The Museum as Petri Dish

Hacking Harvard's Museum of Natural History

Emily Stokes-Rees

Natural history museums are often viewed as the most static and unchanging of all museums; institutional inertia and professional mandates frequently constrain opportunities for them to stretch and experiment with new ways to be relevant.

In her influential 1985 essay on the African Mammals Hall of the American Museum of Natural History in New York City, Donna Haraway, a prominent scholar in the History of Science, criticized the traditional taxidermic dioramas as celebratory of empire, patriarchy, and dominion over the natural world. Echoing this view over 10 years later, historian Randolph Starn wrote that natural history museums represent an often-overlooked front in the "museum wars":

> Until the 1980s, they were comfortably authoritative, rather dusty islands in the museum archipelago. But tensions were built into their institutional profile: scientific authority and showmanship; objectivity and racial and cultural preferences; specimens and spoils; disciplined curiosity and habits of condescension and exclusion—the list could go on.[1]

"Hack the Museum" was conceived by Wendy Derjue-Holzer, the education director at Harvard University's Museum of Natural History (HMNH), and Diana Lempel, a graduate student in Urban and Environment Studies at Harvard University. The project took place at HMNH (fig. 1) as part of the university's Wintersession in January of 2014.[2] The facilitators' goal for the project was to increase the number of young adults, specifically undergraduates, visiting the museum, after an annual college student-life survey of seniors revealed that the vast majority of students graduating

1 Randolph Starn, "A Historian's Brief Guide to New Museum Studies," *American Historical Review* 110 (2005): 87.

2 Wintersession, the last week of winter recess before classes begin, offers students the opportunity to participate in optional enrichment programming coordinated by campus offices, faculty, staff, and students.

EMILY STOKES-REES

fig. 1. The entrance to the Harvard Museum of Natural History, 2014.

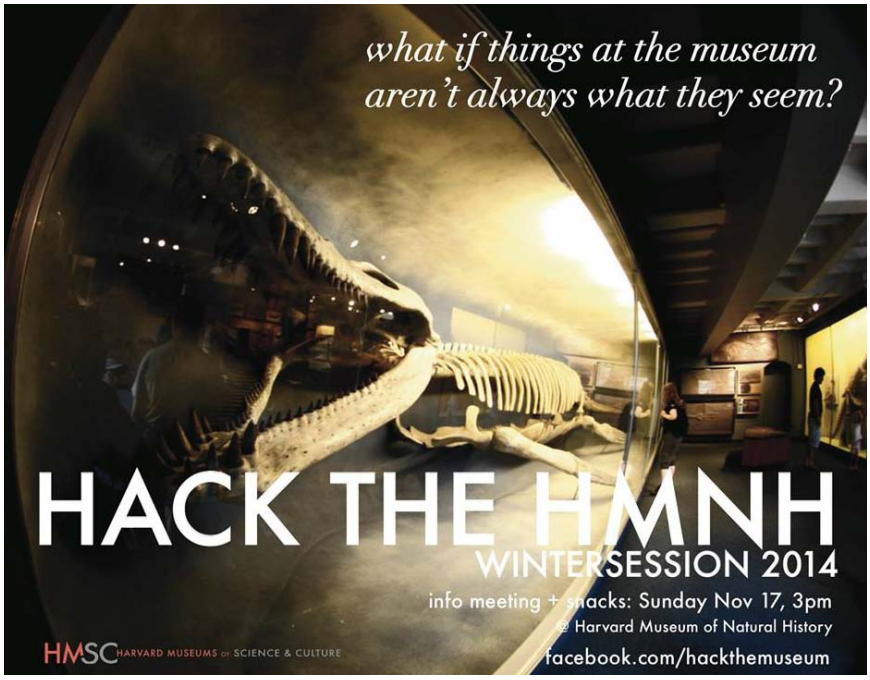

fig. 2. The Harvard Wintersession poster used to invite students to participate, 2014.

from Harvard leave having never entered any of its museums. Diana and Wendy thus began the week by posing the questions: What is a natural history museum anyway? Is it a dusty, musty old place filled with dead things? Is it a catalogue of the world around us? Is it a place where things come alive at night, terrorizing the security guard?[3] What if things at the museum are not always what they seem (fig. 2)?[4] Over the course of a week, student teams were tasked with preparing interventions or "hacks" for a number of the museum's galleries, as well as using the museum's extensive education collections, to explore what could happen in the space if our assumptions about the static, musty, and unchanging nature of natural history museums no longer held true, and the galleries were brought to life in new ways. The nine student participants transformed the museum into a laboratory for participatory practice, and were encouraged to think experimentally in the quest to create more deeply connective encounters for potential visitors within HMNH's traditional natural history galleries. All in all, there were seven installations: Dream Life of the Great Mammal Hall; Specimens Speak; Mount a Specimen; Picture Yourself...; At Camp; Sense and Sensibility; and the Death Lounge.

3 I note the influence here of the very popular *Night at the Museum* movies, which involve a newly recruited security guard at the Museum of Natural History discovering that the museum has been cursed, bringing the animals to life to wreak havoc. Internet Movie Database (IMDb), accessed July 2015, http://www.imdb.com/title/tt0477347/.

4 "Hack the Museum," accessed July 2015, https://hackthemuseum.wordpress.com.

This article profiles just the last two in the list, whose unusual thematic content and innovative use of technology made them particularly successful in exploring ideas about how we might connect with natural history galleries in new ways. Moreover, I was one of the faculty mentors for both the Death Lounge and Sense and Sensibility groups, which meant that I was more intimately involved in the development and analysis of the hacks. Although I was able to experience and critique all of them, my personal connection to these two makes them an obvious choice for a more in-depth analysis.

The Workshop

The weeklong workshop began with a brainstorming session where the student participants ("hackers") responded to a series of questions: When were you last deeply moved in a museum exhibition, and why? Do you ever try to look at a museum display from a different perspective? Are you successful? Ideas were gathered, including thoughts about the current state of museums, what needs to change, and possible creative solutions. The participants then worked as individuals or in small groups on using the ideas generated to develop their hacks over the course of the week, with guidance from various mentors (museum professionals and academics from around Greater Boston; in my capacity as an academic dean and lecturer in anthropology at Harvard, I was

one of the mentors) along the way. The group also heard talks from a variety of speakers, including the director of the Museum of Comparative Zoology and the curator of academic affairs at the Peabody Museum of Archaeology and Ethnology, both at Harvard. All of the lecturers reflected on how natural history museums might produce meaningful, creative projects and events for young adults. The goal was not to teach students a body of knowledge about material things, but rather ways of thinking about and processing knowledge drawn from the material world.

As the students neared the end of the week, the hacks were then "tested" by the mentors. We provided constructive feedback and suggestions for improvement. In culmination, on Friday night the hack participants presented their projects at an after-hours open house for friends, students, and other invited members of the wider Harvard and local museum communities. As they entered, visitors were invited to join the "Exploritas Club," modeled along the lines of many role-playing games where participants are assigned a character to "be" as they play. Likewise, the museum's visitors were each given figures from the history of Harvard's Museum of Natural History, such as zoologist Louis Agassiz and taxidermist Henry Augustus Ward, to "channel" as they moved through the galleries and interacted with the exhibits, their fellow visitors, and the student hackers. The event brought the museum to life outside of daytime hours, and unsurprisingly it was very successful, judging by both the number of attendees as well as the palpable enthusiasm for what everyone experienced (fig. 3).

Later reflecting upon the wonderful evening event as well as my experience as a mentor, it seemed clear from listening to the student hackers work together—as well as observing the resulting hacks—that one of the main themes to emerge from the week could easily have been inspired by a well-known quote from the neuroscientist Antonio Damasio, as paraphrased by museum guru Nina Simon. In writing about creating emotionally engaging exhibitions, Simon asserts that we "are not thinking animals, but *feeling* animals who happen to think."[5] Damasio's research shows that emotion is fundamental to igniting the cognitive processes of wonderment, resonance, and, as Nina Simon suggests, the evocation necessary for engagement in museums.[6] Emotion is not distinct from reasoning; it is essential to it. Even if visitors enter the museum with an interest in science and the natural world, they will inevitably lose focus if they do not connect with the material in a way that is emotionally engaging. It was the possibility of uncovering these material and emotional complexities that inspired the hackers to approach their conversations and installations with a focus on creating powerful experiences for visitors, and, hopefully, encouraging new ways of thinking that would help natural history museums survive by making them more engaging and more relevant to their audiences.

5 Antonio Damasio, *Descartes Error: Emotion, Reason, and the Human Brain* (New York: HarperCollins, 2005). As paraphrased by Nina Simon in "Exhibit Design Workshops," accessed January 15, 2016, http://santacruzmah.org/event/exhibit-design-workshops/.

6 "Exhibit Design Workshops," http://santacruzmah.org/event/exhibit-design-workshops/.

COURTESY OF "HACK THE MUSEUM"

fig. 3. A student participant (and "Exploritas Club" member) engages with the hacks.

Hack #1: The Death Lounge

Conceived and implemented by two students, one from the Graduate School of Design and the other an undergraduate in the History of Science, the Death Lounge enabled visitors to experience the skeletons and taxidermic animals of the Romer Hall of Vertebrate Paleontology in a different light, both literally and figuratively. Everybody involved agreed that it was certainly the most "artsy" of the hacks, in terms of its subdued lighting and jazz-bar atmosphere.

The dimly lit Romer Hall (fig. 4) is located somewhat off by itself, and visitors to the museum typically overlook it in their rush to the Great Mammal Hall or the Blaschka Glass Flowers. Romer Hall showcases the evolutionary history of vertebrates, and features spectacular, preserved fishes, dinosaurs, and diminutive early mammals.[7] Highlights include the world's only mounted *Kronosaurus queenslandicus*, a 42-foot-long prehistoric marine reptile; one of the first *Triceratops* skulls ever discovered; and a huge *Pteranodon*, a fish-catching flying reptile from the Cretaceous period (roughly 145 to 6 million years ago). It is a time machine, of sorts, which gives a sensation of being transported not only to distant prehistoric times, but also on a nostalgic journey to an earlier era of display. Donna Haraway's description of the organisms on display in the African Hall as nostalgic memories of a "dim organic past" is certainly evident here.[8]

7 "Romer Hall of Vertebrate Paleontology," accessed February 7, 2016, http://hmnh.harvard.edu/romer-hall.

8 Donna Haraway, "Teddy Bear Patriarchy: Taxidermy for the Garden of Eden, 1908-1936," *Social Text* 11 (1985): 23.

In this hack, the two students darkened the entire gallery and installed fairy lights along the tops of the exhibit cases. Combined with an existing ambient light from the *Kronosaurus* case, it created quite a creepy atmosphere. The effect of the lighting was intended to accentuate a visitor's encounter with the skeletons in the room—which appeared to be lit from within—hold their gaze, and dissolve the mediation of the glass-fronted display cases. The hack did not stop there, however. The students also pulled a variety of specimens from the education department's collection of taxidermic animals and skeletons, and used them to line the tops of the cases, where they stood, frozen, in death poses. To give visitors an opportunity to view the displays from a radically new vantage point, the students laid soft pelts, also from the handling

fig. 4. In the Romer Hall of Vertebrate Paleontology.

COURTESY OF HMNH

DAN KOFF

fig. 5. Animals aglow in the fairy lights of the "Death Lounge."

collection, on the floor, so visitors could bend down to touch and even lounge on them, allowing the eerily lit objects in the room to be viewed from below—something rarely experienced in a museum. With old-school jazz playing in the background, and a bar serving snacks and warm cider, visitors to the hacked gallery could also sit around a table and attempt to reassemble the skeleton of a goat from an assortment of old bones, touch the furs, and soak up the atmosphere (fig. 5).

The Death Lounge brought ambient, sensory engagement to a very old-fashioned and lifeless display, and it was definitely a "lounge of death"—powerfully drawing attention to the fact that the skeletons and furs on display were once living creatures. The acts of building the skeleton and touching the furs brought the past into the domain of immediacy, bringing an experience of the seemingly remote and inaccessible past into a lived and, at times, highly intimate experience of the present. As Daniel Koff, one of the student participants, reflected: "It was a place for visitors to have an intimate interaction with the corporeal materiality of the animals and with their own living bodies."[9] The Death Lounge brought, perhaps ironically, new life to the exhibit hall, and in a way that was creative and engaging. It reveals, moreover, that introducing technology-based interpretation, which these days is so often the "go-to" solution when museums are attempting to create innovative, visitor-engaging displays, is not always the answer. Sometimes, what is necessary is a simple reimagination of a space. Moreover, this hack created an environment that enabled visitors to reflect on their own lives and experiences in the displays—as fellow mortal creatures. The gallery itself tells a story, but the themes are universal and as such, the possibilities for finding relevant narratives are endless.

Hack #2: Sense and Sensibility

This hack took place in what is undoubtedly the most famous, as well as the most unapproachable, exhibit at the Museum of Natural History—The Ware Collection of Blaschka Glass Models of Plants.[10] Commonly known as "the glass flowers," this exhibit features a unique collection of over 4,000 models—3,000 of which are on display—created by the glass artisan Leopold Blaschka and his son, Rudolf. The commission, which represents more than 830 plant species, began in 1886 and continued for five decades. The idea originated with Harvard Professor George Lincoln Goodale, founder of the Harvard Botanical Museum, who wanted lifelike representations of plants for his botany classes at a time when only crude papier-mâché or wax models were available.[11]

In this exercise, two students transformed what they viewed as a very static, unengaging, exceptionally Victorian gallery into a dynamic location for an educational scavenger hunt, using the five senses to actively engage visitors. Employing a web-based mobile site instead of an app, which allowed different mobile platforms to easily participate—from smart phones to tablets and

9 Daniel Koff, conversation with author, Harvard Museum of Natural History, January 2014. Also see http://www.danielkoff.com/still/.

10 The Ware family financed the glass flower project in memory of their descendant, Dr. Charles Eliot Ware, who was a member of Harvard's class of 1834, hence the name.

11 "The Ware Collection of Blaschka Glass Models of Plants," accessed February 3, 2016, http://hmnh.harvard.edu/glass-flowers.

computers—all visitors needed was an Internet connection and a web browser. On the site, participating visitors were asked three questions for each sense (taste, touch, smell, sound, and sight) and the mobile game led them through the gallery as they searched for the flowers that corresponded to the questions. On a small table near the entrance to the gallery, visitors could consult sensory samples—clues to aid in their search—such as the smell of coffee beans or the feel of soft grass. Additional clues to help one locate the answers to the questions also included recordings which could be played on the mobile device, such as the sound of buzzing bees and blowing wind (which are, of course, important pollinators).

The challenge with this hack was locating the space between engagement and distraction. Would the digital interface chain participants to their phones? Or would it encourage them to actively engage with the exhibits as they searched for flowers? In observing a variety of individuals and groups participating in this hack, everyone appeared to have a wonderful time, judging by the excited chatter, laughter, and visible "racing" through the gallery to be the first to find the correct flower. From my own participation in the scavenger hunt, it was apparent to me that the digital interpretation enhanced the gallery, increasing both physical engagement and meaningful interaction, rather than distancing one from its contents through traditional passive absorption. I was impressed at the extent to which the activity encouraged person-to-person interaction, as my fellow faculty mentor and I gleefully raced and plotted to find the right specimens to fit the clues. The hack fostered the sense that visitors were contributing to their own knowledge production, highlighting the deeply personal and emotional connection we all have with nature that should be explored and celebrated.

Experiments like these have the potential to break down traditional boundaries, rethink collections, and create new modes of interpretation.

Conclusion

While initially conceived of as a means to engage students in one of their university museums, in the end, "Hack the Museum" also shed light on new ways to make natural history museums relevant and engaging. Upon reflection, I think the facilitators' use of the term "hack" is particularly interesting because it captures the notion of decomposition—of breaking something down to its most fundamental elements and rebuilding the fragments into something new, inspiring an alternative mode of viewing and simultaneously critiquing traditional forms. While in fact museums are constantly reimagining and setting up environments that reinforce interpretations, for the student group, hacking—with its subversive undertones—proved to be a useful way to encourage participants to break free from their assumptions about traditional natural history museums. In reflecting upon the two hacks discussed in this paper, both of these experiments were about much more than simply updating exhibits—they were about altering the entire experience to facilitate deep engagement, participation, and social interaction.

The Death Lounge did this by inspiring contemplation about corporeal, mortal bodies, as well as a greater appreciation of the limited time we all have on earth—leaving visitors with a sense of something bigger than themselves. Sense and Sensibility did it through manufacturing a quest for more deeply connective encounters with 19th-century glass flowers, resulting in more intense, sensual connections with museum objects. In a very static museum, moreover, both hacks introduced new kinds of movement through the spaces—lounging and mingling, and searching and racing. The hacks moved beyond traditional natural history museum practice to tap into our creative spirits and

connect visitors with each other. While the Death Lounge facilitated experiences *around* the content of the gallery, Sense and Sensibility directed participatory experiences *with* the content. Experiments like these have the potential to break down traditional boundaries, rethink collections, and create new modes of interpretation.

A quote from one of the guest speakers, Juri Ann Miyamae, curatorial assistant at Harvard's Museum of Comparative Zoology, reflects on her passion for building the relevance of natural history museums today, as well as the euphoric atmosphere everyone experienced by the end of the weeklong workshop:

> Natural history museums are a lush reflection of our ideal relationship with Nature and a manifestation of the big questions we ask ourselves. They are also rich reservoirs of history, larger-than-life personalities, meticulous endeavors, and exciting new research. Uncovering these complexities makes me passionate about preserving past and hidden voices as a way of ensuring the dignity of natural history museums into the future.[12]

Museums of all kinds, whether art or science or natural history, have evolved through, and carry with them, a historical legacy that we must examine critically, and move beyond. In the words of Nina Simon, who has long championed museums' need to be more participatory, her desire for the future of museums is to "invite unusual collaborations, to give people a space to test out their craziest dreams, to push professionals to do something quickly, to encourage experimental thinking and prototyping."[13] As exhibition practitioners, we need to examine our own roots—then strive to break down the categories that divide museums from each other and from their publics, rethinking museum spaces, collections, exhibitions, and how they are used.

The vision of "Hack the Museum" was, in the end, not only to simply get more undergraduate students to visit a Harvard museum, but to simultaneously inspire museums everywhere to consider ways they might become laboratories for participatory practice, in the hopes of expanding institutional practice outside of their walls. This article has analyzed two of the resulting installations to reflect upon what might "move" university-age visitors to natural history museums. I believe that when museums are reoriented toward approaching teaching and learning in creative, unorthodox ways, the assets of the institution are illuminated in a different light, and possibilities for reaching new audiences are revealed.

12 "Miyamae, J. A.," accessed October 10, 2015, https://hackthemuseum.wordpress.com/guests/.

13 "Museum Camp 2013," accessed January 15, 2016, http://santacruzmah.org/museumcamp2013/.

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Emily Stokes-Rees is Assistant Professor and Director, Graduate Program in Museum Studies, Syracuse University. ewstokes@syr.edu