



FutureProofing Natural History Collections: Creating Sustainable Models for Research Resources. A report on a workshop held at the Yale Peabody Museum, December 13-15, 2016 **Chris Norris**

Most of the people reading this article will be very aware of the role of museum collections as part of the global infrastructure supporting research in science and humanities. Recent initiatives to digitize and network biocollections across the United States have added much weight to the argument that collections are a macro-scale research facility. But, paradoxically, the majority of the operating costs of this system within the USA are born by non-federal entities, both private and public, which in many cases struggle to meet these costs. As various societal factors, for example the effects of rising health costs and an aging population, put increased pressure on discretionary funding, the need to quantify the value derived from the care and use of museum collections is becoming more urgent.

Most of us are familiar with the common strategies used to advocate for collections-based research. In speaking to the public or legislators, we regularly cite benefits across a wide range of areas of public interest, including human health, education, agriculture, land management, conservation, and national security. The challenge is to find ways to translate the value of collections to the public into financial support for collections, either directly through funding of collections as research infrastructure; through fees or other charges paid by users of the collections and their associated data; or through the development of alternative income streams that harness collections as a resource.

Currently collections are a largely un-monetized system, based on the assumption that most of the benefits derived from collections are intangible. This assumption is no longer tenable, as has been shown in other fields (ecosystem services, for example) where there have been significant advances in building models that transform intangible benefits into quantifiable ones. The abstract, unquantified theory of collections benefits owes more to mid-20th century museum operations, with a limited, discipline-focused user community requiring only physical access to specimens, than to the future aspirations of museums to harness datasets, emerging technologies, and a much wider user community to address broad-based issues of public interest. So futures studies must play a significant role in any effort to develop measures and

models for sustainable collections operations.

In December 2016, a three-day workshop was held in New Haven, CT, to explore some of the issues associated with developing measures and models for sustainable collections operations. “‘Futureproofing’ Museums” was co-organized by the Ecological Society of America, the American Alliance of Museums, and the Yale Peabody Museum of Natural History, and funded by a grant from the National Science Foundation. The purpose of the workshop was to explore how the public value of collections, partly intangible, can be monetized or at least quantified, and to identify how trends affecting collections use, access, and care could inform the development of new models for the financial sustainability of collections. Participants were drawn from a range of collection-holding institutions of different sizes, and reflected a variety of different roles in their institutions, including directors, administrators, curators, education and exhibit specialists, and collection managers.

Taking as its starting point the assumptions about value and support of collections held by participants, James Chung (Reach Advisors) drew on examples from the business world to show how successful organizations with established models of operation, such as Barnes & Noble, Blockbuster, and print newspapers, had failed because their business model had ended up out of synch with market forces. This was contrasted with General Electric, which had evolved from a primarily manufacturing company to one that uses data driven solutions to improve the efficiency and profitability of its products. The take-home message was one of flexibility and adaptability; long-held and apparently stable assumptions about value and support can be rapidly undermined by a changing and unpredictable environment, a timely warning given the current political climate in Europe and America. To ensure their long-term survival, museums may have to let go of some long-held and treasured beliefs about how they should operate.

From there, participants went on to look at the rise of new economies of support. Emily Graslie (Field Museum) described the use of crowdsourcing to support the restoration of a historic diorama of hyenas at the Field Museum. Elizabeth Merritt (AAM) gave a presentation on Benefit Corporations (B Corporations) – organizations whose shareholders judge performance not solely on financial grounds, but also on social and environmental performance – and Low-profit Limited Liability Companies (L3Cs), which allow for investment by non-profit entities in socially beneficial, for-profit ventures. These are mechanisms that might allow for the development of novel funding streams to support collections. Finally, James Chung discussed the growth in venture philanthropy, which applies the techniques of venture capital



finance to achieving philanthropic goals.

Chung also discussed the evolution of culture: from a patronage model where content such as art is available to a limited few (Culture 1.0), via a stage where technology facilitates mass access (Culture 2.0), to the development of content communities, where the ability to create and participate is as valuable as the content itself, and where culture is entrenched in the fabric of daily life (Culture 3.0). These changes are happening across society, breaking down the barriers between producers and users of content. Traditionally, museum collections have been defined by barriers. How will we adapt our business models to reflect and benefit from the opportunities presented by Culture 3.0?

On the second day of the workshop, participants moved on to the bigger question of “who cares?” Led by Emily Graslie and Chris Norris (Yale Peabody Museum), the group brainstormed the questions of who values collections and why? These could then be classified according to the type of support relationship. Was the support transactional, in that the funding provided payment for value that the buyer received, as with provision of consultancy services? Was it a third party transactional relationship where payment is made for a value that someone else receives (such as the government providing a grant to support activities that benefit society)? Was it philanthropic, in that support was being provided for values that align with those of the donor?

These exercises formed the basis for the main activity of the workshop, which was the invention of new economies of support for collections. Workshop participants were divided into groups and each provided with a case study of a different type of collection in a different institution: for example an entomology collection in a state-run agricultural station, a collection of astrophysical data in a large natural history museum, or the archaeological holdings of a university museum. Each collection faced specific issues of staffing, politics, or economy that presented it with distinct challenges; the groups’ task was to develop alternate funding streams to meet these challenges, which were then assessed competitively by the workshop organizers (Merritt, Norris, and Cliff Duke [ESA]). Some of the solutions proposed included provision of consultancy services to fruit farmers; the use of digital scanning and printing to produce high-end, collectible gummy candies based on museum specimens; and, using museum collections as the basis of therapeutic activities for the elderly.

The workshop generated a mass of useful information and feedback which is still being digested by the organizers. A full report will be available later this year.

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