donatello to Giambologna: Italian Renaissance Sculpture*, which as stated from their website:

"Features a fascinating collection that has never been shown as a whole and that remains virtually unknown to the general public and to scholars alike. In fact, several of the masterpieces on display were only recently rediscovered after being long hidden away in storage—like St. John the Baptist, a completely unknown early-sixteenth-century glazed terra-cotta recently attributed to the Florentine sculptor Giovanni Francesco Rustici, an associate of Leonardo da Vinci. Because many of the objects have been in storage and need extensive work to stabilize, clean, and restore them to their best possible state, the exhibition explores some of the challenges and issues involved in the care and preservation of such a deep and old collection by showing some objects mid-way through conservation."²⁶



Flowers and Festivals: Four Seasons in Japanese Prints exhibition.



CASE STUDIES Cleveland Museum of Natural History

Museum Facts

TYPE: Research-based large natural history museum with low percentage on display.

COLLECTION SIZE: 5 million objects

AMOUNT ON DISPLAY: Less than 1%

MISSION STATEMENT: To inspire, through science and education, a passion for nature, the protection of natural diversity, the fostering of health, and leadership to a sustainable future.²⁷

LOCATION: Cleveland, Ohio



The Cleveland Museum of Natural History opened in 1920 after a group of science enthusiasts wanted to expand a small two room building in Cleveland's Public Square known as "The Ark" (which was founded in the 1830s) with a collection of specimens into an institution.²⁸ The collection today is made up of approximately 5 million objects, less than 1% of which is currently on display. The whole collection, which is stored in the lower levels of the museum, is available for research for anyone who makes an appointment. The museum sees research as its main purpose and, according to Joel Alpern, head of the Exhibits department, only displays the limited number of objects with which the public can identify. There is an importance level established for objects. If it is very rare and easily damaged then the object is not put on regular display. On the other hand, if it is not seen as important, it also is not exhibited. One reason certain animal specimens are not on display is because of multiple examples among the collection; the museum chooses the best-preserved example to exhibit. The CMNH actually has the largest collection of human skeletons of its kind with 3,100 modern human remains; however, it does not display any of them. This is because the skeletons are the remains of unclaimed bodies from the 1800s which researchers used for study. The museum also has a living collection of plants and animals as part of its on-site Perkins Wildlife Center & Woods Garden and the Smith Environmental Courtyard. The CMNH even bought Fern Lake Bog, and other unique lands across Ohio to preserve its natural environments as part of their Natural Areas Program.

The CMNH has four temporary exhibit galleries, one being for traveling exhibitions [see map on page 7]. Its permanent galleries (approx. 10) have been in place since at least the 1970s, though the *Planetarium* is the newest,

being installed in 2002. The Exhibits department handles the development and design of the temporary exhibits; however, plans were developed and a design firm was recently hired for major renovations for all permanent exhibitions. How these new plans affect object change in the galleries is unknown. Ideas for exhibits come from the variety of people working at the museum, and budget usually depends on the scope of the proposed project or exhibit. In CMNH's 2010 Annual Report, 8% of total expenses or \$814,166 was spent on exhibits, whereas 22% (\$2,277,607) was for collections and research. Research does play a large role at the museum with many publications produced by curators, as well as the institution's magazine, *Tracks*, which informs the public about current research and new discoveries.

Based on personal observations, some galleries had very full cases with artifacts and specimens, while others contained large graphic panels and interactives. One example of the latter was *Disease Detectives*, a temporary exhibition most likely designed for children; however, there were also a lot of lengthy labels and no objects. On the other hand, lower level hallway galleries included lots of specimens in wall cases and in semi-dioramas. The CMNH is similar to the Field Museum in Chicago in that they have object-filled cases. There is the point of being overwhelmed with the number of objects and then having a few objects with long text panels. Both these museums found interesting ways to display a lot, but not to an overwhelming degree.

The museum has an array of programs and lectures including classes for all ages and their "Explorer Series" on different science topics. One lecture series at the museum is "Curator's Forum" in which the public can learn about the current research the museum curators are conducting. For the special exhibition *Extreme Mammals*, a traveling exhibition from the



An exhibit case in the *Human and Nature* gallery.

American Museum of Natural History, programs were designed so objects from the CMNH's own collection could be brought out. For example, a recent program, "Humans: Extreme Mammals Living All Over the Globe", brought out clothing from the museum's Cultural Anthropology collection to help indicate what people wear in different climates. This is a practice done with not just traveling exhibits but also with their temporary and permanent exhibitions. However, the objects used on a daily basis for educational programs are from their teaching collection, which are non-accessioned objects.

The CMNH's mission statement is broad in its description of how they go about inspiring through science and education and their collection is not mentioned at all. It leaves out how different departments of the museum can interpret its meaning. The researchers and curators carry out excavations



Part of the *Human and Nature* gallery.



Case on Ohio Paleozoic fossils and rocks.

and publish their findings and hold lectures; the educators create programs and special events; the Conservation and Biodiversity department protects animals and natural environments for the future; and Exhibits creates exhibitions utilizing objects and information about science and history. There is nothing in the mission that specifies how the CMNH's collection is used or should be used, and therefore, if the museum states elsewhere that the collection is mainly for research, then that is its purpose. As visitors, the general public has the opportunity to learn from whatever the museum decides to produce, be it an exhibition or educational program. On the museum's website, it further states that "its mission emphasizes scientific research, conservation, and education."²⁹ Once again collections are not mentioned, with conservation referring to environmental preservation. A short video about the history of the CMNH, "A Legacy of Discovery", describes how the museum's goal has always been discovery and how education has been the central part of its mission since its founding.

CASE STUDIES The Bruce Museum of Arts and Science

Museum Facts

TYPE: Medium-sized history museum with regularly changed exhibits.

COLLECTION SIZE: 15,000 objects

AMOUNT ON DISPLAY: 5-10%

MISSION STATEMENT: The Bruce Museum promotes the understanding and appreciation of art and science to enrich the lives of all people.³⁰

LOCATION: Greenwich, Connecticut



The Bruce Museum was founded after Robert Moffat Bruce gave his home and property to the town of Greenwich in 1908 to be turned into a public museum of natural history, art, and history. The Bruce today has a collection of approximately 15,000 objects, ranging from fine arts to ethnographic pieces from the Americas.³¹ The museum has approximately 750-1,500 objects of its collection on display in its 7,500 square feet of exhibition space, half of which is for the permanent galleries of their *Environmental and Natural History* exhibition that was installed in 1994 (the museum underwent a major renovation in 1992-1993). According to their director of exhibits, Anne von Stuelpnagel, they do have a plan for a major renovation of the permanent galleries again in the next five years. Their temporary galleries are divided into four different exhibition spaces. These exhibitions typically stay up for three-four months; however, certain science and ethnology exhibits developed along with the local schools curriculum might stay up from six months to a year. This means the Bruce produces 12-14 exhibitions a year. Curators and their Education department develop exhibitions and use guest curators every once in a while. Exhibitions are all fabricated in-house except for any audio/visual production, and 25% of the Bruce's annual budget goes toward exhibitions.

Exhibitions are developed from a theme, utilizing objects from the collections when applicable. With at least 12 exhibition changes in one year, themes probably vary enough that different objects are brought out frequently. Sometimes the Bruce does rotate objects from storage into their permanent exhibits, and object storage is divided between the museum and an off-site storage facility. Stored objects are also used as often as possible with loan exhibitions which the museum develops. Jack Coyle, registrar at the museum, stated that the main reason certain objects are

not on exhibit is because of space. A digital database of the museum's entire holdings which will give visitors access to all of the collection is currently in progress. Furthermore, the Bruce does have museum-based programs that allow visitors hands-on activities with objects, as well as their Brucemobile Outreach Program that takes objects to classrooms. The museum's mission statement does not describe the ways in which they do promote art and science, and objects are not specifically mentioned. However, the Bruce was developed from a donated collection and house in which to exhibit them; therefore it appears that, through their attention to exhibitions and object-based programs, objects are seen as the core of the museum.



Mineral Crystal exhibit case.



CASE STUDIES Luce Foundation Centers

Facts

TYPE: Open storage-like galleries.

MISSION: ... seeks to bring important ideas to the center of American life, strengthen international understanding, and foster innovation and leadership in academic, policy, religious and art communities.³²

LOCATIONS: Metropolitan Museum of Art
New York Historical Society
Brooklyn Museum
Smithsonian Institute



The Henry R. Luce Center for the Study of American Art at the Metropolitan Museum of Art.

The Metropolitan Museum of Art's Luce Center, an open storage gallery, was the first of the Luce centers built in the late 1980s from funding by the Henry Luce Foundation. Henry R. Luce was the co-founder of Life, Inc. and had a great appreciation for American art. In 1936, Luce created the foundation in honor of his parents, missionary educators. The Luce centers are funded on a grant basis on behalf of the foundation's American Art Program, which has supported 250 museums, universities, and service organizations in the United States and internationally.³³

The Luce Foundation Center of the Smithsonian American Art Museum in Washington D.C. was established for the sole purpose to exhibit more of their collection on rotation. According to Georgina Bath Goodlander, the Interpretive Programs Manager, before the Center, the art museum only exhibited 800-1000 of their 41,000 objects (30,000 of which are of paper material and cannot be on permanent display). With the Center, they now exhibit 3,300 objects at any given time. Their exhibition design is set up like a storage area that, for example, allows visitors to open light-activated, vibration-controlled drawers to view smaller objects. Using this concept, many objects that museums keep in storage because of preservation issues could actually be exhibited for public view. A case's versatility may depend on object sizes and the materials they are made of; however, there are definite possibilities for object display variety.

This is not to say these drawer cases are only at the Luce Foundation Centers. In fact, other D.C. museums, such as the National Museum of the American Indian, use a similarly-designed case in some of their galleries, as well as the Newseum with their collection of archival newspapers. These cases protect objects as well as save gallery space.



The Luce Foundation Center of the Smithsonian American Art Museum.

The Luce Center at the Brooklyn Museum is their Visible Storage and Study Center. The gallery holds 2,000 objects and only the object's accession number is displayed with them. The numbers can be used on the Center's link on the museum's website to access further information on the objects. The New York Historical Society Luce Center holds nearly 40,000 objects, which is 70% of the museum's collection.

The Center at the MMA holds most of the museum's 21,000 objects in their American collection, which are not otherwise in an exhibition. Cards are placed whenever a object is removed to be exhibited or loaned to other institutions. Part of the collection is waiting for construction to be finished on the second half of the Center, but when completed, the whole collection will be on view. The design of the gallery is large glass cases with objects as close to each other as possible. There is a real sense that the visitor has just walked into the museum's storage area; however, the cabinets have

been replaced with glass. In many of the cases only accession numbers are displayed with the object, though some have a small label. Currently, touch-screen monitors are being installed on each case in order for visitors to learn more about the objects and make connections between them. According to Tim Ventimiglia, a reporter who took a tour with the curator and technologist of the project:

"The Luce Center's collections interfaces and the period room interactive programs are a smart technological retrofit of an existing facility and provide a strong contemporary complement to older (but still effective) exhibition techniques. To me the most interesting aspect of this interface is that it enables the [MMA] to graphically represent the entirety of the collection in a number of ways that reveal larger trends like the proportion of objects in the collection across decades, or the proportion of silver, to glass, to ceramic, etc. These visualizations reminded me of some of the great Victorian collections displays where the entirety of the museum's collection were visible in a kind of panoptic spectacle that was meant to convey the collection's taxonomic structure at a glance."³⁴

Like the CMA, the MMA also has over half of their 2 million-object collection on display; however, they have the gallery space to do so, with 2 million square feet for the whole museum. The open storage concept (collection storage which visitors have access to) began in the 1970s and is credited to The University of British Columbia's Museum of Anthropology.³⁵ Open storage can be a resource for visitors to conduct research or simply see objects normally not on display, but not all museum storage facilities are designed or fit to be open to the public, and not all give tours of their storage areas. What museums, such as those with Luce Centers, have done is bring storage out into the galleries.

CASE STUDIES Cleveland Museum of Art

Museum Facts

TYPE: Medium-sized art museum with over half of collection on display.

COLLECTION SIZE: 40,000 objects

AMOUNT ON DISPLAY: 60%

MISSION STATEMENT: ... seeks to bring the pleasure and meaning of art to the broadest possible audience in accordance with the highest aesthetic, intellectual, and professional standards. Toward this end the museum augments, preserves, exhibits, and fosters understanding of the outstanding collections of world art it holds in trust for the public and presents complementary exhibitions and programs. ...³⁶

LOCATION: Cleveland, Ohio



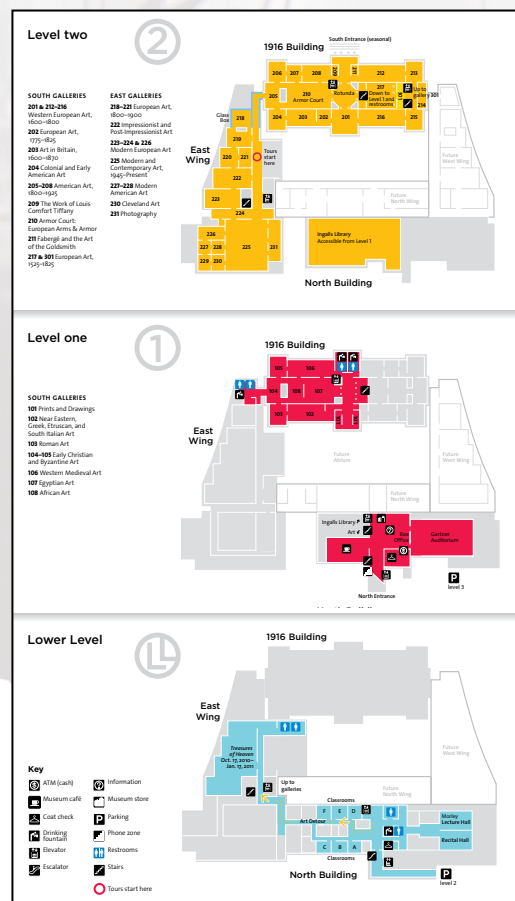
The Cleveland Museum of Art has what they refer to as a “more selective collection” of 40,000 objects.³⁷ The museum was founded in 1913 and is currently under major renovation. As stated on the museum’s website, “At a total cost of \$350 million, it is the largest cultural project in the history of the state of Ohio and one of the most comprehensive renovation and expansion projects in the museum field anywhere in the nation.”³⁸ Once completed in 2013, there will be 30% more gallery space (35,300 sq. ft.), and additional education programming space, offices, and storage areas. The original 1916 building still is a main part of the museum as well as the 1970s addition; however, the galleries were recently renovated. In fact, the older building’s exterior is still shown through the glass walls of the newer addition, which shows the museum’s care for the preservation of history not only through its artifacts but also through its historic architecture.

The collection comprises works from Ancient Near East, Medieval Art, Contemporary Art, and more. New objects are carefully but continually being added to the museum’s holdings to enhance each section of the collection. According to Jeffrey Streaan, director of the Design and Architecture department, the museum has, since its founding, not acquired large bequests or collections if it cannot see a time when all the objects can be exhibited. It did not want to have large storerooms of objects that are never seen. The current building project was not intended so more objects can be displayed (being that they already exhibited 60%), but so more space can be allotted between the objects.

The CMA has an in-house Conservation department and videos on the museum’s website show processes and preserving techniques which are used on the different types of objects. For instance, an Egyptian stele from



Above: Decorative Arts exhibit. Below: gallery maps.



945-924 BCE was chosen to go on exhibit; however, the museum decided to have it conserved before it was installed in one of the newly renovated galleries. Collection Management and the Design and Architecture departments work closely together in order to create exhibitions around objects. The museum has an online database of their whole collection, and conducts provenance research on all objects in order to learn all it can before acquiring and/or exhibiting them. Lectures and special programs are also designed around current exhibitions, such as “Curatorial Voices”, in which curators take visitors around the galleries and talk about their favorite pieces.

The Design and Architecture department oversees the new building project, as well as special exhibitions and the permanent galleries. Exhibitions are developed by curators, signed off on by the director, then the Design department determines the time and budget the proposed idea would entail before it can officially be approved. For 2011, seven temporary exhibitions are planned for installation, ranging in topics from one on Japanese and Korean painted pottery to another on portable objects from Africa. Each exhibition is up for anywhere from four to ten months. The museum’s galleries are divided into cultural and time period sections, and although most are set up as permanent exhibitions, the casework seems to lend to easy change of objects. There are certain cases that appear to be custom made for a specific object; however, many large wall cases could be easily changed to accommodate other objects that may be in storage. Furthermore, if an object is too light sensitive, a case with doors or a drape is made to match the rest of the gallery’s design theme.

REASONS OBJECTS ARE NOT DISPLAYED

There are legitimate reasons millions of objects that are kept in storage at all types of museums are very rarely seen by the public. The different contributing factors for this depend on the institution. First, many objects are not on display because they are at a risk of being damaged. This could be because of the object's age and/or material; e.g. paper artifacts. Humidity, temperature, and light-levels must be taken into account. There are articles, papers and books, such as *Conservation Concerns: A Guide for Collectors and Curators* and the *Museum Handbook for the National Park Services*, that outline the best practices for preserving collections. Though these handbooks and guides are for storage areas, their contents can also be implemented in exhibit cases. For instance, the ideal temperature level for a storage area would be between 65-70°F and 5 footcandles of illumination.³⁹ Therefore, whole galleries or at least the cases themselves would need to be set at these specifications. It would take a lot of time and funds to set up specific climate controls for every case in one gallery, let alone a whole museum, which could be why only a few, if any, 'high risk' objects may be in each exhibit, while the rest are fine at the normal climate levels of the gallery.

Secondly, there could be ethical and political concerns. Since antiquity, objects have been stolen from other countries and cultures. According to Randolph Starn:

"... in the 1790s, Quatremere [a French scholar] had come to the unsettling realization that the amassing of cultural treasures by conquering French armies amounted to an assault on culture and history, a desecration and not a deliverance. It was a political hoax to proclaim that looting served the cause of civilization and enlightenment. Even if museums opened to

a citizen-public the preserved of a privileged few, the museum 'kills art to make history' by wrenching works of art out of their original context."⁴⁰

Whether they are spoils of war or from unauthorized excavations, the provenance of many objects now in museum collections are unknown. "This search for 'lost' art [such as art stolen during the Nazi era] has challenged museum record-keeping systems, forced art museums to address issues of the provenance of collections, and especially threatened international exhibitions where museums are fearful of confiscation of artworks lacking proper documentation."⁴¹ Though stated specifically about art museums, this statement can be translated to any museum with international objects. In the last century or so, cultural groups have spoken against how their ethnic objects are displayed. Along similar lines, certain objects can be seen as offensive to a cultural group so a museum may see it best not to display them. The native culture/country of a specific object could have strict guidelines as to how it can be exhibited, so a museum might decide it is not worth the difficulty to bring the object out, or at least not on a regular basis.

Another factor would be that many museums do not have the available space to exhibit all their objects. The available square feet of gallery space vs. number of objects is very dependent on the museum. Sometimes it is a space issue, while in other cases it is how the museum decides how many objects 'fit' in the gallery. Some museums' exhibit designers choose fewer objects, while others find ways to incorporate as many objects as they can. For example, in this case [see photo to right] from the Field Museum, the designer used specimens as case decorations instead of placing them in neat organized rows. On the other hand, some objects simply cannot be deaccessioned because of policy issues based on how the museum



Objects decoratively exhibited in a case at the Field Museum.

acquired the object in the first place, i.e., a contract with the donor stating the object had to stay in the museum's collection. When the object in question was given decades or perhaps a century ago, it fit with the mission of the museum. Now however, it might not be or actually is not a very good example of its classification (example: an 18th-century teapot that may be a reproduction).

The proper care and conservation of objects can cost a great deal of funds that a museum does not have, not to mention the time and cost of creating exhibitions to display those objects. Some institutions can afford to conserve only a handful of objects in just one year, and for smaller museums, maybe only one object.

Argument Against

Perhaps the collections not on view can be used for research and serve their purpose that way, and therefore do not need to be on exhibit. Furthermore, perhaps there is a division between general public and scholars/researchers. If visitors were really interested in seeing other objects, they would inquire about them to the museum. However, if the museum in question does not have an online database or public access to a whole collection inventory list, how would a visitor know the object they were searching for existed? It could be presumed that a truly invested researcher would inquire at any museum that might have the object they are looking for. Branching off of what Newton H. Winchell said about museums (see section II), visitors who come to museums for the entertainment factor may learn as much as they care to; however, visitors searching for knowledge will put in the energy to learn and research. Therefore, the visitors so inclined to contact certain museums to schedule appointments to see usually-not-on-display objects can at least attempt to do so.

On the other hand, maybe there is a sense of visitors as a nuisance that still goes on and for good reason. If a specimen or an artifact was sitting in a gallery, wouldn't it be safer in storage where there was less of a chance it could be damaged?

Are certain objects even worth exhibiting? Even to someone interested in Prehistoric artifacts, there are only so many pottery sherds one can take in at once. Would visitors really want to see every one of the 32 million objects and specimens the American Museum of Natural History has? Or all 12,000+ bird specimens at the CMNH? People do put value on different things, so while a dozen specimens of insects might look the same to some visitors, others would marvel at them.

IV. DATA ANALYZED

People place value on objects; they hold stories and memories. Since the first people who collected minerals and specimens to study the unknown, it was discovered that knowledge was also stored in objects. The first archaeological excavations proved the ground could tell us about the past, to help us understand what happened to forgotten places and people. Artifacts found were collected, studied, and displayed. Museums evolved from wonder and the desire to learn. Collections grew and museums had to decide what to exhibit and how. Were they institutions of research that shared only what they thought was relevant to the public, with the bulk of their collections just for study, thinking the layperson would have no need to see them? Or were they public institutions whose purpose for being was to serve anyone wishing to learn? They existed to show the public what they could of their massed collections and to help them understand what each object had to say.

Art museums seem more apt to exhibit a larger percentage of objects, such as the CMA, MFA and MMA. Exhibitions have a simplistic design with objects in cases, paintings on the walls, basic labels, and one or two informational graphics in each gallery. The traditional layout of art museums does not seem to change too much from institution to institution. Visitors know what to expect. The way objects are organized may vary but the core of the 'art museum' is there. People come to see the wonder of certain paintings to gaze in awe at them, with no interpretive panel needed. The period rooms allow visitors to pause their own lives for a moment and think about what life would have been like if they lived in that time. They go from gallery to gallery amazed at the variety of objects from different eras and places. The typical visitor may or may not know thousands more objects are in



Arms and Armor gallery at the Cleveland Museum of Art.

storage, since the permanent galleries seem to hold so much, and the temporary exhibit galleries are enough that they feel like they see different things every time they come. And they may think that all the important/interesting objects are probably out anyway.

Technically, it is a matter of opinion as to what is interesting or important; however, people do understand certain objects can be too rare and fragile to be displayed permanently. Art museum collections can grow every day with artwork being created every day. It is unrealistic to exhibit a whole collection: With every new object accessioned, an older one would presumably have to be stored to make room. Places like the CMA chose to limit what they collect in order to exhibit the majority of their objects. The MMA has the luxury of 2 million square feet of building space to exhibit half of their collection, with projects in the works to bring out still more.



The Henry R. Luce Center for the Study of American Art at the Metropolitan Museum of Art.



A case from the Reptiles and Amphibians gallery at the Field Museum.

Multi-year fundraising campaigns are organized to construct new wings for the sole purpose to exhibit a specific collection. Galleries such as Luce centers are great ways for visitors to see 'stored' objects; however, could they not be overwhelming to the point of some visitors not seeing any one object? The collections are amassed together with little to no information attached to them, and the way in which the objects are organized may make sense in a storage setting, but not to a layperson. Nevertheless, some object may catch a visitor's eye, which in turn sparks an interest in learning more about it and similar objects. It is an improbability that this would happen to all visitors. The important factor is that it is a possibility; the objects are visually available.

For the various types of history and natural history museums, it is a different story. The collections are not just made up of artwork; there are specimens, rocks, and fossils. Millions upon millions of things have been collected by scientists and researchers that made their way to museums for all to study from. However, are they really for everyone? Such as with the CMNH, some collections are viewed by their institution on a research-only basis. The public can view what these museums choose to exhibit but their main purpose is for study. Although, if a museum states that their multi-million object collection is for research, how likely is it that every single object is being used? If a list was compiled of the objects that have not been studied or displayed in the past 20 years, how long would it be? As stated above, there are those reasons why objects should not be exhibited (conservation, deaccession policies, etc.); however, there are probably many other objects that would still be on that list. No matter what the stored object is, it was collected by someone at sometime because they thought it was interesting, and it may be assumed others would think that way too. If the objects are worth keeping, aren't they worth exhibiting?

Exhibitions in anthropology, archaeology, history, science, art, and natural history all have the goal of teaching visitors about something previously unknown, or at least enriching what the visitor may already know. They capture the awe factor with beautiful artifacts or long extinct animal skeletons. These museums also have the same exhibitions up for decades, with little to no change. For instance, let us say a permanent exhibit about Ancient Greece was installed in the 1970s. It showcases enough of the whole collection that the institution thinks it shows a well-rounded view of all the holdings. Therefore, the museum has no need to create another exhibit about the same topic. There may be an exhibition here and there in one of the temporary galleries where a piece might be used, but as a whole, the collection sits in storage with only a researcher now and then to view the different objects. The reasons for certain objects to be exhibited instead of other similar objects vary: better condition, fits better with the storyline, not enough room in the case, etc.

In this age of technology, there are many ways for people to learn and objects may not be determined the best way. Instead of coming to a museum to look at an object and having to read long labels to understand its importance, people can travel in virtual worlds of the object's origin from their computers. Online databases allow museums to share their collections with anyone wishing to know about them, and virtual tours, such as with Microsoft's program Photosynth, allow people to see whole museum galleries in virtual form by combining photographs. Still, as the survey data showed, it is still not the same as seeing the objects in person.

This does not mean museums do not make an attempt to exhibit more objects or to change exhibitions regularly. The Andy Warhol Museum, one of the Carnegie Museums of Pittsburgh, states that it "presents unique and intellectually stimulating exhibitions year-round, and continues to display



Case from *Curator's Choice* exhibit at the Museum of American Glass of Wheaton Arts, New Jersey.



Cleopatra's Barge at the Peabody Essex Museum.

never-before-seen Andy Warhol artworks from the collection. The artwork within the Warhol Museum's six floors of gallery space frequently rotate, providing an ever-changing experience for our visitors."⁴² The British Museum currently has 5-10% of their 8 million objects on display. Some of the collection is rotated for conservation reasons and temporary exhibitions, though the museum also has a plan to exhibit a larger percentage of their collection.⁴³ Some museums have curator choice exhibits or new acquisition cases that change out every few months or every year, such as at the Field Museum and Wheaton Arts in southern New Jersey [see photo to left]. Another way stored objects sometimes come out is when agreeing to lend out an object, the borrowing institution must conduct any conservation needed. Therefore, the reason the object could not be displayed at its museum may no longer be an issue, and the object could be exhibited on a regular or semi-regular basis.

Museums also realize they cannot hide their own museum's history of how certain, possibly offensive, objects came into the collection decades or centuries earlier. A great example of this is the Minnesota History Center. In development for 2012 is an exhibition about the U.S.-Dakota War of 1862. The museum's collection holds items, such as a hanging rope and clothing from the 38 Dakotas who were killed during a mass hanging, that have not been displayed or not least not displayed with the full history of the museum's accession of the objects, for some time.⁴⁴ As stated by exhibit developer Kate Roberts, the war is a dark time in the history of Minnesota and telling the story through an exhibition is needed and seems to be wanted by Minnesotans. What the museum wishes to do now is exhibit these objects with all information known about them and how they came to be at the museum, then have visitors draw their own conclusions about what the objects stand for, symbolize, mean, etc.

Lastly, while talking to a visitor outside the *Cleopatra's Barge* exhibit (a recreated interior room of a ship) at the Peabody Essex Museum in Salem, Massachusetts about the different aspects of this thesis, she stated: "Period rooms seem like a way to get more objects out. The important objects in the galleries can have labels but other objects can be used to recreate a period room. Labels don't seem necessary."⁴⁵ Many museums utilize period rooms and dioramas, although how often are they designed with the idea of using more objects from storage? As with the *Cleopatra's Barge*, no labels were used to identify the different objects in the cabinets around the room. There was an external graphic panel that explained what the room was and no other object information seemed to be needed. With this idea in mind, the application of this thesis was developed.

V. AREAS FOR FURTHER RESEARCH

To gather more visitor understanding and curiosity about collections, it would be ideal to conduct the front-end surveys at all the case study museums. The CMNH gives only the example of a natural history museum, therefore at least one art museum comparison would be needed. The same survey could be used, although with minor changes. For example, the CMNH does not have an online database; a few visitors jumped to the conclusion that the museum had one, even though the question stated ‘for all museums’. If the survey was given at another museum without a visitor accessible database, the question may need rewording.

Though interviews were conducted with multiple people at each case study museum, there still seems to be additional information that would be relevant. It is unrealistic to hope to know everything about how a museum’s collection-exhibiting techniques have evolved through their entire history; however, further research into the museums’ pasts may help to understand why objects are displayed as they are.

It would also be interesting to expand this thesis to include other case studies. The Field Museum in Chicago could be another natural history comparison, while the British Museum would give an international example. On the other hand, expanding to include multiple museums from Europe would be very intriguing. Some European museums, of course, have been around a lot longer than American ones; therefore, it would be compelling to see how the museums mentioned in section II have evolved (or not evolved) in respect to their object-based exhibitions.

Further research and analysis of other publications would also be helpful. For instance, looking at studies about the number of objects visitors can

take in before being overwhelmed, the amount of information given to visitors versus the amount of necessary objects, or about how three-dimensional imaging of objects can be implemented into exhibitions when displaying the actual object is not an option. On the other hand, it would be interesting to look into computer programs, such as Photosynth to show more objects. Instead of creating a 360-degree view of a gallery, why not one of collection storage with click-able areas to learn more information about the individual objects?

Some museums are finding ways to include the public in their collections and, as stated in section II, allow artists to utilize their objects in new and interesting ways. More research into exhibition projects, such as Virgil Marti’s *Set Pieces* and community-curated exhibits at the Brooklyn Historical Society, would expand on what is currently happening in museums to exhibit more of their collections.

The political and ethical issues of material culture go on and on. It would be very informative to understand these issues and concerns throughout history. Many objects have a provocative history of, for example, being stolen from a grave and sold to a perhaps unknowing museum acquirer who did not ask questions about where it came from. Though institutions do research their objects’ histories and abide by the Native American Graves Protection and Repatriation Act, concerns still arise that affect the object today, even if its controversial issue is a century or more old. Though some of these concerns were discussed above, a lot more can be researched on the subject.

ENDNOTES

1. See Alexander and Alexander 2.
2. See Conn 5.
3. Fact about object percentage on display, see Schwarzer 122.
4. See Newhouse 14.
5. See Alexander and Alexander 11.
6. See Alexander and Alexander 235.
7. See Cummings 33.
8. See Alexander and Alexander 236-237.
9. See Genoways and Andrei 271.
10. See Schwarzer 122.
11. See Conn 7.
12. See Alexander and Alexander 236.
13. See Schwarzer 125.
14. See Alexander and Alexander 237.
15. See Schwarzer 131.
16. See Schwarzer 130.
17. See Alexander and Alexander 12.
18. See Hein 78.
19. See Starn 8.
20. See Fitz Gibbon 321.
21. Permission to carry out the surveys was given by Marie Graf, Director of Marketing at the CMNH.
22. At the time the survey was given, the percentage of objects on display was thought to be 5%; however, it was later learned that the CMNH actually only has less than 1% of their collection on exhibit.
23. General MFA information from museum website and exhibit information from conversation with Gillian Fruh, Assistant to the Director, Exhibitions and Design.
24. See MFA's website, www.mfa.org/mission-statement.
25. See MFA's website, www.mfa.org/americas-wing/galleries.
26. See MFA's website, www.mfa.org/exhibitions/donatello-giambologna.
27. See CMNH's website, www.cmnh.org/sites/aboutus.
28. Factual information obtained from CMNH's website, various docents upon visits, 2010 Annual Report, and conversation with staff members.
29. See CMNH's website, www.cmnh.org/sites/aboutus/history.
30. See Bruce Museum's website, http://brucemuseum.org/site/about_us.
31. Factual information from Anne von Stuelpnagel, Director of Exhibits, Jack Coyle, Registrar, and the Bruce Museum's website.
32. See Luce Foundation website, www.hluce.org/mission.aspx.
33. See Luce Foundation website, www.hluce.org/history.aspx.
34. See blog website for article, <http://museumdesignlab.wordpress.com/2010/11/10/metropolitan-museums-luce-center-of-american-art>.
35. See article, <http://www.museumethics.org/content/open-storage>.
36. See CMA's website, www.clevelandart.org.
37. Information about the CMA from website, visit observations, and conversations with staff members, such as Jeffrey Streaan, Director of the Design and Architecture department.
38. See CMA's website, www.clevelandart.org.
39. See Bachmann 23.
40. See Starn 9-10.
41. See Alexander and Alexander 44.
42. See Warhol Museum website, <http://www.warhol.org/exhibitions>.
43. British Museum collection information from Peter Borowiec, Learning and Audiences department.
44. Information from Kate Roberts, Exhibit Developer from the Minnesota History Center.
45. Peabody Essex Museum visitor, Allison Hill of South Hamilton, Mass.

PHOTO CREDITS

Page #	Subject	Source
Cover	African storage at the Peabody Museum at Harvard	www.peabody.harvard.edu
2	Early 20 th century Cabinet of Curiosity	www.kew.org/collections
2	Background image: early 20 th c. gallery photo at CMA	www.clevelandart.org
3	Japanese Hoo-den at the Columbian Exposition	www.flickr.com/columbiaexposition
4	The Wagner Free Institute of Science	wagner-free-institute.com
4	Akeley's <i>The Muskrat Group</i> diorama	flickr.com/muskratgroup
5	Abstract Cabinet	Maximowitsh, Peter. <i>Kabinett der Abstrakten</i> . Belin: Museum of American Art, Berlin, 2009.
5	Marti's <i>Set Pieces</i>	icaphila.org
7	CMNH gallery map	Scanned from gallery guide
13	MFA's gallery maps	Downloaded from mfa.org
17	Bruce Museum	artinfo.com/brucemuseum
18	Bruce Museum exhibit	wikipedia.org/brucemuseum
18	Bruce's gallery plan	brucemuseum.org
20	Luce Center at the Smithsonian	images.net/LuceCenter
20	Objects in drawers	americanart.si.edu/luce
22	CMA's gallery guide	clevelandart.org
42	Tour and lecture photos	brucemuseum.org americanart.si.edu

All other photographs are by author.

APPENDIX A

Survey # _____

Museum Exhibition Planning and Design Graduate Thesis Front-end Survey

Date: _____

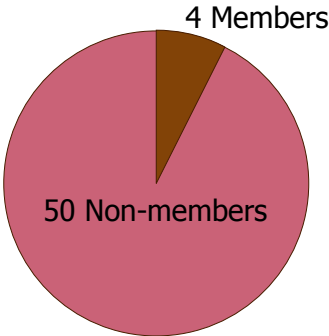
1. Do you know how many objects this museum has total (on display and in storage)? If not, can you make a guess? _____ [Will give answer]
2. What do you think is the reason objects are in storage and not on display? (Circle all that apply.)
 - A. Not enough gallery space
 - B. Conservation
 - C. Ethical reasons [Will explain if needed]
 - D. Museum just hasn't gotten around to it yet.
3. Would you be interested in learning more about collections that are not on view and why? No / Yes
If so, please explain. _____

4. For all museums, online collection databases are:
 - A. The same as seeing the objects in person.
 - B. Efficient way to see objects that are not on view at the museum.
 - C. Not the same as seeing in person.
 - D. I don't look at or use online databases.
5. Have you visited this museum before? No / Yes - How many times? _____
6. If you are a repeat visitor, do you notice when the museum changes out objects? No / Yes
7. How often do you visit other history, art, or science museums? _____ times a year

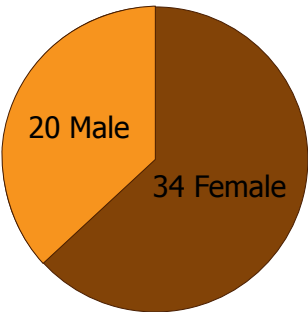
Optional: Are you a member of this museum? No / Yes
Gender: Female / Male
Age Range: under 18 / 18-24 / 25-44 / 45-64 / 65-80 / 80+
Zipcode: _____
Highest Level of Education: High School / College / Masters or other Advanced Degree

APPENDIX B Visitor Survey Demographic Data

CMNH Members



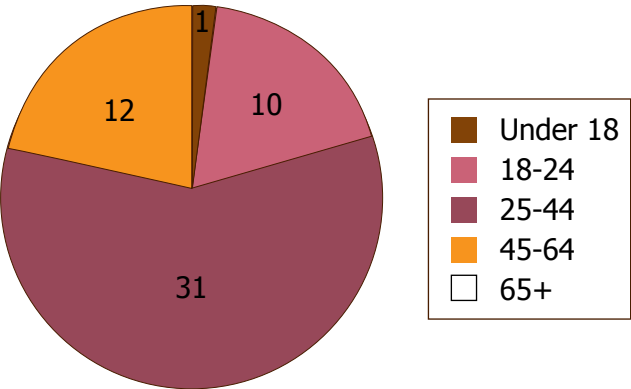
Gender



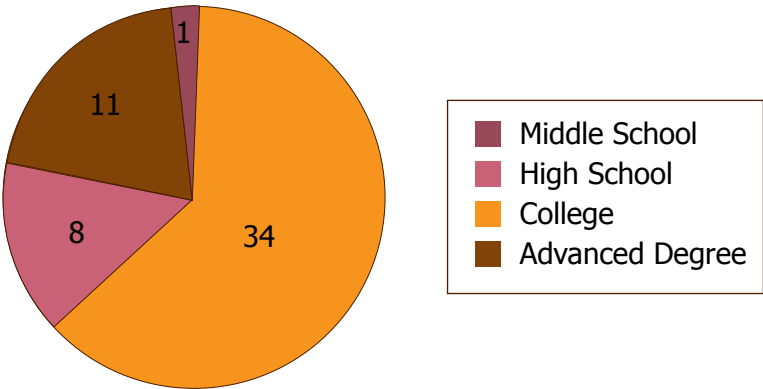
Zipcodes

Central Ohio	5
Cleveland and Akron vicinity	35
Northwest Ohio	1
Arkansas	1
Indiana	1
Michigan	1
New Jersey	1
New York	1
North Carolina	1
Pennsylvania	1
Germany	2
United Kingdom	1
Unknown	3

Age



Education Level



APPENDIX C Museum of Fine Art's Mission Statement

The Museum of Fine Arts houses and preserves preeminent collections and aspires to serve a wide variety of people through direct encounters with works of art.

The Museum aims for the highest standards of quality in all its endeavors. It serves as a resource for both those who are already familiar with art and those for whom art is a new experience. Through exhibitions, programs, research and publications, the Museum documents and interprets its own collections. It provides information and perspective on art through time and throughout the world.

The Museum holds its collections in trust for future generations. It assumes conservation as a primary responsibility which requires constant attention to providing a proper environment for works of art and artifacts. Committed to its vast holdings, the Museum nonetheless recognizes the need to identify and explore new and neglected areas of art. It seeks to acquire art of the past and present which is visually significant and educationally meaningful.

The Museum has obligations to the people of Boston and New England, across the nation and abroad. It celebrates diverse cultures and welcomes new and broader constituencies. The Museum is a place in which to see and to learn. It stimulates in its visitors a sense of pleasure, pride and discovery which provides aesthetic challenge and leads to a greater cultural awareness and discernment.

The Museum creates educational opportunities for visitors and accommodates a wide range of experiences and learning styles. The Museum educates artists of the future through its School. The creative efforts of the students and faculty provide the Museum and its public with insights into emerging art and art forms.

The Museum's ultimate aim is to encourage inquiry and to heighten public understanding and appreciation of the visual world.

- <http://www.mfa.org/about/mission-statement>

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PART TWO: APPLICATION

APPLICATION: EXHIBITION PLANS

Goal: To develop a multi-optioned plan that can be used by institutions to inform the public about their reasons for not exhibiting certain objects, by implementing new programs and graphic panels and to exhibit more objects on rotation.

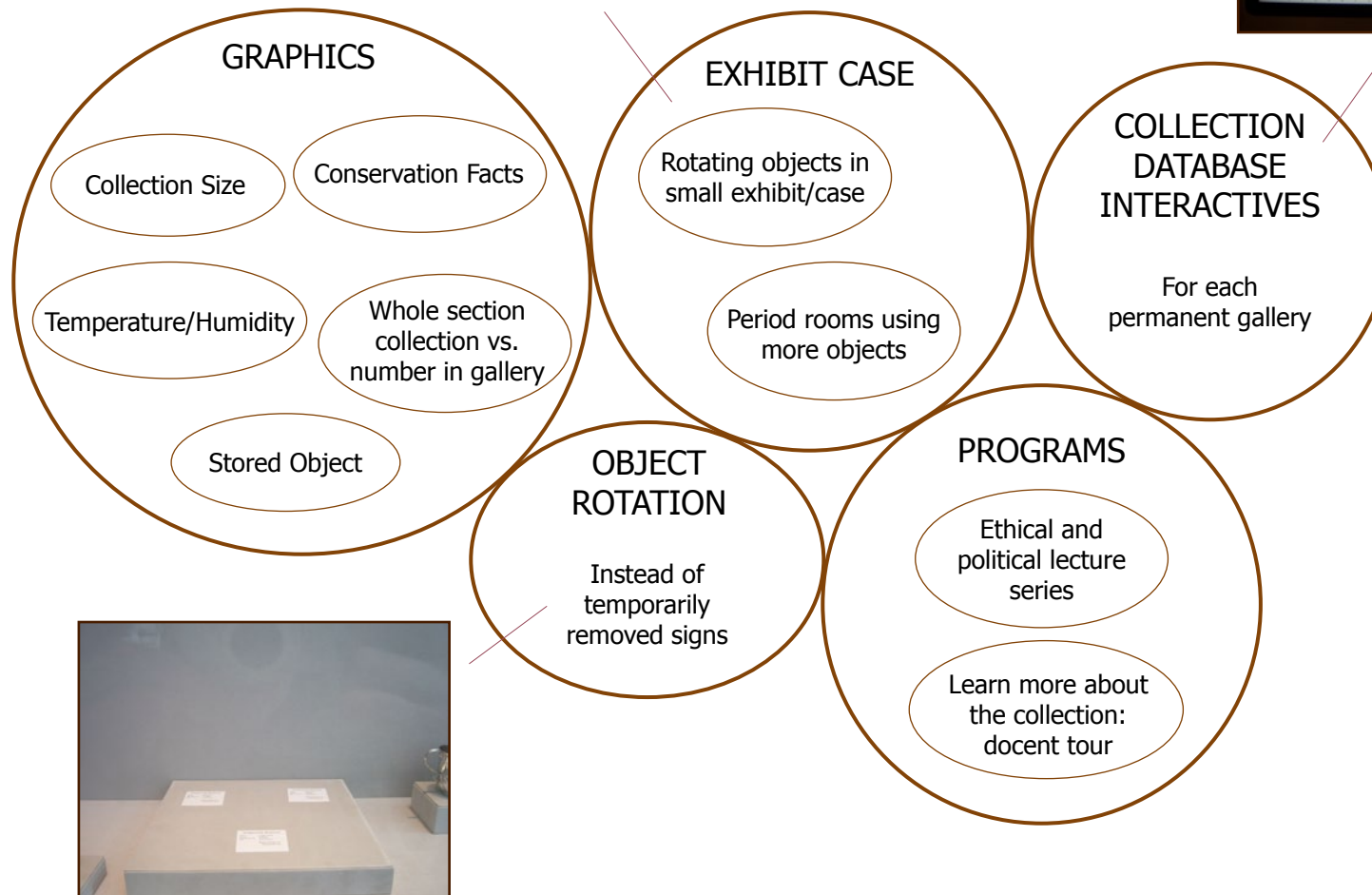
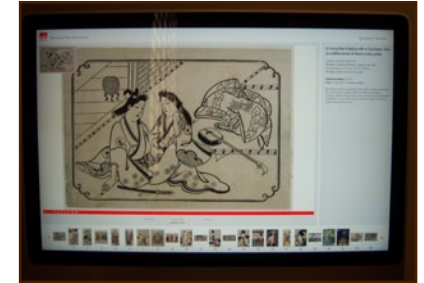
If museums inform visitors about the cost level that goes into exhibiting and the conservation of objects, visitors may be more apt to get involved at the museum and make donations. When raising multi-million dollar funds to build a new wing for more gallery space or updating a permanent exhibition simply is not an option, then smaller scale projects can be implemented.

Depending on budgetary limits and the size of the museum, a different option of this exhibition plan could be utilized. The first option is graphics added around the museum, the second is a object-based program series, the third an exhibit case addition to permanent exhibitions, the fourth a rotation plan for objects, and the fifth option is database interactives added throughout the museum. Existing museum galleries, exhibitions, and objects will be utilized as examples to include a new element for the project's schematic design. Any information written about the objects is fictional.

Dependent on the museum is also who would be managing and creating the project. It is intended that no matter which option is chosen, it will involve inter-departmental conversations. Unfortunately, communication between departments, let alone among members of one department, can be a challenge. With so many people with different goals and objectives, it can be hard for all to be on the same page. A hope of this project is that

conversations happen among everyone that is involved with the museum's collection, which should be every staff member in some way, shape or form. Though projects similar to these five options may already exist at certain institutions, the goals behind them here could be different. It appears that though a museum may inform visitors about certain stored objects, the question is why are they doing so? Because they can? Because it is their job as a curator to publish their findings in some way? What this project wishes to accomplish is getting staff members from across the different departments, Exhibits, Curatorial, Conservation, Marketing, etc. to understand why and how they present every object in their collections.

CONCEPT DIAGRAM



OPTION 1: GRAPHICS

Graphics can be installed throughout the museum's permanent exhibitions informing visitors about conservation and why objects in their collections are not exhibited. Most of the graphics are in the style of "Did you know..." facts, which for example, explain the number of objects in a collection verse what is on display, and the amount of time and money it takes to conserve one object. Other graphics explain why different objects need different climate and humidity levels. Simple panels are a easy way to inform visitors about different object and collection aspects without having to redesign or rearrange anything in the galleries. Whoever designs graphics for the institution would need to team up with staff members from Collections and Conservation in order to create the panels.

Sample Style Guide

For graphics about general
collection information



For graphics about a specific object
or collection



For graphics about conservation



Font: ITC Velijovic, Medium and **Bold**, pt. 24 & 28

Did you know this
museum has **2 million**
objects in its collection?
And that you are **only**
seeing 5% of them in
the galleries? That's
only 100,000 objects.

Why not display all
the objects?

Because the galleries
would need to be **20**
times bigger to fit
them all.



Do you know what this device is for?

It shows the humidity and temperature of the case. The ideal levels for the objects in this case are for the temperature to be at 65 degrees and the humidity at 75. Too high or low levels could cause damage the objects over time, such as cracks in the glaze finishes.



A HIGHLIGHT FROM STORAGE

Also from the Japanese collection is this serving bowl. The bowl needs repair to some cracks and its base before it is stable enough to be removed from storage and displayed.



Did you know different types of objects need different temperature, humidity, and light levels? For example, painted wood objects should have a low light level (5 footcandles - how light is measured) especially so finishes don't crack and the paint doesn't fade.



OPTION 1 CONTINUED

WAITING TO BE EXHIBITED

Not a lot of information is known about this Renaissance painting, including when it became part of the museum's collection and who painted it. Therefore, once more research is completed, it will be moved from storage and put on exhibit to share with the public.

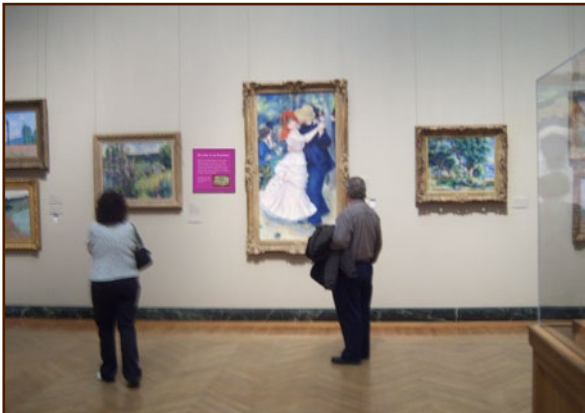
The painting was last on exhibit in the 1960s before this gallery was renovated in 1963.



Did you know the whole African Collection has approximately 250,000 objects? These galleries currently exhibit 2,000 of them.

Did you know it took 8 staff members, 4 months, and \$15,000 to conserve and exhibit this statue?

Want to learn more? Check out the museum's Conservation Lecture Series.

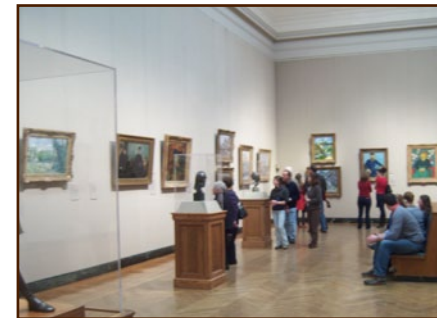


OPTION 2: PROGRAMS

Some museums mentioned above do have programs which utilize objects; however, this option contains programs specifically about objects. A docent or educator, at set times throughout the year, can present a series about the different collections the museum has, give reasons certain objects cannot be on display, explain the conservation issues, and bring out objects usually in storage. One example would be a tour taking visitors around the galleries to different objects that have been preserved in some way. The docent would explain the different techniques used and why. One tour would be designed specifically for children, another for adults, and the last for visitors of all ages.

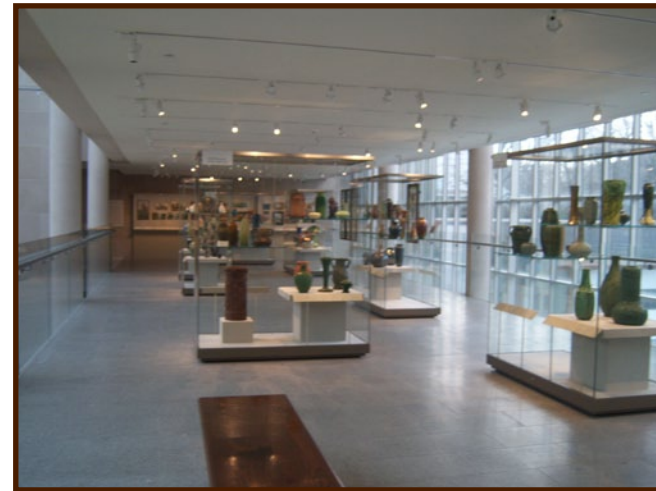
“Conversations with the Museum” is an open forum series for visitors to learn about some of the political and/or ethical issues that keep certain objects from being exhibited. It would be given six times a year with each forum centered around a different object or group of objects that has a type of controversy in the way it has or has not be displayed. Different museum staff members would have a round table discussion with anyone from the public who wished to attend and give their opinions. For example, say the Exhibits department at the CMNH wants to create an exhibition using the 19th century skeleton collection, which has been classified as only for study and not display. The exhibition would use these skeletons, as well as others from the collection, to explain how medical science has evolved. The idea is generally taken well by the museum; however, a few staff members believe the same issues that made the museum decide not to exhibit the skeletons are still relevant. It is decided that hearing visitor opinions would help determine if displaying these unknown remains could be seen as disrespectful.

Museums have an obligation to be honest about the past, even if it is their own history they are exhibiting. Sometimes a certain subject matter might offend a group of people; however, as long as the museum is aware an exhibition may raise some controversy, they understand it is displaying the facts and not personal opinions about history.



OPTION 3: NEW EXHIBIT FOR PERMANENT GALLERIES

As stated above, permanent exhibitions can be viewed in different ways. One way is that they are a realistic approach to displaying objects. As non-profit institutions, museums sometimes do not have the funds to update older exhibitions. It is done when possible; however, change is typically focused on the temporary exhibitions. On the other hand, permanent exhibitions do not allow for display of similar stored objects in addition to those already on exhibit. Two solutions were devised for this project option. First, a single exhibit case can be added in each permanent exhibition of a museum with rotating objects from the collection represented in the gallery. Graphics would describe how objects are chosen for exhibition, and the cost level that goes into conservation and exhibits, to explain why some objects cannot be displayed. The rotating objects would be those that cannot be displayed long because of light exposure, objects that ideally need conservation work before being displayed, or are similar to ones already on exhibit: for instance, a broken teacup or a woodblock print that will fade if exposed to light for an extended period of time. Seen on the opposite page is an example of how a case can be added to resemble the rest of the gallery, although, with different colored graphics from those already in the exhibit to visually show to the visitors that something is different about this case.



This selection of storage objects was on the initial list of items to be installed into the gallery; however, because of space they were removed.

The whole Decorative Arts collection comprises 30,000 pieces. This gallery holds about 85 of them.

COLLECTION ROTATION CASE

Since not all objects from the Decorative Arts collection can be displayed at once, this case will rotate objects from storage every few months. Some of these objects need conserved, while others are similar to those already in the gallery. Can you find them?



OPTION 3 CONTINUED

The other solution for this option would be for any permanent galleries to have a period room or diorama. As discussed above in section IV, period rooms are an opportunity to utilize a variety of objects from storage without having to display information on each one. Many period rooms are set units, with the whole room being almost exactly as it was in the house it come from. This project recommends creating a room from scratch using objects from storage even if they are not in the ideal display condition. For instance, say there is a set of permanent galleries about colonial America with 120 objects of the collection being used. In storage, there are 1,500 more objects from that period. Some are similar in style, others simply were chosen for display instead, or some are repeat items, such as bowls from a china set. In one of the galleries, objects are spread out with enough room to push cases closer together or to rearrange a few objects to get rid of a case altogether without the gallery being too overwhelming with the number of objects.

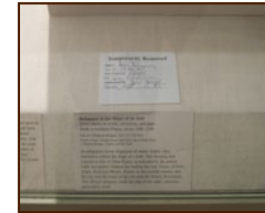
Look and Feel



A 10'x 8' roped off area can be constructed in a corner of the gallery to create a living room from the 18th century. The concept is to exhibit a room that looks lived in and not one from a wealthy family's mansion. Walls are designed from research of the period. A couch that ideally would need conserved is used, a side-table from the early 1700s is on one side of the couch while on the other is a table from around 1780. A landscape painting by an unknown artist is hung above a reconstructed fireplace, using pieces from an unsuccessful removal of the fireplace from a 18th century house bequeath from the early 1900s. Two portraits that have been sitting in storage for decades that the museum had nearly forgotten existed, can hang on the opposite wall. A china cupboard is in the corner with a variety of knickknacks from the collection: vases, a decorative plate, a set of glass bookends, and more.

OPTION 4: OBJECT SWITCH

On a visit to the MMA, seventeen temporarily removed cards were counted in just four gallery sections. Though the number varies, this is seen at many museums, sometimes without a sign explaining why the object was removed. Instead of putting up a “temporarily removed for conservation/research purposes” sign, why cannot museums make this an opportunity to bring out another similar object from storage to take its place? For instance, the CMNH tends to exhibit the best example of any specimen or object, which makes sense. There is no need to exhibit five of the same animal skeletons that would take up more space in a case, when more variety of specimens could be displayed. Therefore, when the ‘best’ version is removed for whatever reason, another one (though it may not be in the best of conditions) can be exhibited instead. This does not only have to apply when objects need to be removed. A rotation plan can be developed for permanent galleries and stored objects, keeping in mind that objects should not be rotated for the purpose of rotating, they should still have a reason, a story to tell. A list of all the objects in the galleries can be compared to the rest of the collection. Where applicable, a stored object can replace the object needing to be removed, and also every few months a handful of objects around the museum can be switched out for the sole purpose of rotation. A well laid out plan would have to be compiled with every object and its required light and climate levels. As seen on the next page, this example is an empty case from a gallery, then it is filled with objects.



OPTION 4 CONTINUED



Empty case in a permanent gallery.



Example of how case can be filled instead.

OBJECT SWITCH

The Statue of Orisis was removed for research and study by the curators. In its place are these two 5th century BCE Upper Kingdom jars. Both objects have been in storage for awhile and decided to make an appearance in the gallery for the time being. The statue will return once it is finished being studied.



OPTION 5: DATABASE INTERACTIVES

This last option is for the installation of a collection database computer interactive in every permanent gallery, so visitors can look at the objects they are not seeing in person. Many museums have visual databases visitors have access to or, such as in the MFA's *Flowers and Festivals* exhibit, have database monitors already as part of their exhibitions. The idea is to only have the objects from the collection currently in the gallery on each of the touch-screen monitors. Therefore, visitors are not overwhelmed with all 2 million+ objects of the full museum's holdings, but can focus on just the Asian or Ancient Egyptian collection. Visitors will have the opportunity to group objects together into mini-exhibits that could be used if the museum also implemented the option 3 exhibit case part of this project. Visitors could then come back in a few months to see if their idea was chosen. This option would need collaboration between a museum's collection experts, multi-media developers, and exhibit designers. Here is an example of how the interactive would be organized.



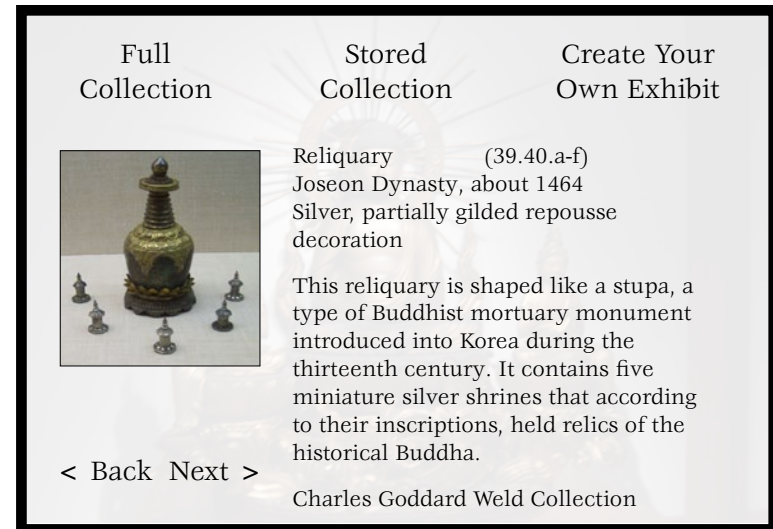
Objects scroll along bottom



OPTION 5 CONTINUED



Once visitor clicks on an object



Screen shown if visitor clicks on "Stored Collection".



Screen shown if visitor clicks on "Create Your Own Exhibit".

