

Duquesne University

Duquesne Scholarship Collection

Graduate Student Research Symposium

2019-04-17

Engaging Visitors with Conservation: The Key to Museum Sustainability

Megan Crutcher

Follow this and additional works at: <https://dsc.duq.edu/gsr>



Part of the [Education Commons](#), [Fine Arts Commons](#), [Museum Studies Commons](#), and the [Public History Commons](#)

Engaging Visitors with Conservation: The Key to Museum Sustainability. (2019). Retrieved from <https://dsc.duq.edu/gsr/2019/Proceedings/7>

This Paper is brought to you for free and open access by Duquesne Scholarship Collection. It has been accepted for inclusion in Graduate Student Research Symposium by an authorized administrator of Duquesne Scholarship Collection.

Engaging Visitors with Conservation:
The Key to Museum Sustainability

Megan Crutcher
PHST 601
Dr. Bucciantini
December 13, 2018

Conservation is the practice of preserving and protecting material culture and cultural heritage, including objects, sites, monuments, ceremonies, memories, and histories,¹ from deterioration and destruction, both through prevention and restoration. Conservation in some form, whether through permanent staff or consultation, is an essential part of every public history site. Yet there is a surprising lack of public attention and programming dedicated to it.

Conservation of cultural heritage is truly effective only when it leaves the public informed and passionate about its meaning and processes. Educational initiatives and permanent exhibits are the primary way to effectively engage and impassion the public in order to continue support for conservation of cultural heritage and history. Using shared authority, interpretation, and community engagement, some conservation education programs have effectively impassioned the public. The most successful of these have included object-based lessons, interaction with actual conservators, visible lab work, visible collection management, *in situ* conservation, STEM themes, collaboration with the public, and permanent or long-term installation.

Conservation education begins with unifying definitions of what conservation is. Many visitors automatically think of art, while others are completely unsure.² In addition, conservators and museum professionals have often faced difficulties in defining conservation of cultural heritage.³ Arresting misconceptions about conservation can be difficult when conservators have to juggle conservation, museum politics, and the public.⁴ Yet this struggle to define conservation

¹ Heritage means material culture, cultural heritage, and history. I will use the term heritage to refer to what conservators work on, because part of the conservation mandate is to preserve socially and culturally significant heritages. While in the past this has sometimes limited conservation efforts to the heritages of majority groups, present efforts to conserve heritage have become far more inclusive. One is reminded of the fire at the national museum of Brazil, which failed to preserve hundreds of recordings of indigenous languages which were being conserved at that museum. Conservation is increasingly concerned with providing resources and agency to formerly marginalized groups in order to conserve world heritage, rather than just European or Western.

² The Museum of Fine Arts, Boston, "Visitor Research on Conservation," in Emily Williams, *The Public Face of Conservation*, Archetype: 2013.

³ Mary M. Brooks, "Culture and Anarchy: Considering Conservation," in Williams 2013.

⁴ Maria Grammatikou, "Conservation and the Museum's New Role," in Williams 2013, 47.

in a way that serves all parties is a necessary part of improving the sustainability of museums and public history sites to raise museum profiles and accountability.⁵ An ignorant public may never allocate time or resources to preserving heritage, so community involvement ensures continuing support for museums.⁶ Part of this starts with public awareness of the deterioration that materials face. Conservators generally group deteriorative effects into two categories, catastrophic and gradual.⁷ Catastrophic deterioration can be either natural or human, and encompasses disasters such as floods, fires, warfare, terrorism, and other largescale catastrophic events. Gradual deterioration, on the other hand, occurs over a longer period of time, including pollution, pests, light damage, humidity, temperature, handling, and dissociation. Often, conservation education emphasizes human deteriorative effects as these are easily understood by visitors.

Conservators can provide historical context when they talk about the deterioration that objects have undergone in their lifetimes. By contextualizing objects, conservators have a chance to act as historical interpreters. Increasing public awareness of conservation can help prevent dissociation, a deteriorative effect that occurs when cultural heritage loses historical or situational context. Sometimes dissociation is the result of looting or removal, abandonment or neglect, mislabeling, misplacement, or the passage of time. Dissociation can also occur as the result of conservation or archaeological work that preserves without regard for history, significance, or public interaction.⁸ Display or storage of heritage outside of the immediate context, like in the case of expatriated objects, can cause major losses from dissociation.⁹ Conservators must therefore take on the role of interpreter to ensure that objects are preserved *in*

⁵ Ibid., 45.

⁶ Roberto Nardi, "Conservation for Presentation: The Key to Protecting Monuments," *CCA-Roma*, 2005.

⁷ Canadian Conservation Institute, "Agents of Deterioration," 2017.

⁸ Ibid.

⁹ Roberto Nardi, "A Critical Review of 25 Years," in Nina Owczarek, *Engaging Conservation: Archetype*, 2017.

situ to preserve their context. Roberto Nardi, founder of the Centro di Conservazione Archeologica in Rome, argues that conservation restores “social utility” to dissociated objects or sites;¹⁰ illuminating the context of cultural heritage allows the public to engage with and ‘use’ that knowledge. Like each history book, each conservation treatment “is a process of world-making.”¹¹ Conservators have a responsibility to communicate objects’ histories and not just their physical or mechanical deterioration. Therefore, conservators must emphasize heritage’s “cultural value,” “legibility,” “comprehension,” and publication.”¹² Cultural heritage unexplained leads to deterioration and destruction. In contrast, conservation—the preservation, protection, and presentation of cultural heritage—allows people to reimagine the histories with which they come face to face every day.

Thus, conservation is a vital part of the restitution and reinterpretation of stakeholders’ cultural property, especially as a part of public history. Conservation leads the charge on inclusive preservation, educating the public about why stories matter and specifically about how they are preserved. Conservation education creates “awareness of the need for protection,” saves sites and objects from being forgotten, and moves the public away from passive “consumption” of heritage.¹³ Thus it can “limit potential aggressions by preventing vandalism and abuse of cultural heritage, simply by encouraging public participation.”¹⁴ Conservators also have the ability to “change the face of conservation” by including the public as stakeholders.¹⁵ Both conservation and public history rely on collaboration,¹⁶ aspiring to preserve and protect *all* histories. All too often, conservators of the past carried out treatments and interpretation without

¹⁰ Nardi, “Conservation for Presentation.”

¹¹ Annlinn Kruger, “Fixing History,” in Williams 2013, 29.

¹² Nardi, “Conservation for Presentation.”

¹³ Nardi, “Going Public.”

¹⁴ Ibid.

¹⁵ Kruger, 30.

¹⁶ Grammatikou, 47 and Brooks, 3.

consulting the stakeholders involved with the objects or art.¹⁷ This created an alienating effect where stakeholders were barred from interaction and handling of their heritages. The new face of conservation increasingly involves direct and long term partnership with stakeholders. This also increases public awareness of and support for conservation.

Conservation affects more than conservators or museums. Thus it is vital to create ways for stakeholders to view and experience conservation beyond just a “rudimentary”¹⁸ knowledge, as well as to document processes and procedures for future efforts. However, the public can often view conservation, if they are even aware of it, as an obstruction to access¹⁹—don’t touch, don’t get too close, don’t *interact*, or you may damage it. Likewise, museum administrators often see conservation as a nuisance,²⁰ an expensive barrier to hands-on education, and therefore to museum sustainability and funding. Surveys on heritage conservation have showed high public interest and “support for preservation,” but simultaneously “a lack of direct participation in heritage-related behaviours [and] a degree of confusion about what heritage means.”²¹ Part of this seeming lack of interest is due to the immeasurability of certain popular heritage-related activities, such as genealogy, nominating historic landmarks, and “preserving family heirlooms.”²² Yet part of it is due to the fact that visitors to heritage sites, whether they be museums, historic sites, monuments, or landmarks, are often kept at arm’s length from material

¹⁷ I cannot address this here, but see Gencay-Ustun, Ozge et al, “Conserving the tataayiyam honuuka' (ancestors): a case study at the Autry Museum of the American West.” In Owczarek, Nina, Molly Gleeson, and Lynn A. Grant. *Engaging Conservation: Collaboration across Disciplines*. London: Archetype Publications, 2017. Gencay-Ustun’s article is a case study on stakeholder consultation with indigenous peoples over ancestral remains and grave goods. Ultimately the partnership was beneficial on both sides. The same is true of Jessica Johnson’s 2005 “Practical Aspects of Consultation with Communities,” which argues for stakeholder participation in every major conservation treatment, especially of the heritage of indigenous peoples.

¹⁸ Museum of Fine Arts, 188.

¹⁹ Brooks, 2.

²⁰ Ibid.

²¹ Heath Macdonald, “Understanding the Antecedents to Public Interest and Engagement with Heritage,” *European Journal of Marketing*: 2011, 1.

²² Ibid., 2.

culture—they are made into passive consumers, “glass case” observers²³ of once-dynamic “identities and histories.”²⁴ Some conservators question whether they have done enough to “embed... conservation practice sufficiently as a means of both preserving artifacts and making meaning for it to be sustainable” under duress.²⁵ The answer is no, not if the public is unaware. The question then becomes how to incorporate visitors as learners and participators in conservation without putting cultural heritage at risk. The rarity of permanent conservation education in public history sites shows that the emphasis has far too long been on the latter. In foregoing public interaction conservation has rendered itself less sustainable, and recent efforts at public programming and raising awareness have highlighted the difficulties and the successes of changing the discipline to reflect stakeholder interests rather than just conservator interests.

Earlier methods of ‘arm’s length’ conservation are challenged by an increase in educational programs that make conservation accessible to stakeholders. The Winterthur home in Wilmington, Delaware has effectively used conservation education since the 1950s—one of the earliest public conservation education initiatives in the country. Early tours of the laboratories in the 1950s garnished long lines that “extended out the entrance of the research building as the general public got their first introduction to a previously hidden world.”²⁶ Tours of the conservation laboratories continue today, but they are more all-inclusive and do not require extra tickets. Winterthur’s tour demonstrated the difficulties and benefits of conservation education as a fixture of programming. At first, guides were cautious and often reticent because the technicality of conservation and the presence of the conservators unnerved them.²⁷ Conservators

²³ Ibid. Add to this the fact that simply observing does not true learning make. Most, if not all, educators agree that hands on and experiential learning is the best way to affect true absorption of knowledge in learners. People just don’t learn things well by staring at them and not interacting with them.

²⁴ Nardi, “25 Years of Critical Review.”

²⁵ Brooks, 1.

²⁶ Lois Price, “Conservation Curiosity,” in Williams 2013, 9.

²⁷ Ibid, 10.

were concerned with correctness, while guides were concerned with entertaining visitors. The public wanted to see conservation in action.²⁸ Early tours pushed this tension between conservators, other museum and education staff, and visitors. With the design of permanent exhibit panels for the conservation lab, the tour was made easier for the guides. Information could flow more coherently because the panels would give more technical information for interested visitors and the guides were freer to ensure visitor satisfaction.²⁹ Panels would be object-based, focusing on the before and after of conserved objects. Now, conservation tours often include important donors who want to “see how their gift would be used,”³⁰ illustrating the importance of conservation education to the sustainability of museums as a whole.

In 1997, Winterthur’s exhibit *Deceit, Deception, and Discovery* created intrigue as it dealt with recognizing fakes and authenticating art and artifacts. Conservation assessment was central to this exhibit. Conservators provided analyses of the materials, chemistry, and historicity of famously deceptive artifacts and objects.³¹ Coincidentally, this exhibit marked the first time that the museum directly asked visitors about conservation, and 37% were highly interested.³² In 1999, the museum began to make conservation a permanent fixture of public programming, focusing on the objects before and after conservation treatment and increasing visitor questions about conservation.³³ Recently, Winterthur has begun to educate school groups and teachers, emphasizing the STEM roots of conservation and the importance of conservation not just to museums, but to personal and family objects as well.³⁴ The Winterthur tour and conservation education illustrates the growing importance of conservation education and the benefits that it

²⁸ Ibid.

²⁹ Ibid.

³⁰ Ibid.

³¹ Ibid.

³² Ibid.

³³ Ibid, 12.

³⁴ Ibid, 14.

can have for museum growth and visitor satisfaction. People were genuinely interested in conservation and became passionate about it through these tours and exhibits, partly because they emphasized the interesting nature of conservation. In order to implement effective programming, the museum had to overcome internal barriers to coherent education, as well as learning how to incorporate conservation into permanent exhibits for a long-term effect.

Similarly to Winterthur, Colonial Williamsburg faced challenges with incorporating conservation into permanent exhibits. They began to present tours and lectures rather than incorporate conservation as a permanent fixture of exhibiting. Conservation tours provide the public with a behind the scenes, “meet the conservator”³⁵ feel. Yet Williamsburg found that this only engaged a segment of the public—it excluded children, young people, and those who were not initially interested in conservation. The site began to develop youth programming that would teach conservation from a STEM perspective, incorporating Virginia public school science standards into the curriculum.³⁶ Even though this program was directed at children, its conceptual stages did not include interaction and hands on activities, so newer iterations were developed to include audience participation.³⁷ Initially, this conservation exposure was impermanent and object-based, like Winterthur. However, Williamsburg took a different turn by providing an “exhibit space as a stage on which conservators could engage with the public.”³⁸ The exhibit that ran from 2010-2012, *Conservation: Where Art and Science Meet* was designed to be user-friendly and applicable, with three major points being causes of deterioration, the role of humans, and the concept of minimal intervention in conservation.³⁹ Conservators and

³⁵ Ibid.

³⁶ Ibid., 109

³⁷ Ibid., 111.

³⁸ Patricia Balderson and Emily Williams, “Where Art and Science Meet,” in Williams 2013.

³⁹ Emily Williams, “Presenting Conservation: Where Art and Science Meet,” in Williams 2013, 172. Minimal intervention means you do as little as possible in order to conserve the object—conservation is not in the business of restorations that detract from the original intrinsic value of the object.

designers who collaborated on the exhibit wanted to give people a behind the scenes experience by including conservators as fixtures of the exhibit.

Colonial Williamsburg relied on collaboration between departments and the public in order to make this interaction happen. The planning of *Conservation: Where Art and Science Meet* relied on stakeholders from the public.⁴⁰ Stakeholder dialogue showed that people were more interested in the STEM background of conservation and the objects that had been conserved. They were also interested in the ways conservation applied to their lives—family heirlooms, science and technology, and causes of deterioration.⁴¹ Thus, the public conception of conservation that appeared in Williamsburg’s exhibit was one of preservation, protection, and restoration of cultural property. Many were stirred by the presentation of before and after images or displays, which seems to have been a major success of the exhibit.⁴² In Williamsburg, presenting before and after imagery of objects allowed people to ask deep questions about causes and fixes of deterioration that “conservators [were] uniquely placed to answer.”⁴³ The exhibit was a way to deeply engage the public and collaborate within the site and with stakeholders. Williamsburg’s exhibit reveals similar principles to Winterthur—those of collaboration, object-based exhibits, personal interaction with conservators, and dialogue that interacts with the work.

Another way that museums have found to incorporate conservator interaction, before and after imagery, and *in situ* conservation efforts is through the visible lab or conservation window. These allow conservators to continue their work while also interacting with the public. Museums and sites have also incorporated this interaction and objects-based education through *in situ*

⁴⁰ Ibid.

⁴¹ Ibid.

⁴² Museum of Fine Arts. Visitors expressed great interest (60% of visitors were enthusiastic) about before and after imagery or objects. They wanted to see the effects and the process of conservation in action. This is a way to impassion people about conservation’s importance!

⁴³ Williams, 173.

conservation, which means that objects or sites are conserved outside of the laboratory but within the museum or in their original location. An early use of a visible conservation lab was at the Science Museum of Minnesota in 1980. Conservator Gretchen Anderson, now the head of conservation at the Carnegie Museum of Natural History, worked in a glass-walled workspace and laboratory where windows opened to guests.⁴⁴ Projectors outside the lab presented videos on deterioration and conservation from the Canadian Conservation Institute on a loop whenever the building was open. The lab's real publicity came in 1993 with the conservation of a unique 1920s art deco mummy case. Conservators' focus was not only on arresting deterioration, but also of "reinterpreting" the mummy case and its "historic importance."⁴⁵ Conservation and interpretation allowed conservators to interact not only with visitors, but also with staff people over issues of neglect and abandonment of heritage.⁴⁶ Based on the conservation team's work in the visible lab, the case was properly associated with its historical context as a 1920s artist's gift to the museum's then-newly acquired mummy.

With a "constant stream"⁴⁷ of visitors and children, conservators and museum education staff learned how to cooperate to express the aims of conservation to visitors. Visitors to the Science Museum wanted a personal interaction with conservators.⁴⁸ Programming on conservation, then, was a collaborative effort between conservators and interpreters. Videos and staff talks used object-based examples to teach about conservation, showing damage of objects and demonstrations of how damages affect their historical and structural integrity on exhibit paneling. Second, museum teaching focused on how conservation applied to visitors, from

⁴⁴ Gretchen Anderson, "Interview on Visible Lab at Science Museum of Minnesota," interviewed by Megan Crutcher 7 Dec 2018.

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Ibid.

family heirlooms to protecting belongings from damage or dust. Hands-on programming for kids was developed, including an exercise to reassemble a fake broken ceramic. Kids were enamored not just with the big, spectacular objects like the mummy case, but also with simple actions like ironing or dusting.⁴⁹ Conservation in the museum's visible lab "was a way to get conservation in the public view... It directly related to their lives—because who hadn't had to deal with polishing silver 30 years ago?"⁵⁰ Last, programming tended to focus on the risks and deterioration of objects and preventative measures.⁵¹ In another witty anecdote, Anderson recounted how some visitors immediately grasped and applied conservation ideas about preventing pests—one pair of children, after hearing Anderson explain how to set mousetraps, proudly exclaimed that they could now tell their father he was "doing it wrong!"⁵² It is precisely this personal fascination with conservation through hands-on activities, interaction with conservators, STEM education, object-based lessons, and use of digital technology which provoked and continues to provoke support for the profession and for museums in the public.

Other museums that have had large successes at conservation in labs more recently have been at the Musical Instruments Museum in Arizona in 2010 and the Walters Art Museum in Maryland in 2009. At the MIM, the visible lab was constructed alongside the museum which allowed a degree of intentionality. Outside of the lab, TV screens displayed slides about exhibiting, the conservators themselves, and "In the Lab Today."⁵³ Similar to museums that have developed visible collections management or visible storage programs, the lab also incorporated other tasks, such as collections management, to avoid the issue of "the empty lab" which would

⁴⁹ Ibid.

⁵⁰ Ibid.

⁵¹ Ibid.

⁵² Ibid.

⁵³ Irene Peters, "Through the Looking Glass," in Williams 2013, 191.

disappoint visitors.⁵⁴ This became a collaborative effort between volunteers, conservators, and educational staff. One of the innovative digital installations was a connection between the conservators' microscopes and the TV screens outside the lab, which connected people with STEM and technology in conservation.⁵⁵ At the MIM, conservation education in the visible lab incorporated direct interaction and innovative, successful STEM education. It also illustrated the necessity of having permanent programming on conservation that is organized and unified.

The Walters Art Museum opened its conservation window in 2009. Unlike the MIM, the Walters chose to combat the empty lab phenomena by opening the lab at certain times. The visible lab became limited edition, and therefore more desirable to visitors. Visitors were extremely satisfied, and about 87% learned about conservation for the first time.⁵⁶ At the Walters, public outreach and education has since become a vital part of the conservation job description.⁵⁷ The relationship that can be established between conservators and visitors is what makes the museum "accessible, interesting, and memorable."⁵⁸ At the Walters and the Musical Instrument Museum, visible conservation increased the museum's "public value,"⁵⁹ illustrating the benefits of incorporating permanent conservation visibility into the museum. The Walters successfully brought conservation into the public eye through interaction with conservators and STEM education.

When a visible lab is not a viable option, conservation often operates *in situ* in the public view. While this has many benefits to visitor engagement, it also comes with its own set of challenges, including collaboration and programming organization. Ruth Fauman-Fichman, an

⁵⁴ Ibid.

⁵⁵ Ibid., 193.

⁵⁶ Jessica Arista, "The Conservation Window at the Walters Art Museum," in Williams 2013, 198.

⁵⁷ Ibid., 200.

⁵⁸ Ibid.

⁵⁹ Ibid.

interpreter and conservation assistant at the Carnegie Museum of Natural History, worked on the conservation of the *Lion Attacking a Dromedary* taxidermy, which is a well-known, large artifact in the Pittsburgh museum. During the conservation of this piece, conservators worked in the open while volunteers or interns conversed with visitors, who were obviously fascinated at the magnitude and importance of the piece.⁶⁰ Visitors to the Carnegie Museum during this time were curious not only about the historical context of the piece, but also about its construction methods, the engineering behind it, and the scientific or technological methods being used to conserve it. Because of spatial limitations, conservators were unable to answer questions during their work time on the piece, and so this programming fell to the interpreters or interns. Part of what Fauman-Fichman tended to emphasize was the tools of the conservator, before and after photos, and the challenges of cleaning and reassembling museum pieces.⁶¹ Fauman-Fichman and fellow interpreters did face difficulties in this effort, as the museum has not standardized interpreter training on conservation and its role in the museum. Interpretation of conservation, therefore, is often left out of public programming. In creating an interactive atmosphere, some interpreters like Fauman-Fichman have begun to crack open the door to conservation and get visitors asking what it does and why it matters for museum survival. *In situ* conservation can illuminate the field for visitors if it is accompanied by programming or a unified vision for public education. However, without these intentional steps, *in situ* conservation efforts often just encompass interaction with conservators and do not use other successful strategies such as technology or object handling.

At the Smithsonian Museum of American History, conservation of a spectacular and emblematic piece, the original Star Spangled Banner, took place *in situ* accompanied by specific and strategic programming. An eight-year effort, this rendered the exhibit semi-permanent. The

⁶⁰ Ruth Fauman-Fichman, "Interview on Conservation Education," interviewed by Megan Crutcher 7 Dec 2018.

⁶¹ Fauman-Fichman.

object was symbolic for many visitors, so initial stages of the project used stakeholder collaboration to discover visitor interests in its conservation and context.⁶² The message of the exhibit became about the fragility and deterioration of the flag.⁶³ During the process, there was such a high “demand” for information about conservation that specific and dedicated programming was developed to educate the 1.5 million visitors to the exhibit.⁶⁴ This included video, photographs, and exhibition of other period sewing implements that would have been used on the flag, giving historical context to its conservation in the present. Yet the project also faced challenges. Impassioning the public proved to be so successful that the constant questions and interactions strained the conservators.⁶⁵ As a collaborative effort, perhaps this could have been avoided if more intentional programming had been developed before the conservation had begun rather than as a result of visitor interest after the fact. Overall, however, this project showed how successful object-based programming that both uses technology and provides intimate interactions with conservators can be in increasing museum publicity during *in situ* conservation.

The Museum of London went one step further, actually incorporating the public as workers into *in situ* conservation work on the Bucklersbury Roman mosaic pavement. Not only did the conservation of this work happen *in situ* in the public view, but also through the public’s hands. The mosaic had previously only been cleaned every two years, during which the gallery had been closed. During the cleaning in 2009, however, conservators and volunteers allowed and encouraged children under the age of ten to come across the barrier and clean the mosaic with them. Using STEM ideas, personal interactions, and specific programming, this participatory

⁶² Suzanne Tomassen-Kraus, “Conservation in the Public Eye,” in Williams 2013, 143.

⁶³ *Ibid.*

⁶⁴ *Ibid.*

⁶⁵ *Ibid.*, 146.

exhibit had “immense appeal” to the public.⁶⁶ Other exhibits and tours at the museum allowed people to handle archaeological objects and learn about their deterioration and conservation. Through these, people learned from tactile experiences about the technologies and processes for conserving artifacts. Ending surveys showed that visitors felt “privileged” to be allowed behind the curtain of vital museum operations like conservation.⁶⁷

While conservation *in situ* can be extremely effective, it is rarely a long term fixture as in the Smithsonian’s project. Few museums have developed permanent exhibits on conservation. One is the J. Paul Getty Museum in California, a partner of the conservation school at UCLA. The Getty developed an exhibit called *Preserving the Past*, which incorporated shared authority between conservators and educators, as well as public stakeholders.⁶⁸ Designers tried to convey the main points of conservation in a short time frame, allowing visitors to interact with science and technology, treatment samples, and photography and video.⁶⁹ Over 12,000 visitors viewed the exhibit in 1993.⁷⁰ As a permanent fixture, *Preserving the Past* incorporated object-based, STEM, and digital learning, but not interaction with conservators. Another permanent exhibit on conservation, *Created, Collected, Conserved*, at the Carnegie Museum of Art in Pittsburgh, PA, “shows how extensive research and new technology can uncover fascinating stories.”⁷¹ The Carnegie dedicated a corner of the largest art gallery to conservation education, showing visitors before and after images in an object-based display. Interactive and digital panels explained and showed conservation of paintings in action, from their creation to the various deterioration and risks that they faced. Like the Getty and others, the Carnegie incorporated STEM research and

⁶⁶ Helen Ganiaris, “Lifting Barriers,” In Williams 2013, 215.

⁶⁷ *Ibid.*, 217.

⁶⁸ Jerry Podany, “Can The Complex Be Made Simple?” *Journal of the AIC*, 1993.

⁶⁹ *Ibid.*

⁷⁰ *Ibid.*

⁷¹ Scaife Galleries, “Created Collected, Conserved,” *Carnegie Museum of Art Blog*, 2017.

technology in the exhibit to show how conservation relies on varied disciplines. Yet it still missed the vital visitor desire of personal interaction with conservators. These two exhibits exemplify the difficulties of mixing permanent exhibit installations with conservator interaction. Often permanent exhibits feature technology and object-based learning, but organizing consistent conservator presence is difficult. To mix both requires collaboration, flexibility, and creativity. It seems that few museums have been able to succeed at both.

A few museums have taken permanent installations in a different direction with the creation of visible storage and visible collections management. While not necessarily STEM focused, these installations incorporate the conservative aspects of museum work that often go unnoticed. The Brooklyn Museum's Luce Center for American Art received press attention for what some saw as an adventure. The Luce implemented visible storage in the beautiful formerly closed backstage areas of the museum. This piqued interest in the mystery of museum operations behind the curtain. "Even at their starkest, glass cases stuffed with objects can be intriguing, inviting people to think about museums and how they go about making their choices."⁷² This is also a method of conservation, since it emphasizes protection and presentation. The Heinz History Center in Pittsburgh, PA is using visible storage as a permanent exhibit, complete with labeling and interactive activities.⁷³ Guests are invited to experience visible storage, as a dynamic and interesting lift of the curtain on museum operations. The aesthetic and organization of the storage is part of its appeal. Visible storage takes the cramped, dark, and often inaccessible collections spaces and transforms them into vivid, dynamic learning spaces. Providing access is itself conservation, as barriers to artifacts are removed and the public is invited to participate in,

⁷² Celestine Bohlen, "Museums as Walk-In Closets," *New York Times* May 8, 2001.

⁷³ Heinz History Center, "Visible Storage," Exhibit.

rather than consume, heritage. Visible storage can also make use of the same benefits as conservation education in being object-based, visible, technological, and interactive.

Some different conservation organizations, like the Italian Carabinieri, have chosen to implement digital exhibits and activities that increase conservation awareness. One aspect of deterioration that many museums do not tend to address, but is vital to the survival of cultural heritage, is looting. In the Mediterranean this is an especially large issue, so the Italian Carabinieri have developed an educational campaign against looting. They have decided to use the same tool that often sells and ships looted objects, the internet, as a way to educate people. Virtual activities and games allow children to play secret agents tracking down stolen items. Woven within this game is the message that heritage is important *in situ* and it is the public responsibility to ensure their safety.⁷⁴ The website also educates adults, displaying images and information about stolen art to show people their responsibility to avoid purchasing it.⁷⁵ International exhibits in collaboration with UNESCO emphasize the importance of cultural heritage in at-risk areas, garnishing much public approval. Carabinieri outreach extends to schools and international conferences, meetings, and exhibits. The philosophy is that it is much “easier to prevent an object being stolen” through awareness than it is “to recover an object following its theft.”⁷⁶ The Carabinieri project incorporated not only shared authority among disciplines, but among nations and organizations. Using objects-based programming and technology to reach the public, it emphasized the importance of historical context, interpretation, and preservation *in situ*. The Carabinieri effort gives the public responsible engagement with conservation that would have otherwise been relegated to law enforcement and experts. In using

⁷⁴ Laurie Rush, “Carabinieri Public Outreach and Education,” in *The Carabinieri Command for the Protection of Cultural Property*, 2015: 37.

⁷⁵ *Ibid.*, 42.

⁷⁶ *Ibid.*, 47.

technology and broadening awareness, the Carabinieri contributed to the further preservation and prevention of looting from cultural heritage sites with the public as the main players.

These various case studies span a large time frame and specific subject matter. However, their common aim is not to protect heritage *from* the public, but to protect heritage *through* the public. Conservation must offer interpretation and legibility. Conservation education should start with objects that the museum or site has access to, and move to STEM techniques, *in situ* efforts, and interactions with conservators, eventually becoming permanent fixtures. Incorporating technology is necessary in the modern era, as is catering to all stakeholders and tailoring the message for comprehension.⁷⁷ The best conservation education programs have incorporated object-based programming, face-to-face interactions with conservators, focus on STEM and technology use, visible labs, virtual education, and *in situ* conservation; these have registered incredible visitor engagement. These require creativity, collaboration, and dedication to public engagement. The rarity and impermanence of conservation programming in many institutions is one way to improve on the field's mandate to education. It begins with visitor engagement and stakeholder interest. Conservation education itself is often difficult to implement, but without it our sites and histories, are in danger of being obliterated by time, lost memory, and discrimination. With permanent methods in place to present conservation to the public, heritage can be preserved for the future.

⁷⁷ Podany.

Bibliography

A note on sources: The rarity of conservation education programs is evident. To date, there are only two anthologies of articles published (Williams, 2013 and Owczarek, 2017). As a result, it is difficult to find tangible evidence of conservation education programs. Two of my sources come from interviews of conservators and interpreters at the Carnegie Museum of Natural History. Other sources on visible storage come from the popular media or museum websites. I am optimistic of the future of conservation as expressed through these prestigious and influential institutions.

- Anderson, Gretchen. "Interview on Visible Lab at Science Museum of Minnesota." Interviewed by Megan Crutcher at Carnegie Museum of Natural History, 7 December 2018.
- Arista, Jessica and Terry Drayman-Weisser. "The Conservation Window at the Walters Art Museum: Building Conservation Support by Creating Public Value." In Williams, Emily. *The Public Face of Conservation*. London: Archetype, 2013.
- Balderson, Patricia and Emily Williams. "Where Art and Science Meet: Education Programming for Colonial Williamsburg's Conservation Exhibit." In Williams, 2013.
- Bohlen, Celestine. "Museums as Walk In Closets." *New York Times* May 8 2001.
<https://www.nytimes.com/2001/05/08/arts/museums-as-walk-in-closets-visible-storage-opens-troves-to-the-public.html>
- Brooklyn Museum. "Visible Storage and Study Center."
<https://www.brooklynmuseum.org/exhibitions/luce/>
- Brooks, Mary M. "Culture and Anarchy: Considering Conservation." In Williams, 2013.
- Canadian Conservation Institute. "Agents of Deterioration." September 2017.
<https://www.canada.ca/en/conservation-institute/services/agents-deterioration.html>
- Fauman-Fichman, Ruth. "Interview on Conservation Education." Interviewed by Megan Crutcher at Carnegie Museum of Natural History, 7 December 2018.
- Ganiaris, Helen and Rebecca Lang. "Lifting the Barriers: Widening Involvement in Conservation at the Museum of London." In Williams, 2013.
- Gencay-Ustun, Ozge et al. "Conserving the tataayiyam honuuka' (ancestors): a case study at the Autry Museum of the American West." In Owczarek, Nina, Molly Gleeson, and Lynn A. Grant. *Engaging Conservation: Collaboration across Disciplines*. London: Archetype Publications, 2017.
- Grammatikou, Maria. "Conservation and the Museum's New Role." In Williams, 2013.
- Heinz History Center. "Visible Storage." <https://www.heinzhistorycenter.org/exhibits/visible-storage>

- Johnson, Jessica S., Susan Heald, Kelly Mchugh, Elizabeth Brown, and Marian Kaminitz. "Practical Aspects of Consultation With Communities." *Journal of the American Institute for Conservation* 44, no. 3 (2005): 203-15. <http://www.jstor.org/stable/40025151>.
- Kruger, Annlinn. "Fixing History: the Public Sphere and the Transfiguration of Conservation." In Williams, 2013.
- McClure, Ian. "Making Exhibitions of Ourselves." In Williams, 2013.
- McDonald, Heath. "Understanding the antecedents to public interest and engagement with heritage." *European Journal of Marketing* 45: 2011. 780-804. 10.1108/03090561111120037.
- The Museum of Fine Arts, Boston. "Visitor Research on Conservation." In Williams, 2013.
- Nardi, Roberto. "Going Public: A New Approach to Conservation Education." *UNESCO Museum International* 51 no 1: 1999.
- _____. "Conservation for Presentation: the Key to Protecting Monuments." *CCA-Roma*: 2005.
- _____. "A Critical Review of 25 Years of Training Activities in Archaeological Conservation of the Centro di Conservazione Archeologica of Rome (CCA)." In Owczarek, Gleeson, and Grant, 2017.
- Peters, Irene. "Through the Looking Glass: Guest Experience and the Wondrous World of Conservation at the Musical Instrument Museum." In Williams, 2013.
- Podany, Jerry C., and Susan Lansing Maish. "Can the Complex Be Made Simple? Informing the Public about Conservation through Museum Exhibits." *Journal of the American Institute for Conservation* 32, no. 2 (1993): 101-08. www.jstor.org/stable/3179702.
- Price, Lois and Lois Stoehr. "Conservation Curiosity: an Irreversible Trend." In Williams, 2013.
- Rush, Laurie, and Luisa Benedettini Millington. "Carabinieri Public Outreach and Education." In *The Carabinieri Command for the Protection of Cultural Property: Saving the World's Heritage*, 37-52. Boydell and Brewer, 2015. <http://www.jstor.org/stable/10.7722/j.ctt155j3p6.9>.
- Scaife Galleries. "Created, Collected, Conserved." Carnegie Museum of Art Blog, October 2017. <https://cmoa.org/exhibition/created-collected-conserved-the-life-stories-of-paintings/>
- Snyder, Colleen. "Behind the Scenes at the Getty Villa: Conservation Outreach for Kids." In Williams, 2013.
- Thomassen-Kraus, Suzanne. "Conservation in the Public Eye: Musings from the Other Side of the Glass." In Williams, 2013.
- Williams, Emily. "Presenting Conservation: Where Art and Science Meet." In Williams, 2013.