



University Museums and Collections Journal

Volume 4 · 2011





University Museums and Collections Journal

Volume 4 – 2011

The University Museums and Collections Journal (UMACJ) is a peer-reviewed, on-line journal for the proceedings of the International Committee for University Museums and Collections (UMAC), a Committee of the International Council of Museums (ICOM).

The journal appears at least once a year at: http://edoc.hu-berlin.de/umacj

Editors

Nathalie Nyst Réseau des Musées de l'ULB Université Libre de Bruxelles – CP 175 Avenue F.D. Roosevelt, 50 1050 Brussels Belgium

Peter Stanbury
Australian Society of Anaesthetists
Suite 603, Eastpoint Tower
180 Ocean Street
Edgecliff, NSW 2027
Australia

Cornelia Weber Humboldt University of Berlin Hermann von Helmholtz-Zentrum für Kulturtechnik Unter den Linden 6 10099 Berlin Germany

Copyright

© International ICOM Committee for University Museums and Collections http://umac.icom.museum

ISSN 2071-7229

University Museums and Collections as Recorders of Cultural and Natural Communities Worldwide



Proceedings of the 10th Conference of the International Committee of ICOM for University Museums and Collections (UMAC)

Shanghai, China, 7th–12th November 2010

Table of Contents

Enlightening Chinese museums – lessons from university museums Li Huizhu & Fang Hui	1
A survey of university museums in Shanghai and their role in World Expo 2010 LI RONG & ANDREW SIMPSON	5
A preliminary survey of university art museums in Southeast Asia Tan Li-Jen	13
The PSU Museum: Interpretation of peninsular Thailand's nature YINGYOD LAPWONG	19
Besieged! Contemporary political, cultural and economic challenges to museums in the academy as seen from Ann Arbor RAYMOND SILVERMAN & CARLA M. SINOPOLI	27
To touch the past: The painted pottery of the Mimbres people at the Weisman Art Museum, University of Minnesota LYNDEL KING	39
Human remains in museum collections and their restitution to the communities: Museum of La Plata – Argentina GRACIELA WEISINGER CORDERO & MARÍA DEL CARMEN MAZA	47
Turning the museum inside out: The biological sciences at Macquarie University, Sydney, Australia SARA ESTRADA-AREVALO, VICKI MICHAEL & ANDREW SIMPSON	57
Material models as recorders of academic communities: A new project on university collections in Germany Cornelia Weber	65
A special exhibition about research projects – a new form of scientific communication GABRIELE PIEKE	73
POMUI. The web portal of Italian university museums ELENA CORRADINI	77

Enlightening Chinese museums – lessons from university museums

LI HUIZHU & FANG HUI

Abstract

In recent years, with China's economic growth, a rapid expansion in the number and size of Chinese museums can be seen. Unfortunately, the aim of museums to serve communities has not reached the appropriate level. Visitors' participation and recognition need to be improved. In this article we explore the road ahead for Chinese. We suggest ways for Chinese museums raise money, attract more visitors and better serve and engage their interest.

Campus resources available to university museums

As we all know, the development of museums is closely related to financial investment; daily operations such as collecting, displays, exhibition rooms and safe facilities require stable funding. Most Chinese museums are state-owned (over 2,000), while there are only about 300 private museums (about 15%), according to the available incomplete statistics. In Western countries, the number of private museums is up to 40%. In contrast, Chinese museums mainly rely on national or local appropriation. Of course, some museums clearly develop themselves through income-generation from tourism resources. University museums in China have more advantages than others in attracting funds from the community.

Firstly, on institutions: universities are equipped with bodies such as councils, education foundations, and alumni associations. These bodies are set up to attract and integrate external resources, especially financial contributions. But in China today, the majority of general museums are without these special institutions and are dependent on national funding. Secondly, from the social marketing perspective, the social impact and cultural transmission of universities are higher and stronger, and the university museums are important facilities in the campus culture. University museums thus find it easier to catch the attention of donors. In addition, when the university alumni return to their alma mater, they sometimes contribute funding to the museums thus allowing teachers and students to benefit permanently; and the effects of such donations can be clearly seen. For example, the Arthur M. Sackler Museum of Art and Archaeology in Peking University and the Museum of Art and Archaeology in Zhejiang University attract contributions from home and abroad. Our museum in Shandong University also has received financial support from the Youth Foundation established in Taiwan.

Of course, the development of university museums would be greatly restricted without a fixed support from the state budget. In such a situation, their very existence depends largely on how much attention the university decision-makers pay to them. Undeniably, the method and idea of drawing funds from the society to run a university museum has become both useful and popular. With China's economic development, Chinese museums can raise money from the increasingly affluent social environment, lessening dependence on state finance. In order to comprehensively promote their self-development they should set up dedicated bodies to communicate with the outside society both to attract external financing and, more importantly, explain the role and function of museums.

Who visits museums today? Who will in the future?

A museum is a cultural facility, designed mainly to meet the spiritual needs of the audience. With China's economic development, people are gradually moving into the well-off society. However, all is still not perfect, people still pursue material wealth; especially they are concerned about housing,

transportation and other living conditions to meet their immediate needs. Therefore, on the whole, people today are not keenly interested in museums. Instead they seek new friends or scenic and historical attractions. With the improvement of living conditions, tourism has been very popular in China, but visiting a museum is considered by very few.

There has been no significant increase in the number of visitors recent years despite the museums of provincial and municipal offering free entry (with financial support from the government). Clearly, the reason why people do not like to enter museums is not about price or tickets. The reasons are various. Firstly, on living conditions: so far, China's economic life does not allow people to live off the fat of the land so it is hard for them to spare time for just visiting museums for enjoyment. Secondly, a museum is not simply a place for displaying objects; it requires the visitor to have certain knowledge, understanding, aesthetic and other emotions which require some cultural training. This brings stress to the audience that reduces the pleasure of visiting. In other words, the audience's education level is directly proportional to the number of visiting museums. Consider the museums in Beijing, Shanghai and other developed areas, for example: the number of visitors to museums is significantly more than in regional areas in which there are fewer educated people.

Teachers and students make up the majority of the visitors to university museums, who are the highest educated and centralized in society. From the audience statistics of university museums in recent years, it's noticeable that the number of visitors is not only more but also relatively stable, which shows that those who visit and use university museums are more culturally educated than 'ordinary' people. From this trend, it seems that with the popularization and development of Chinese education, the cultural quality of people will be gradually increased; and that more and more people will visit.

University museums have accumulated experience in how to provide considerable services to their audience with certain cultural training. For instance, various seminars are held regularly taking advantage of the variety of professional researchers on campus; activities of different sorts are organized to attract youth full of eagerness for knowledge and liveliness to explore the sources and connotations of museum collections through the interaction between the museum staff and the students. This can change museums into leisure facilities for the youngsters and help them explore the resources available. This is an inevitable future development of museums.

We should also rule out the erroneous view that the low level of cultural quality can be blamed for low visitor numbers. On the contrary, where there is no strong need of museums, the museum staff should overcome it by taking the initiative to find what the audience is really interested in instead of passively waiting for an audience to turn up.

University museums and their community counterparts

Such a trend of museums serving fixed communities leads the development of modern museums, as well as assisting social improvement. The community museum is a brand-new type first developed from the 70s of last century in the West. It's an organization aiming at improving the quality of community residents, increasing their sense of identity and belongingness, and promoting community economic and cultural development by means of collecting, preserving and displaying the historical witnesses which are inextricably and emotionally linked with the local development and natural environmental transition.

Communities not only refer to an area, but also to cultural groups, political groups, as well as single societies, even human society as a whole. Although university museums are different from local museums, neighborhood museums, eco-museums and community museums, they are generally located in a fixed area on campus; so the audience is also more stable, mostly cultured teachers and students. Take the Museum of Shandong University for instance, its collections of artifacts originated

from the archaeological excavations of the department of archaeology, paintings from the collection of retired professors, and the exhibition of university history is about the history of the last century of our school. All these collections have an emotional resonance with our audience. The activities of the museum are all concerned with the entire campus and the faculty, investigating their needs and attracting their participation, in order to promote campus culture.

The concern and research on community museums began in the latter half of 90s of the 20th century. Issues raised at ICOM conferences and the information of museums abroad assisted us to provide service to our communities. Community museums in the West have been in existence for nearly half a century, in Britain, France, Germany, Australia, Japan, Kenya and Morocco. In China, community service has just started.

University museums promote school and campus culture, increasing their sense of pride through paying close attention to developments and changes on campus, centralizing on the faculties, collecting and showing various items and memories closely related to the teachers and students. Such ideas and methods can be used by other museums. There will be more and more community museums in China.

Only by understanding and possessing the knowledge of specific areas and the various factors of living environment, cultural customs and material levels of the residents can the museum usefully plan an appropriate service that will be appreciated and used.

Summary

The points discussed are: favorable terms for the development of the university museum. Colleges and universities generally receive attention from our governments of different levels and society due to the policy of striving to develop education. And the thoughts and practices carried out by university museums indeed are worth learning by all types of museums. However, the public outside the university campuses is generally unaware of the benefits of visiting museums. In the future, to meet the Chinese audience's current and future needs, museums should get inspiration from university museums in how to communicate and make reach out to the surrounding community, analyzing the needs of the potential audience, striving for multiple sources of funding, and generally going further in community service.

Contact

Li Huizhu

Vice Curator, Museum of Shandong University Address: No. 44 Wenhua Xilu, Jinan, P.R.China

E-mail: lhz(at)sdu.edu.cn

Hui Fang

Curator, Museum of Shandong University Address: No. 44 Wenhua Xilu, Jinan, P.R.China

E-mail: fangh(at)sdu.edu.cn

museum.sdu.edu.cn

A survey of university museums in Shanghai and their role in World Expo 2010

LI RONG & ANDREW SIMPSON

Abstract

World Expo is a grand gathering of the world cultures, during which the host city welcomes people from around the world and also takes this significant opportunity to promote its culture and spirit. Besides the new pavilions of participant countries or regions, the existing museums, galleries, theatres, heritage buildings entice visitors from around the globe to explore and learn about cultural diversity and social harmony.

University museums, as an integral part of the cultural scene of any city, can showcase their diversity and project it into this global intellectual and cultural festival. This paper investigates the university museums' role in presenting cultural information and images during the past World Expo and specifically, surveys eleven university museums in Shanghai and examines how they contributed to the Shanghai Expo 2010.

Introduction

In recent times there has been a growing awareness and increasing research on the relationship between cities and their museums (Jones et al. 2008). Much of this has focused on museums that represent and interpret the history of their city to both visitors and local inhabitants. This interest has been driven by increasing global urbanization. Over half the world's population now resides in cities (Prevelakis 2008).

City museums can be the focus of specific cultural events, such as the celebration of milestones and anniversaries, and can also serve specific social purposes (e.g. Galla 1995). The relationship of changing urban demographies has exercised the minds of museum planners. The opportunities for museums to be engaged as part of urban planning, has also been a focus of attention (Grewcock 2006).

University museums, while they may attempt to engage with broader audiences, are primarily responsible to their host academy. The advent of a significant international cultural event such as a World Expo potentially opens up museum spaces, including university museum spaces, to new and significantly expanded audiences. Little has been written on the relationship between cities and their university museums. This paper documents increased activity of university museums in Shanghai as a result of World Expo 2010; it seems reasonable to assume that much of it was due to this major international cultural festival.

Expo 2010 Shanghai is an international event hosted by the Shanghai Municipality. It ran from May 1 to October 31, 2010. The theme was *Better City - Better Life*. As indicated on the website, its goal was to attract the participation of 200 countries and international organizations and 70 million visitors. Obviously, with strong support from the municipality and Chinese central government in terms of infrastructure upgrade, preferential policy, event promotion and personnel support, this goal is likely to be achieved (60 million visitors as of October 8, 2010). This means that Expo 2010 has become such a large-scale world's fair that it surpasses any previous World Expo and therefore represents a most significant cultural, commercial and political event.

Shanghai has undergone profound development in recent years. The website for CAMOC: the International Committee for the Collections and Activities of Museums of Cities notes that in 1980 Shanghai had 121 buildings over eight storys, this had grown to 3,529 by 2000 and 10,045 by 2005.

The city features its own urban planning museum. The centerpiece of the exhibition is a huge scale model of the city of Shanghai, showing all existing and approved buildings. Much of the recent development of city infrastructure positioned it to host a large international Expo.

The Expo attracted millions of local visitors from Shanghai and other parts of China as well as visitors from around the globe, who actively participated in this city-wide celebration. University museums, as an integral part of the cultural scene of Shanghai, had a significant historical opportunity to engage at a new level with local and international audiences through this global intellectual and cultural festival.

University museums in Shanghai initially developed in the 1990s and witnessed rapid development in the new century along with booming economic conditions in China. As a result, in recent years, they seek to expand their roles and serve wider communities.

How have they responded to the challenge and opportunity of Expo 2010? What sort of a contribution to the Expo have they made? Have they utilized this event to promote the museums and their collections by increasing accessibility for the public? How could they come up with a development strategy coping with post-expo circumstances?

With these questions in mind, eleven top university museums in Shanghai were investigated in an attempt to understand their engagement with, and contribution to, Expo 2010 Shanghai and to identify their strategies both during and after this massive international event.

Development of university museums in Shanghai

In 2005, the top ten university museums of national culture were announced by Shanghai Municipality as an initiative to promote cultural education. These included Fudan University Museum, Shanghai



Fig. 1 - Shanghai University, Museum of Traditional Chinese Medicine. Photo: Andrew Simpson

Jiaotong University C.Y. Tung Museum, Maritime East China Normal University Chinese Ancient Coins Museum, Donghua University Chinese Costume Museum, Shanghai University of Traditional Chinese Medicine Museum, Shanghai Ocean University Museum, Shanghai Normal University Ceramics Museum, The Museum of Oriental Musical Instruments affiliated to Shanghai Conservatory of Music, Shanghai Theatre Academy Chinese Traditional Opera Museum and the University of Shanghai for Science and Technology Printing Museum. Later, in 2007, a newly established Shanghai University of Sport Chinese Martial Art Museum was added to the list.

Although for some of these university museums, their collections can be tracked back to the early 20th century, the museums have not been purposefully grown and developed until 1990s. Only at the start of the 1990s did they begin to serve a teaching and research function for their universities. Purposebuilt museums such as Fudan University Museum (1992) emerged. The new century saw rapid development of university museums with the expansion of exhibition areas, the erection of new buildings and the merging of some smaller museums. After 2005 university museums in Shanghai

enjoyed prosperous times. As part of the development plan of municipal education, and the selection of the top ten university museums by Shanghai Municipality, the government committed to provide financial support to these museums on an on-going basis. Starting from 2007, university museums have presented a joint exhibition each year in school summer holidays to the public, which played an important role in publicizing their collections and developing community engagement. The general public thus became more aware of the treasures in the 'ivory towers'.

These eleven museums include three natural science museums and eight of human science. They are diverse in collection and all have unique features based on their academic subject. Please also refer to tables 1 and 2 for data from the survey of eleven university museums in Shanghai.

Among the eight human science museums, Fudan University Museum is well known for its collection of native Taiwanese cultural heritage, the best and biggest of its kind in mainland China. East China Normal University Chinese Ancient Coins Museum displays over 500 well-preserved coins in dynasties as well as oracle bone inscriptions, stone implements, jade objects, bronze ware, gold silver ware, and ancient weapons, etc. Donghua University Chinese Costume Museum, occupying a construction area of 6,700 square meters, has a rich collection in Chinese textile and costumes. Shanghai Normal University Ceramics Museum boasts ceramics collections from prehistoric Ma Jia Culture to Han, Sui, Tang and Ming and Qing Dynasties, covering all the important kilns in the history. Among the collections of The Museum of Oriental Musical Instruments, Shanghai Conservatory of Music, the highlights are an 8000 years old heptatonic bone flute, a bronze idiophone of Han Dynasty and a set of collected bronze bells. Shanghai Theatre Academy Chinese Traditional Opera Museum features a collection of texts, original manuscripts, artworks, performance costumes, archives and audio-video records of Chinese traditional operas. University of Shanghai for Science and Technology Printing Museum focuses on the ancient typography and development of printing in China. Shanghai University of Sport Chinese Martial Art Museum presents history and culture of martial art with artifacts (tools), photographs, videos.

There are three natural science museums. Shanghai Jiaotong University C.Y. Tung Maritime Museum features nautical charts, photographs, archival materials, maritime trade routes and relevant artifacts, reflecting Chinese maritime history. Shanghai University of Traditional Chinese Medicine Museum has more than 15,000 objects and specimens in its unique collection of Chinese medicine. Shanghai Ocean University Museum has a large collection of 40,000 fish specimens, including an 18.4 meters long sperm whale skeleton specimen.

Digitization of collection data and exhibitions has become a strong trend in recent years. In 2001, supported by the Ministry of Education as part of a National Online Education Resources Network - University Digital Museums Project, Fudan University Museum and Shanghai Jiao Tong University Ship Museum launched their digital presence. Shanghai Theatre Academy Chinese Traditional Opera Museum has also developed a sophisticated digital theatre to showcase traditional opera and performance art in China. The rest of the museums use websites to both inform and communicate with potential audiences, with the exception for Shanghai Ocean University Museum which does not have a website.

University museums and World Expo

To respond to the World Expo 2010, university museums have taken the initiative to contribute to the event and promote their traditional culture. As summarized in table 1, most of them made efforts to either provide more or extend existing programs. Some museums have been more active than others. For instance, the Museum of Oriental Musical Instruments has taken a comprehensive and proactive approach and improved all aspects of its service:

- 1. To participate in the one-month long joint exhibition of university museums during World Expo;
- 2. To increase capacity, the museum created a multimedia group guide system, in Chinese and English versions;
- 3. To optimize and update the information retrieval system of world musical instruments;
- 4. To setup a large screen to display musical performance from China and around the world;
- 5. During the World Expo 2010, in addition to normal open hours, the museum was open by appointment on weekends, holidays or evenings;
- 6. Seminars and lectures are now provided to help audiences better understand knowledge and history of musical instruments;
- 7. Musical instrument professionals are available in the museum for any enquiry;
- 8. Chinese traditional musical instrument performances and appreciation programs are provided by appointment.
- 9. On-site tutoring of musical instrument and interactive programs is available.

The above measures fall into four categories: upgrading facilities and systems, improving exhibition content, improving service levels, and improving accessibility.

As a result, visitor numbers have increased and the museum-going experience for visitors is improved. The museum's audience is geographically broader.

University museums are additional cultural sites for World Expo 2010, that supplement the main site developed specifically for the event. They have a great opportunity to present unique, more specialized collections such as oriental musical instruments (as discussed above). This showcases the culture and spirit of the host city, while World Expo brings a diverse international audience to university museums that helps build profile and awareness.

The challenge is that World Expo is a one-off event but university museums are seeking long term development goals. When we look at the approaches of the eleven university museums, we find some strategies that may help achieve long term goals, while others are less likely to have an impact beyond Expo. So a significant question is how to achieve continuous improvement after Expo. The Museum of Oriental Musical Instruments has set a good example.

Summary

By investigating and assessing the efforts and strategies of university museums during World Expo 2010 Shanghai, it is concluded that such large events are opportunities for university museums to improve and promote themselves and they in return are valuable supplementary cultural resources for World Expo. The approaches university museums have taken to contribute can be considered as a catalyst towards their longer term goals, rather than mere stand alone short term opportunities. In conclusion, all university museums should seek opportunities to both contribute to, and benefit from, large national and international cultural festivals.

Literature cited

GALLA, A. 1995. Urban museology: an ideology for reconciliation. *Museum International* 47 (3): 40–45. GREWCOCK, D. 2006. Museums of Cities and Urban Futures: new approaches to urban planning and opportunities for museums of cities. *Museum International* 58 (3): 32–42.

Jones, I., R. MacDonald & D. McIntyre (eds.) 2008. *City Museums and City Development*. Maryland: Alta Mira Press.

PREVELAKIS, G. 2008. City Museums and the Geopolitics of Globalisation. In: *City Museums and City Development*, eds. Jones, I., R. MacDonald & D. McIntyre (Maryland: Alta Mira Press).

Contact

Li Rong

Student, Museum Studies Program (Masters graduate)

Address: Macquarie University, Department of Environment and Geography, NSW 2109, Australia

E-mail: teresalirong(at)gmail.com

Andrew Simpson, PhD

Director, Museum Studies Program

Address: Macquarie University, Department of Environment and Geography, NSW 2109, Australia

E-mail: andrew.simpson(at)mq.edu.au

University museums	Museum type	Feature collection	Facility
Fudan University Museum	Human science/cultural history/folk art	Gaoshan folk culture	1,600sqm, 2-story building with 2 permanent exhibition spaces and 2 temporary exhibit spaces
Shanghai Jiaotong University C.Y. Tung Maritime Museum	Natural science/science & technology/transport	Ship, marine history	600sqm, 2-story building
East China Normal University Chinese Ancient Coins Museum	Human science/cultural history/numismatics	Ancient coins	1,300sqm, two exhibition spaces
Donghua University Chinese Costume Museum	Human science/cultural history & art/textile, costume, folk art	Costume and textile	6,748sqm, 5-story building
Shanghai University of Traditional Chinese Medicine Museum	Natural science/medicine	Traditional Chinese medicine	6,314sqm, 3-story building, plus 9,300sqm of botanic garden area
Shanghai Ocean University Museum	Natural science/ecology	Fish specimens	1,036sqm
Shanghai Normal University Ceramics Museum	Human science/cultural history and art/fine arts, folk art, decorative arts	Chinese ceramics	740sqm
The Museum of Oriental Musical Instruments, Shanghai Conservatory of Music	Human science/cultural history & art/musicology	Oriental musical instruments	1,200sqm
Shanghai Theatre Academy Chinese Traditional Opera Museum	Human science/cultural history & art/musicology, opera	Chinese traditional opera	
University of Shanghai for Science and Technology Printing Museum	Human science/cultural history & art/printing	Printing	1,000sqm
Shanghai University of Sport Chinese Martial Art Museum	Human science/cultural history & art/martial art, folk art	Chinese martial art	2,000sqm

 $\begin{tabular}{ll} Table 1 - Survey of eleven university museums in Shanghai covering museum type, nature of collection and physical capacity. \\ \end{tabular}$

University museums	e-museum	Special programs or approaches during World Expo	Improvement category
Fudan University Museum	Digital museum www.digmus.fud an.edu.cn/	Special tours provided.	Improved service level.
Shanghai Jiaotong University C.Y. Tung Maritime Museum	Digital museum shipmuseum.sjt u.edu.cn/	Special tours provided.	Improved service level.
East China Normal University Chinese Ancient Coins Museum	Website gqbmuseum.ecn u.edu.cn/	Two special public programs provided focusing on numismatics and historical artifacts including group tours and worksheets.	Improved service level.
Donghua University Chinese Costume Museum	Website 202.120.157.10 0/pages/pages2. aspx?page=6&i d=438	Free entry and open 5 days a week from Tuesday to Saturday during World Expo.	Improved accessibility.
Shanghai University of Traditional Chinese Medicine Museum	Website www.shutcm.co m/shutcm/bowu guan/	Provided purpose designed full day special tour and workshop.	Improved service level.
Shanghai Ocean University Museum	No website	 Free entry for children and students; Provided special tours; Provided scientific film viewing; Provided one-week long camp of life sciences for students groups; Quiz designed for visitors with awards for the winners. 	Improved accessibility, service level & exhibition content.
Shanghai Normal University Ceramics Museum	Website bwg.shnu.edu.c n/Default.aspx?t abid=1842	Provided special tours for student groups including museum visits and performance viewing.	Improved service level.

Table 2 - Survey of eleven university museums in Shanghai covering digital presence, additional Expo activities and their classification (Part 1).

University museums	e-museum	Special programs or approaches during World Expo	Improvement category
The Museum of Oriental Musical Instruments, Shanghai Conservatory of Music	Website www.shcmusic.e du.cn/html/dongf angleqibowugua n/bowuguanjianji e/1637801.html	 To participate in the one-month long joint exhibition of university museums during World Expo; To increase reception capacity, the museum created a multimedia group guide system, in Chinese and English version; To optimize and update the information retrieval system of world musical instruments; To setup a large screen to display musical performance from China and around the world; During the World Expo 2010, in addition to normal open hours, the museum is open by appointment on weekends, holidays or off hours including evenings; Seminars and lectures are provided to help audience better understand knowledge and history of musical instruments; Musical instrument professionals are available in the museum for any enquiry; Chinese traditional musical instrument performance and appreciation program are provided by appointment; On-site tutoring of musical instrument and interactive programs. 	Improved accessibility, service level, exhibition content, facilities & information management.
Shanghai Theatre Academy Chinese Traditional Opera Museum	Digital theatre museum www.sta.edu.cn: 8080/xjxy/szbwg /index.jsp	1. Provided two special programs with the theme of art experience and art mysteries, each including sessions of lecture, performance, and interactive experience; 2. Provided incursions to schools with exhibitions, lectures and other programs.	Improved service level, exhibition content & accessibility.
University of Shanghai for Science and Technology Printing Museum	Website ysbwg.sppc.edu. cn/a/benguangai kuang/2009/092 1/4.html	 Special tour about Chinese printing history, including museum visits, questionnaire and knowledge competition; Special program about appreciation of printing artifacts; Special workshop about modern printing technology; Special workshop about traditional engraving printing. 	Improved service level.
Shanghai University of Sport Chinese Martial Art Museum	Website www.wushumus eum.com/cn/	Provided 2-hour special tour including museum visiting, interactive experience, and on-site learning of martial art.	Improved service level

Table 3 - Survey of eleven university museums in Shanghai covering digital presence, additional Expo activities and their classification (Part 2).

A preliminary survey of university art museums in Southeast Asia

TAN LI-JEN

Abstract

This paper presents a preliminary survey of the university museums landscape in Southeast Asia, some of the challenges confronting each of these institutions, and the different curatorial strategies employed in relation to specific needs of each university museum. These issues have not been well documented or discussed. Recent efforts by a group of university museums in Singapore, Philippines, Malaysia and Indonesia to initiate a regional platform where discussions and practices can be exchanged will be discussed in this article. Considering the dramatic growth of museums and their exhibitions in Asia, this initiative acknowledges the need for a network that encourages innovative and sustainable strategies in mobilizing university museum collections and curatorial collaborations.

Introduction

This paper presents a preliminary survey of the university museum landscape in Southeast Asia, outlines the varying histories pertaining to the origins and development of selected museums, identifies some of the challenges confronting each of these institutions and considers the different curatorial strategies employed in relation to specific needs of each university museum. These issues have hitherto not received much attention nor drawn much discussion in the absence of a regional collaborative platform. The impetus for a regional university museums platform first emerged during an exhibition collaboration between the National University of Singapore (NUS) Museum and the Vargas Museum at the University of the Philippines (see below). This led to a conference organized jointly by Vargas Museum and NUS Museum, which was hosted by the former at the University of Philippines, Manila in January 2010.

The 2-day conference titled *Challenges Confronting University Museum Collections and Contemporary Curatorial Practice in Southeast Asia* was a preliminary attempt at mapping the university museums landscape in Southeast Asia, defining the role of university museums, highlighting challenges faced by participating institutions, setting the agenda for future engagements, identifying collaborative strategies that are tailored to fit individual and collective needs, and are, more crucially, based on sustainable and meaningful forms of collaboration and exchange.

Cognizant of the diverse spectrum and histories of university museums in the region, this conference was not designed to compile an exhaustive list of university museums. Participation at this preliminary juncture involved selected representatives from university museums in Indonesia, Malaysia, Singapore and the Philippines. The current (though evolving) focus of the regional network is limited to museums specializing in modern and contemporary art, for example NUS Museum, National University of Singapore (art museum), Muzium & Galeri Tuanku Fauziah, Universiti Sains Malaysia (science and art museum), and, in the Philippines, Vargas Museum, University of the Philippines (art museum), De La Salle-College of Saint Benilde (design & art museum which is a space for students to exhibit their works), De La Salle University (art museum), Ateneo Art Gallery at the Ateneo de Manila University (art museum).

Challenges confronting university museums in Southeast Asia

The issues highlighted and discussed during the Manila conference are the ones pertinent to university museums regionally and internationally. Regardless of functioning within wide-ranging realities and contexts, many university museums grapple with physical and funding constraints whilst constantly working to align and strategically position itself in relation to the university and its aims

(some institutions, in contrast, are only tenuously linked to the university's formal structure). Underscoring the diversity of university museums, some institutions outlined curatorial directions that are consciously integrated into the university's academic programs, and at times, corporate strategies. Others highlighted connections with communities outside the university, on national or international levels, at times threading precariously the dynamics of the art market.

Mapping the university museums landscape in Southeast Asia

The examples below illustrate the university museums landscape in Southeast Asia as well as some of the issues identified in the preceding section.

The University of Philippines (UP) Vargas Museum

The Vargas Museum collection is a bequest from the Philippines' first Executive Secretary Jorge Vargas who left his collection of art, personal papers and memorabilia to his alma mater in 1978. In 1986, the Vargas Museum was built. Its art collection shows the extensive range of Philippine artistic activity. It also has a philatelic and numismatic collection, both of which span the 1880s to the 1960s/1970s. It has more artworks by the country's first national artist, Fernando Armosolo than any other public collection. In addition, the museum has a collection of rare Filipiniana documents, papers, books, journals, newspapers and magazines from the 19th to the 20th centuries. At present, the museum is managed by the office of the Chancellor together with other museum collections owned by the University of Philippines. Each is regarded as a separate entity. The 2010 conference in Manila was funded by the university with a view of coordinating and gathering all the various museums on campus under the direction of a university curator, thereby promoting a more coherent vision and interaction.

Galeri Soemardja, Institut Teknologi Bandung (ITB)

Galeri Soemardja in Indonesia is the oldest university gallery in Indonesia and Bandung, but it has no collection. It was founded, though not funded, by the university as a university gallery in 1974. It functions as a commercial gallery space. The gallery is named after the late Syafe'i Soemardja, one of the architects of art education system in Indonesia. Functioning as an educational complement to the university's department of fine art, Galeri Soemardja was initially a place for the academic circles of ITB to exhibit their works. Currently, it is a place for contemporary art exhibitions; the curatorial strategy is largely organic in function and positioning: students, young emerging artists, and curators are invited to participate in projects relating to exhibition and art programs.

Muzium & Galeri Tuanku Fauziah, Universiti Sains Malaysia (USM)

Muzium & Galeri Tuanku Fauziah is amongst the earliest entities of its kind to be established in a Malaysian university. It combines both sciences and arts under one roof. The conceptual premise of the Muzium & Galeri Tuanku USM is the emphasis on the promotion of a balanced symbiosis between heritage, modern and contemporary art, history of science and technology and the challenges of securing a sustainable development for the future. Muzium & Galeri Tuanku Fauziah USM is also known in Malaysia for its significant collection of modern art. This collection is balanced by contemporary art exhibitions and interactive science and technology exhibitions. Muzium & Galeri Tuanku Fauziah USM also features a collection of various cultural artifacts especially those related to the traditional forms of the performing arts such as *Mak Yong*, *Gamelan* and *Wayang Kulit*. This collection is kept alive through various interactive activities in the form of workshops, demonstrations, performances, short courses and lectures.

NUS Museum, National University of Singapore (NUS)

The history of NUS Museum can be traced back to the establishment in 1955 of the University of Malaya Art Museum at the then University of Malaya (currently the National University of Singapore). It may be regarded as a prototypical museum institution, its historical trajectory and collection reflecting the search for a Malayan identity within the geographical and cultural contexts of Southeast Asia, China and India. Started under the direction of Michael Sullivan, an art historian and the museum's first curator from 1954 to 1960, the museum's collection was instrumental in the teaching and study of art history at the university. The collection was also very much a colonial inheritance, shaped by the politics of decolonization and emergence of the nation. Following the split of Singapore and Malaya and the former's independence in 1965, the museum's collection was divided, half of which went to the University of Malaya in Kuala Lumpur. With the closure of the museum in 1973, the collection was moved to the National Museum until 2002 when the NUS Museum was officially opened. Today, with its collection ranging from classical Chinese and Indian materials to modern and contemporary Southeast Asia art, the museum seeks to remain an integral part of the university. The museum's curatorial emphasis is on bridging the contemporary and historical, with a focus on Asia, particularly Southeast Asia. Exhibitions are conceived to complement and dialogue with the museum's permanent collection, encouraging emerging perspectives relating to art, heritage and culture. Programs and projects are also developed to provide platforms that encourage collaboration between researchers, students, artists and curators.

Collaborations - agenda for future engagements

Following the initial agenda tabled during the Manila conference in January 2010, a follow-up conference was convened and organized in December 2010 by the Muzium & Galeri Tuanku Fauziah in Penang, Malaysia. At this session, the regional grouping and network of university museums was formalized as the University Museums Network Southeast Asia (UMNet).

The regional network will serve as a platform and tool to facilitate discourse and knowledge on the functions and status of university museums. The link between the university and museum affords the university museum space to negotiate a distinct position where it becomes a "site of theoretical exploration and experimentation in its own right, where the dominance of verbal mediation, which characterizes the academy, gives way to a primacy of spatial and sensorial modes of narration and signification" (Reiman). The network also aims to raise the profile of university museums within and beyond hosting universities, engage with existing regional (ASEAN) and international networks (UMAC), develop common tools of engagement such as publications, conferences, curatorial residencies and workshops, develop sustainable and meaningful strategies in mobilizing collections and curatorial interests.

The emphasis on the process of collaboration amongst our university museums is regarded as a process hinging on the desire to establish curatorial strategies sensitive to and contingent upon the particularities of each university museum's history and current position.

A case study: Persistent Visions | Erika Tan

This paper concludes with a case study, *Persistent Visions* | *Erika Tan*, which prompted the initiation of a regional network of university museums in Southeast Asia. One of its aims is to continue collaborations, more specifically, exhibitions drawing reference and adapting from a collaborative framework developed during the conceptualization in 2009 of the *Persistent Visions* was developed by NUS Museum (Singapore) and Vargas Museum (Philippines) in 2009. Erika Tan is a Singapore born, London-based artist. Her 24-minute, three-screen video installation explored the concept of the colonial archive as a site of contestation and power. Presented concurrently in both museum spaces

and contextualized using a selection of each university museum's collection and curatorial interpretation (see fig. 1–6), the project encapsulates a lean, inexpensive, and fluid mode of collaboration that the regional network (UMNet) seeks to continue in the course of its development.







Fig. 1–3 - Persistent Visions was presented at the NUS Museum's Archival Square flanked by the Chinese collection of bronzes and ceramics and archaeological materials from Singapore's Fort Canning. This curatorial strategy prompted intimations towards the 'museum' as an emporium of classifications and taxonomies shaped by varied intents. Gallery impression, Persistent Visions | Erika Tan, NUS Museum, 2009. Photos courtesy of NUS Museum, National University of Singapore



Fig. 4 - Materials from the UP Vargas Museum extend the discourse in Erika Tan's work to the Philippine colonial experience. Two paintings from the art collection respond to the colonizer's gaze towards the colonized. Here in this image: *Picnic in Normandy* by Juan Luna, a Filipino painter trained in the Western academic tradition. Gallery impression, *Persistent Visions* | *Erika Tan*, UP Vargas Museum, 2009. Photo courtesy of Jorge B. Vargas Museum and Filipiniana Research Center, University of the Philippines, Diliman



Fig. 5 - *Day Begins* by Vicente Alvarez Dizon, an artist who received further training in American institutions. Gallery impression, *Persistent Visions* | *Erika Tan*, UP Vargas Museum, 2009. Photo courtesy of Jorge B. Vargas Museum and Filipiniana Research Center, University of the Philippines, Diliman



Fig. 6 - Various images of the American colonial presence in the Philippines as documented in photographs offer a glimpse of how the Americans, as a colonial power, represent themselves through their own gaze to reinforce the idea of the white man's burden. Published in the book *Our Islands and their People as Seen with Camera and Pencil* by Jose de Olivares (Saint Louis: N. D. Thompson Publishing, 1899), these images serve as vivid journals of the West's encounter with the Orient. Gallery impression, *Persistent Visions* | *Erika Tan*, UP Vargas Museum, 2009. Photo courtesy of Jorge B. Vargas Museum and Filipiniana Research Center, University of the Philippines, Diliman

Literature cited

REIMAN, C. K. A Museum or a Centre for Mexican Contemporaneity? <u>globalartmuseum.de/site/publication1_text4</u> (accessed September 14, 2011).

Contact

Tan Li-Jen

Manager of Outreach and Programmes at NUS Museum, National University of Singapore Address: NUS Museum, University Cultural Centre, 50 Kent Ridge Crescent, Singapore 119279

E-mail: tanlijen(at)nus.edu.sg www.nus.edu.sg/cfa/museum/

The PSU Museum: Interpretation of peninsular Thailand's nature

YINGYOD LAPWONG

Abstract

The PSU Museum, officially named the Princess Maha Chakri Sirindhorn Natural History Museum is part of the Prince of Songkla University in Southern Thailand. The history of the museum's collections is briefly documented. They originally developed to support the university's teaching programs in the biological sciences, but have undergone rapid growth in recent years in support of biodiversity research in the region. The scope of the museum's collections and associated outreach and educational programs are outlined. Administrative arrangements for the museum are analyzed. It is argued that professional museum staff members are required to augment the scientific expertise of the museum.

History

Most of biological collections in universities are generally responsive to teaching activities in their biological departments (KRISHTALKA & HUMPHREY 2000). Accordingly, the Department of Biology, Faculty of Science, Prince of Songkla University (PSU) has established biological collections of plants and animals to support its teaching programs. These collections have been giving students opportunities to learn by handing real objects, and, thus, providing a more effective object-based pedagogy. Moreover, biological collections provide resources not only for principle biology but also for taxonomy, systematics, and other branches of biological science (LANE 1996). Currently, PSU students from nine faculties, in Hat Yai campus, relating to natural and health sciences have to take at least one biological subject as part of their degree programs. The number of these students accounts for more than half of all students in campus. So, the biological collections of the department have continuously grown in order to support teaching activities of the growing university. In addition, there is a collection of rocks and minerals which was donated by the Department of Mining Engineering, Faculty of Engineering. In 1994, all biological collections and the geological collection was eventually merged and established in the Faculty of Science as the Natural History Museum of Prince of Songkla University (PSU Museum). Later on 14 January 2008, it was renamed the Princess Maha Chakri Sirindhorn Natural History Museum.

Although the biological collections were primarily used as teaching materials, the current main objective is actually to be reference collections in support of research activities at the Department of Biology and the Centre of Biodiversity of Peninsular Thailand (CBIPT), Faculty of Science, PSU. These three organizations – the museum, the department and CBIPT – collaborate in many research projects. Amongst these projects is the Plant Genetic Conservation Project under the Royal Initiative of HRH Princess Maha Chakri Sirindhorn. While many university museums are facing financial problems due to the research bias towards molecular biology (GROPP 2003), the biological science collections of the Department of Biology have fortunately continued to expand, because of the department's emphasis on biodiversity research, which benefits greatly from the existence of the biological reference collections (PONDER ET AL. 2001). The collections of particular organisms have, therefore, been expanded due to these research activities.

The plant collection, which later became the herbarium, was established in 1970 as a result of the Plant Taxonomy subject. In 1975, Professor Jack Cannon from Western Australia University visited PSU, and studied on flora of Southern Thailand. Then, he deposited voucher specimens from his research to the herbarium. Since 1978, the herbarium has gradually continued to increase in size, thanks to the financial aid of the World Bank and the pioneer contribution from the late Professor

Kasin Suvatabhandhu of Chulalongkorn University. Also, Gordon Congdon and Clement Hamilton from Harvard University had volunteered in the herbarium between 1978 and 1979. With the assistance of James F. Maxwell who joined the herbarium between 1984 and 1986, the herbarium reached the milestone of 7,000 specimens and was registered an international herbarium in 1987 as the PSU Herbarium. Then, further specimens of higher plants, fungi, lichens and seaweeds were registered in the collections during 1990s and 2000s, adding the number of specimens up to over 25,000. The PSU Herbarium was one of the very first registered international herbaria in Thailand, along with the Forest Herbarium (BKF) and the Bangkok Herbarium (BK). These three herbaria are part of the Plant Genetic Conservation Project. At present, the PSU Herbarium is curated by Assoc. Prof. Dr Kitichate Sridith, who succeeded the retired Prof. Puangpen Sirirugsa in 1999 (SATASOOK & LHEKNIM 2008).

The current faunal collections were also established as a result of teaching activities and research. Since the Department of Biology was founded, there have been excursions to collect faunal specimens every year as part of most zoological courses. As a center of biodiversity studies in Southern Thailand, many research projects also added up the number of specimens. In addition, local people and institutes have donated or sold some specimens to the museum, so that they will be on display to the public. However, unlike the floral collection, each faunal collection had been developed independently, causing the collections to be heterogeneous. The variation of the collections is limited by specializations of the department's lecturers and researchers. As a result, only particular groups of fauna are focused, whereas some others are poorly studied and collected.

Administration

In the beginning, as part of the Faculty of Science, the Princess Maha Chakri Sirindhorn Natural History Museum was reported to the dean of the Faculty. In early 2010, it became an independent unit of the university. This situation is uncommon for most university museums which usually are operated under jurisdiction of the departments. Still, at the moment, all activities are to be inspected and assisted by the Faculty of Science. The museum is currently directed by Assoc. Prof. Dr Chutamas Satasook, Dean of PSU Faculty of Science.

The Princess Maha Chakri Sirindhorn Natural History Museum is one of very few active natural history museums in Thai universities. Most university museums only function as exhibition and storage areas, overseen by departmental lecturers. They are only opened for visitors on special occasions. Additionally, active collections used in research usually belong to academic departments, without registration in forms of museum collections or database. By contrast, there are seven full-time members of staff working in the museum. However, due to the administration system of the university, there is no official position of curator or manager at present. The museum plans to recruit six more posts by 2013. Volunteering is not common for most museums in Thailand, although it usually plays a significant role in several activities at the museums. Realizing such an importance, the museum regularly conducts volunteer programs. There are both paid and unpaid volunteers, the majority of which is from the Faculty of Science. Local residents and high-school students also join the programs. It is possible for the volunteers to work in both reference collection and exhibition sections. Those who work in the reference collection are supervised by researchers with specialized knowledge of each collection. They mainly work on specimen preparation and putting data into database. Those who work in the exhibition sections are trained to have enough knowledge concerning the exhibition contents and skills to present them efficiently. The main responsibility of these volunteers is to guide visitors through the museum's exhibitions, especially in some special occasion, such as Thailand's National Science Week organized yearly by the Faculty of Science in August. Previously, the first and the second batches of volunteers were instructed by staff members from the National Science

Museum. However, the museum has recently trained the volunteers itself based on instructions of the National Science Museum and with the aid of volunteers from previous batches.

The museum's governing committee comprises two groups of members, namely 'researchers' and 'support officers and technicians'. Most of them are from the Department of Biology and CBIPT in the Faculty of Science. As there is no full-time curator at the moment, the collections have been cared for by the researchers from nine research units within CBIPT that, albeit an independent entity, collaborates with the museum. These nine units are:

- Seaweed and Seagrass Research Unit
- Plankton Research Unit
- Coral Reef and Benthos Research Unit
- Bat and Barn Owl Research Unit
- Insect Research Unit
- Flora Research Unit
- Paleobotany Research Unit
- Cephalopod Research Unit
- Amphibians and Reptiles Research Unit

The research conducted by these units are likely to focus on the biodiversity of all ecosystems in upper Malay Peninsula, even though CBIPT scope of study covers all parts of Thailand and her neighboring countries.

Financially, the museum has been supported by the Office of the Higher Education, Faculty of Science, PSU and the royal Plant Genetic Conservation Project. The admission fee and souvenir sales do not contribute significant income to the museum. The fee itself is low, and the museum does not have a museum shop. Souvenirs are available from the administration office. However, the museum is developing the membership program and the friends of museum program which encourage people and companies to support the museum.

The Princess Maha Chakri Sirindhorn Natural History Museum has collaborated with several institutes, both domestic and international, aiming to exchange knowledge and professionals in research and education. The domestic institutes include some universities in Thailand, Ministry of Natural Resources and Environment, and the National Science Museum. The international institutes collaborating with the museums comprise several universities in Europe and Asia, the Royal Belgium Institute of Natural Science, the Kew Botanic Garden (in London), the Harrison Institute, the Raffle Museum, the Field Museum (in Chicago), and the Hungarian Natural History Museum.

Collections

The Princess Maha Chakri Sirindhorn Natural History Museum houses more than 50,000 specimens of over 6,000 species of organisms – including plants, animals, fungi and protists – more than 70% of which are from Southern Thailand. The collections are mostly the results of teaching and research activities. Nevertheless, some collections have been developed and improved as a result of workshops held by the museum or the department. There are few numbers of purchased and donated specimens.

The PSU Herbarium has documented more than 25,000 specimens of about 1,500 species of plants. Furthermore, there is a small collection of fungi and lichens deposited in the herbarium. Most of the plant specimens, especially higher plants, are conserved in the form of herbarium sheets. Fungi and lichens were air-dried and placed in envelopes. These dry specimens are grouped in families and stored in cabinets in a temperature-controlled room to avoid humidity and germs. However, some

specimens are preserved in alcohol to aid research. There are five type specimens of higher plants and one type specimen of fungi kept in this collection (XU & BURTT 1991; CHANTARANOTHAI & PARNELL 1993; SRIDITH 1999; PETCHARAT 2003; MAKNOI & JENITTIKUL 2006).

The Seaweed and Seagrass Research Unit is responsible for caring the collection of seaweeds. This collection preserves 142 from 326 algal species in Thailand (COPPEJANS ET AL. 2010), making it a very comprehensive collection of this kind. Additionally, there is a small collection of fossils, consisting of 178 specimens of unidentified plant species.

There are estimated 25,000 specimens of 4,500 faunal species in the museum. The fauna collection has a considerable number of invertebrate specimens due to their abundance in nature. Also, more than half of zoological researchers in the department work on invertebrate zoology. Some significant faunal collections include corals, crustaceans, planktons, molluscs, insects, fishes and bats. The coral collection has 200 of the 428 coral species found in Thai waters (SPALDING ET AL. 2001). They have previously been cleaned and preserved as dry specimens. Their exoskeletons are stored in plastic boxes to protect them from dust and physical damage. Most of these specimens have been collected from southern Thailand by CBIPT researchers.

The crustacean collection is significant as it contains five type specimens (ANGSUPANICH 2001; ANGSUPANICH 2004; LEELAWATHANAGOON ET AL. 2005; LEELAWATHANAGOON ET AL. 2010). The collection owns more than 1,000 specimens of over 400 crustacean species, most of which are preserved in formalin, before being transferred to alcohol. Formalin was widely used as preservative solution, because of its great fixative ability. However, due to strong health concerns, upcoming specimens will be fixed with formalin before transferred to preserve in alcohol to reduce toxicity.

The crustacean collection overlaps with the plankton collection because some plankton species are crustaceans. However, they are administered by two different research units. There are 67 specimens of 37 zooplankton species kept as wet specimens and mounted slides; mostly rotifers and cladocerans. Two of these specimens are type specimens of a rotifer (CHITTAPUN ET AL. 2003). None of phytoplankton is registered.

The mollusc collection includes 3,300 specimens of over 80 species. Most bivalves and gastropods are kept as shells. A sub-collection of about 2,000 formalin-preserved cephalopod specimens has been developed recently. However, they are currently being identified.

The insect collection is the largest zoological collection in the museum in terms of the number of species. There are approximately 2,000 species of insect preserved as pinned specimens. Insect identification is still problematic, due to a very large number of species and specimens found. As such, the final count of the quantity was still incomplete. In this collection, there is an attractive sub-collection of butterflies. This sub-collection is considered one of the largest in Thailand with 12,000 specimens of 850 species, accounting for 67% of the 1,291 species found in Thailand (EK-AMNUAY 2007). In addition to invertebrate collections, there is a small collection of echinoderms.

Although another majority of invertebrates is worm phyla, especially annelids, the collections of these fauna have not been developed yet. The teaching samples of worm phyla are collected every year but they could not be registered to a collection, as they require special methods of collection and preservation.

Fishes are the major component of the vertebrate collections, with more than 3,000 specimens preserved in formalin. Froese and Pauly (2011) assert that 2,191 species of fish, both native and introduced, are found in Thailand. The PSU Museum houses about 40% of these known species, i.e. more than 880. Another comprehensive vertebrate collection is the bat collection. Although there are

268 species of mammals in Thailand, almost half are bats with 119 confirmed species (BUMRUNGSRI ET AL. 2006). This faunal collection of the museum contains 84% of bat species in Thailand. The number of specimens in this collection reaches 1,600 of 100 species. In fact, this collection includes several unpublished new species and new records in Thailand. In terms of preservation, some specimens are in alcohol and some specimens are stored in the form of skulls or skins. This collection is the only collection which preserves tissue for molecular genetics purposes. Other than fishes and bats, the museum houses a small number of other vertebrates, including amphibians, reptiles, birds and small mammals. Lastly, several animal fossils are also present in the collection.

Collection	Number of specimens	Number of species	Number of species found in Thailand	% of species found in Thailand
Coral	Counting	200	428 ¹	44%
Crustacean ²	2,000	400	n/a	n/a
Plankton ²	67	37	n/a	n/a
Mollusc	3,300	Identifying	n/a	n/a
Bivalve & Gastropod	1,300	400	n/a	n/a
Cephalopod	2,000	Identifying	n/a	n/a
Insect	Counting	2,000	n/a	n/a
Butterfly	12,000	850	1,291 ³	67%
Echinoderm	200	50	381 ⁴	13%
Fish	3,000	880	2,191 ⁵	40%
Amphibian	426	35	141 ⁶	25%
Reptile	120	53	325 ⁷	16%
Bat	700	100	119 ⁸	84%
Plant	25,000	1,500	15,000 ⁹	10%
Algae	2,000	142	326 ¹⁰	43%
Fossil	203	Identifying	n/a	n/a
Plant fossil	178	Identifying	n/a	n/a
Animal fossil	25	Identifying	n/a	n/a
Total	50,000	6,000		

Table 1 - The approximate number of specimens and species in some collections in the Princess Maha Chakri Sirindhorn Natural History Museum in comparison to the diversity of fauna and flora in Thailand (as of 2010).

Unfortunately, the museum lacks for a professional taxidermist. There are a few taxidermic specimens on display, but none of them has been registered in any collection. Furthermore, the donated rocks and minerals, both on-display and in-store, have yet to be registered. Gemstones are not currently exhibited due to the limitation of security system. It is, therefore, essential for the museum to establish more collaborations with other institutes, such as the Department of Mining Engineering, Faculty of Engineering. Moreover, anthropological collection and exhibition should be developed to encourage learning on other natural history topics. It is suggested that the museum should recruit a museologist

¹ SPALDING ET AL. 2001.

² The species of crustacean and plankton are overlap.

³ EK-AMNUAY 2007.

⁴ PUTCHAKARN & SONCHAENG 2004.

⁵ FROESE & PAULY 2011.

⁶ CHAN-ARD 2003.

⁷ NABHITABHATA ET AL. 2000.

⁸ BUMRUNGSRI ET AL. 2006.

⁹ OFFICE OF ENVIROMENTAL POLICY AND PLANNING (OEPP)1992.

¹⁰ COPPEJANS ET AL. 2010.

who is independent from research activities to act as a collection manager. Hopefully, the policy to get more staffs would fill these gaps.

Exhibitions and outreach

The museum occupies a three-storied building in the PSU Hat Yai campus, to house its permanent exhibitions. The exhibition area is divided into four main sections, entitled (1) *Origin of Earth and the Geological Time Scale*, (2) *Temporary Exhibitions*, (3) *Diversity of Life*, and (4) *Ecosystems*. All exhibitions focus more on peninsular Thailand. There are several techniques of display. The *Origin of Earth*, the *Geography of Thailand*, and the *200 years of Darwin* are displayed as poster-based exhibitions. The *Rocks and Minerals*, the *Fossils*, and the *Diversity of Life* display real objects. In some cases, models are preferable for safety and convenience. For example, fish models are used, since most fish specimens are preserved in hazardous formalin. The *Amazing Nature*, which is a temporary exhibition, employs interactive displays to attract audiences' attention and interest. Similar to many museums, dioramas are set in the exhibition area to show objects in simulated environment, as found in the *Carboniferous Forest* and the *Ecosystems*. Since the opening in 2008, the museum has welcomed more than 40,000 visitors each year.

The museum also provides several outreach and educational programs, including youth camps, workshops, volunteering, research support opportunities, and other special events. Every year, the museum organizes at least one youth camp for students from the local area to develop their interest in conservation through activities in the camps. Occasionally, the museum hosts workshops, particularly on taxonomy and conservation. Moreover, students from PSU, local schools, and local residents can also join the museum as volunteers. However, unlike western countries, the museum does not have any retired professor volunteering. Besides, students and researchers from around the world are also able to access to the collections, and use them as a resource for their study and research. The museum also aims at acting as the community center for the learning of natural history. There are some events, such as the National Children Day and the National Science Week, which allow free admission to the museum. There are some activities that aim to assert indirectly the importance of science and biology, including science shows, games, and competitions. Recently, the museum together with the municipality and local schools has established a program promoting the protection of the woodland behind PSU. It is expected that this will be a tool for natural study for locals, especially those in younger generations.

Issues for consideration

The museum also has several problems, one critical of which concerns the database. The museum does not have a universal database, because each of its collections has been established and cared for by different research units. So, the types of data set are unmatched. The museum has begun to develop a self-written database software for all collections, but this will take time to complete. Despite the attempt to create such a universal database, the process is very slow, because of the large number of specimens, both registered and registration-awaiting. Another reason that slows the progress in completing the database is the different data sets that require amalgamation that will still allow for the development of further research. For example, the bat database requires a data set of bat vocalizations, whereas the plankton database requires a data set of electron microscope photography. In this case, an additional professional collection manager may help create a system and integrate all databases together.

Another problem is the lack of knowledge about museum organization. This hinders the organization from functioning as a whole. Most of the personnel involved in this museum are from scientific backgrounds. This is beneficial to the museums in terms of collection maintenance. However,

management and other relevant aesthetic issues regarding displays are poorly developed. Some exhibitions contain very competent content, but fail to attract audiences, while some are too difficult for children – the majority of visitors – to follow. Some specimens on display are vulnerable because of unsuitable environments, such as too strong light or too high temperature. Knowledge of marketing and public relations is also needed. The museum still depends upon government support, because it could not be operated merely by its current level of self-generated income. At present, because of university policy, it is not likely that the museum will be able to recruit a collection manager. As mentioned before, few museums in Thai universities are administrated as an independent unit. So, the Office of the Higher Education does not have any measure to support university museums. Therefore, such positions as curators or collection managers do not exist in the university's administration structure. Unless this policy can be reversed, then training existing personnel on museum management and other relevant issues is essential for long-term development of a sustainable museum. Thus, the museum needs to encourage the university to consider about this issue.

Acknowledgements

Many thanks are dued to Dr Andrew Simpson and all lecturers in the Museum Studies Program, Macquarie University for advice; and to all staff member at the Princess Maha Chakri Sirindhorn Natural History Museum for provisions. Special thanks to Mr Chirabodee Tejasen for comments on the language use.

Literature cited

- ANGSUPANICH, S. 2001. A new species of Pagurapseudopsis (Tanaidacea, Pagurapseudidae) from Songkhla Lake, Thailand. *Crustaceana* 74 (9): 871–882.
- ANGSUPANICH, S. 2004. A new species of Longiflagrum (Tanaidacea, Parapseudidae), from Songkhla Lagoon, Thailand. *Crustaceana* 77 (7): 849–860.
- BUMRUNGSRI, S., D. L. HARRISON, C. SATASOOK, A. PRAJUKJITR, S. THONG-AREE & P. J. J. BATES. 2006. A review of bat research in Thailand with eight new species records for the country. *Acta Chiropterologica* 8 (2): 325–359.
- CHAN-ARD, T. 2003. Amphibians in Thailand. Bangkok: Dan Suttha Printing Co., Ltd. [in Thai].
- CHANTARANOTHAI, P. & J. PARNELL 1993. New taxa and combinations in Cleistocalyx and Syzygium (Myrtaceae) in Thailand. *Kew Bulletin* 48 (3): 589–610.
- CHITTAPUN, S., P. PHOLPUNTHIN & H. SEGERS 2003. Contribution to the knowledge of Thai microfauna diversity: notes on rare peat swamp Rotifera, with the description of a new Lecane Nitzsch, 1872. *Hydrobiologia* 501: 7–12.
- COPPEJANS, E., A. PRATHEP, F. LELIAERT, K. LEWMANOMONT & O. DE CLERCK 2010. Seaweeds of Mu Ko Tha Lae Tai (SE Thailand) Methodologies and field guide to the dominant species. Bangkok: Biodiversity Research and Training Program (BRT).
- EK-AMNUAY, P. 2007. *Butterflies of Thailand. Fascinating insects.* Vol. 2. (1st edition). Bangkok: Amarin Printing and Publishing Public Co., Ltd. [in Thai].
- FROESE, R. & D. PAULY (eds.) 2011. FishBase. www.fishbase.org (accessed September 14, 2011).
- GROPP, R. E. 2003. Are university natural science collections going extinct? *BioScience* 53 (6): 550.
- KRISHTALKA, L. & P. S. HUMPHREY 2000. Can natural history museums capture the future? *BioScience* 50: 611–617.
- LANE, M. A. 1996. Roles of natural history collections. *Annals of the Missouri Botanical Garden* 83 (4): 536–545.
- LEELAWATHANAGOON, P., V. LHEKNIM & P. K. L. NG 2005. On a new species of freshwater crab of the genus Johora (Brachyura, Potamidae) from peninsular Thailand. Crustaceana 78 (1): 59–66.

- LEELAWATHANAGOON, P., V. LHEKNIM & P. K. L. NG 2010. On a new species of freshwater crab of the genus Terrapotamon (Brachyura, Potamidae) from peninsular Thailand. *Crustaceana* 81 (1): 49–59.
- MAKNOI, C. & T. JENITTIKUL 2006. A new species of Curcuma L. (Zingiberaceae) from Southeast Asia. *Gardens' Bulletin Singapore* 58 (1): 41–45.
- NABHITABHATA, J., T. CHAN-ARD & Y. CHUAYNKERN 2000. *Checklist of Amphibians and Reptiles in Thailand*. Bangkok: Office of Environmental Policy and Planning (OEPP).
- OFFICE OF ENVIRONMENTAL POLICY AND PLANNING (OEPP) 1992. *Thailand Country Study on Biodiversity*. Bangkok: Ministry of Science, Technology and Environment.
- PETCHARAT, V. 2003. Edible Astraeus (Basidiomycota) from Thailand. *Nordic Journal of Botany* 23 (4): 499–503.
- PONDER, W. F., G. A. CARTER, P. FLEMONS & R. R. CHAPMAN 2001. Evaluation of museum collection data for use in biodiversity assessment. *Conservation Biology* 5 (3): 648–657.
- PUTCHAKARN, S. & P. SONCHAENG 2004. Echinoderm fauna of Thailand: History and inventory reviews. *ScienceAsia* 30: 417–428.
- SATASOOK, C. & V. LHEKNIM (eds.) 2008. *Princess Maha Chakri Sirindhorn Natural History Museum.* Hatyai: Faculty of Science Press, Prince of Songkla University [in Thai].
- SPALDING, M. D., C. RAVILIOUS & E. P. GREEN 2001. World Atlas of Coral Reefs. Prepared at the UNEP World Conservation Monitoring Centre. Berkeley: University of California Press.
- SRIDITH, K. 1999. Argostemma fasiculata (Rubiaceae), a new species from Cambodia. *Nordic Journal of Botany* 23 (2): 169–171.
- XU, Z. R. & B. L. Burtt 1991. Towards a revision of Paraboea (Gesneriaceae): I. *Edinburgh Journal of Botany* 48 (1): 1–18.

Contact

Yingyod Lapwong

Princess Maha Chakri Sirindhorn Natural History Museum, Prince of Songkla University, Hatyai,

Thailand

Master student, Macquarie University, Museum Studies Program

Address: Macquarie University 2109 NSW, Australia

E-mail: psu.museum(at)yahoo.com www.nhm.psu.ac.th/museum_en/

Besieged! Contemporary political, cultural and economic challenges to museums in the academy as seen from Ann Arbor-

RAYMOND SILVERMAN & CARLA M. SINOPOLI

Abstract

In this article, we discuss some recent experiences of two museums at the University of Michigan. We use these cases – of the removal of Native American dioramas from the Exhibit Museum of Natural History and of responses to repatriation by the Museum of Anthropology – as a lens through which to examine the challenges, and the potentials, of university museums. We begin by describing the museums within the broader framework of museum culture at the University of Michigan, and the recent financial and organizational challenges they have faced. Moving from these structural challenges, we shift to debates about the content and missions of two museums that in somewhat different ways are each involved in disputes over culture and ownership. We explore how each museum has responded to these disputes and how each has interacted with multiple stakeholder communities, both within and beyond the university. We conclude by suggesting that the conflicts themselves are productive and that university museums can play important roles in engaging students, researchers, descendent communities, and the larger public in discussions of complex ethical and cultural issues.

Introduction

University museums throughout North America have faced profound challenges over the last decade. Many are dealing with budget cuts associated with the economic recession. Some have been forced to close their doors. Others have experienced threats to their collections as universities and state legislatures have sought to sell collections in whole or in part to address budget shortfalls. The most extreme and celebrated recent case in the United States was the thwarted attempt by Brandeis University to sell the collections of its Rose Art Museum to raise funds for the university (Kennedy & Vogel 2009). More recently, the University of Iowa Museum of Art has been pressured by members of the Iowa legislature to sell its most valuable acquisition, a Jackson Pollock painting titled *Mural* to support student fellowships (Pogrebin 2011). University science museums have not been spared these pressures and, in fact, may be even more endangered as a result of changing scientific research priorities and increasing emphasis on molecular research over studies of the whole organism (see MACDONALD & ASHBY 2011).

In this article, we address recent experiences of some museums at the University of Michigan. Overall, these are far more positive than the examples cited above, as the university's central administration recognizes and values the contributions of its many museums to the intellectual and cultural life of the institution. Nonetheless, significant challenges exist. The sources of these challenges vary: some derive from the organizational and reporting structure of individual museums; others from the nature of the collections they curate and/or exhibitions they present.

After providing some general background on the University of Michigan museums, we explore these issues in more detail, by addressing recent challenges faced by two of our university museums: the Exhibit Museum of Natural History and the Museum of Anthropology. We focus on how each museum has addressed issues concerning politically sensitive exhibitions and collections and examine how each has interacted with diverse stakeholder communities within and beyond the university. For the

[•] The views expressed in this article are the views of the authors and do not necessarily reflect the views of the University of Michigan administration, or the various stakeholder groups and individuals referenced in the paper.

Exhibit Museum of Natural History, we consider the events that led to the removal of one of the museum's most enduring and popular exhibitions: historical dioramas depicting the lives Native Americans.¹ In the Museum of Anthropology, we address recent issues around repatriation and compliance with the Native American Grave Protection and Repatriation Act (NAGPRA).

Neither of these examples fully represents the breadth or diversity of these two museums or the varied communities they serve. However, both have been sites of controversy and high emotion on the University of Michigan campus, and both provide a forum for the larger issues that we wish to address in our conclusions, specifically, the intellectual, and political, currents that can affect university museums and their diverse stakeholders; and, even more significantly, the potential role that university museums can play in encouraging our students to engage difficult and complex ethical, historical, and intellectual issues. Thus, while the title of our article reflects a powerful dimension of the experiences of these situations and their larger contexts – that of feeling 'besieged' – we ultimately end on a positive note, advocating that university museums provide 'ideal' venues for productive engagement of difficult issues, and as such play a core role in the educational mission of a university.

Background: Museums at the University of Michigan

The University of Michigan was founded in Detroit, Michigan in 1817 and moved to its home in Ann Arbor in 1837. On the day that the Ann Arbor campus was formally created by the Michigan state legislature, the legislature also authorized the creation of a 'Cabinet of Natural History' at the university (RUTHVEN 1929, 3). Over succeeding decades, the cabinet was transformed into 'The University Museum', and in 1881 the growing collections were shifted from basement closets and faculty offices to the campus' first formal museum building. Today, as many as twelve University of Michigan museums (depending on how one defines a museum) trace their origins to this early vision (see table 1). Some are primarily dedicated to exhibition and public programming (i.e., the Exhibit Museum of Natural History), others lack exhibition space and instead curate large scientific collections that support the research activities of faculty-curators, students, and visiting scholars (i.e., the Museums of Anthropology, Paleontology, Zoology, the University Herbarium); and a few balance exhibition and research (the Kelsey Museum of Archaeology, the Museum of Art, the Nichols Arboretum and Matthaei Botanical Garden). As university museums, all seek to engage undergraduate and graduate students, the larger university community, and diverse publics in their activities, albeit to widely varying degrees.

The University of Michigan museums reside in various administrative homes (table 1).

Museum		Primary Mission	Reports to
1.	Exhibit Museum of Natural	Exhibition andoutreach	Associate Dean of Undergraduate
	History		Education, College of Literature,
			Science and the Arts (LSA).
2.	Kelsey Museum of	Exhibition and research	Dean of LSA
	Archaeology		
3.	Herbarium	Research and collections	Chair of Department of Ecology
			and Evolutionary Biology
4.	Museum of Anthropology	Research and collections	Dean of LSA
5.	Museum of Paleontology	Research and collections	Dean of LSA
6.	Museum of Zoology	Research and collections	Chair of Department of Ecology
			and Evolutionary Biology

¹ We'd like to thank the director of the Exhibit Museum of Natural History, Amy Harris, for giving us permission to include photographs of the dioramas in this paper.

-

7.	Museum of Art	Exhibition and research	Provost
8.	Matthaei Botanical Gardens	Exhibition and research	Provost
	and Nichols Arboretum		
9.	Sindecuse Museum of	Exhibition and historical	Dean, School of Dentistry
	Dentistry	collections	
10.	The Detroit Observatory	Exhibition	Director, Bentley Historical Library
11.	Stearns Collection of	Collections and Exhibition	Dean, School of Music
	Musical Instruments		
12.	The Virtual Museum	Digital exhibitions and	Museum Studies Program
		research	

Table 1 - University of Michigan Museums²

The Museum of Art and Matthaei Botanical Garden and Nichols Arboretum (MBGNA) report directly to the university's highest academic and budget officer, the university Provost. The Kelsey Museum, Exhibit Museum of Natural History, and two of the four research museums – the Museum of Anthropology and Museum of Paleontology – report to the dean of the College of Literature, Science and the Arts (LSA), the university's liberal arts college, which serves more than 18,000 undergraduate students. Until July 2010, the other two natural science research museums – the Museum of Zoology and University Herbarium – also reported to the college dean. However, in a reorganizational move – that we find problematic and troubling (see below) – they have recently been absorbed by one of the college's departments, and now report to the chair of the Department of Ecology and Evolutionary Biology (EEB).

The diverse reporting lines that exist among the university museums play out in similar ways across the United States, though perhaps not often with so many variants at a single institution, and the 'ideal' reporting line for university museums is a frequent topic of university museum discussion lists (e.g., the listserv of the Association of Academic Museums and Galleries) and surveys. At Michigan, these reporting lines place the museums in dramatically different structural and budgetary positions within the university. The museums that report to the Provost have, in principle, the ear of the highest level of the university administration and their placements outside of the university's 19 academic colleges formally recognizes that they exist to serve both the entire campus and the larger community of Southeastern Michigan. Yet the Provost has much larger concerns than the needs of individual museum directors, and the museums risk not receiving adequate attention. Further, by not being closely tied to academic departments, these museums may struggle to remain connected to the larger intellectual mission of the university and must actively work to engage faculty and student priorities.

Curators in most of the museums within the College of LSA (and EEB) have half-time curatorial appointments in their respective museum and half-time faculty appointments in an academic department (excluding the Exhibit Museum of Natural History, which has a professional director and no curators). This has the advantage of linking these individuals closely with a single academic unit, though conversely may make it harder for these museums to connect to multiple departments that may have interests in their collections and mission. This structure also has the disadvantage of making curatorship half-time work and, in the research museums, curation has historically taken a back seat to teaching, fieldwork, new research, and the production of the scholarly publications that are essential for tenure and promotion in the curators' departmental homes (the museums are not tenure granting units).

² <u>Isa.umich.edu/museumstheme/museums/museums-list.asp</u> (accessed September 14, 2011).

In general, the research museums occupy a distinctive place in the university's museum structure. They reside within the university's largest undergraduate college, yet their primary mission lies in research and collections rather than teaching. They lack dedicated exhibition space, yet contain the university's largest and most diverse natural history and archaeological collections, mostly held in locked storerooms. As such, they are hampered by their relatively low visibility and limited accessibility to diverse university and public audiences. As befits their research mission, curators have been hired because of their scholarly excellence rather than their museum experience, and many have privileged new field research and scholarly publication over collection-based scholarship and basic curatorial activities. While this model has worked very effectively for more than a century, generating world class collections and leading scholarship, the value of the research museums, the collections, and the space and staffing resources they consume, and their contributions to the university's core mission have increasingly come under question.

The research museums were created over several decades, from the late 1800s through the 1920s, during a pre-digital era when direct access to the objects of study (biological, paleontological, or archaeological specimens) was considered essential to education and research. The primary mission of these museums was to acquire collections for the university, to conduct research on those collections, and to expose students to distant regions and the world beyond the conventional classroom. Until the mid-1950s, these museums reported to the central administration; since then, they have reported to the liberal arts college and all curators came to hold joint faculty appointments. But by and large, over the last century, the formal mission of these museums has not changed significantly. However, the academic landscape they inhabit has, and the museums have come to be seen both by some non-curator faculty colleagues and the college administration as costly, antiquated, and problematic, especially at a time when molecular studies and digital access to the world's biological and archaeological heritage has, for some, rendered physical collections anachronistic.

One response to these perceptions has been the rethinking of the administrative structure of two of the research museums. Ironically, these changes occurred at the end of a year-long celebration of museums in the academy, during which an array of special courses, lectures, and events highlighted the important work of the university's museums. As noted earlier, in July 2010, the Museum of Zoology and University Herbarium were reorganized and incorporated into their associated academic department. Thus, they no long function as freestanding units with direct reporting lines to the LSA dean. While this decision was made at a time of budgetary stress and has, to a certain extent, reduced administrative costs, the stated objective for this merger was to strengthen evolutionary biology on campus - though precisely how this was to be accomplished was never articulated. To our minds, the loss of administrative independence has serious implications for these museums - including loss of budgetary autonomy, loss of control over their collection and research facilities, and perhaps most important, the loss of the ability to set priorities and make decisions about future curatorial and staff appointments. Though (supposedly) not economically motivated, it seems likely that the budget dedicated to the museums will shrink, that staff and curatorial positions will be lost, and that the commitment to the collections will decline. Finally, the precedents and potential long-range consequences of this merger have heightened tensions within the other museums in the college, creating a sense of anxiety and uncertainty about the future.

In addition to economic and organizational challenges and their consequences, two of our museums, specifically the Exhibit Museum of Natural History and Museum of Anthropology, face socio-political challenges that are exacerbating already difficult situations. We turn to these issues in the next section.

Who owns culture?

The term 'culture wars' is used in North America in reference to a number of museum exhibitions developed in the late 1980s through the 90s – for instance, *The Spirit Sings* at the Glenbow Museum in Calgary (1988), *Into the Heart of Africa* at the Royal Ontario Museum in Toronto (1990), *The West as America* at the National Museum of American Art (1991), *Enola Gay* at the National Air and Space Museum (1994), *Sensation* at the Brooklyn Museum in New York (1999) – that sparked considerable controversy primarily centered around the representation of culture and contested readings of history. During the last decade there have been a number of celebrated claims for the repatriation of cultural artifacts. In effect, these controversies stem from the very basic question, who owns culture? Here we are not only referring to material culture – the object itself – but to the narratives inscribed upon and around the object. In other words, we are talking about both tangible and intangible cultural property. Universities have not been immune to such controversy. Indeed, at times some of the most heated debates concerning these issues occur on academic campuses where debates can become highly politicized.

Exhibiting Indians in the Natural History Museum

The University of Michigan Exhibit Museum of Natural History was formally created in 1956 in the same museum building that housed the university's four research museums. Its mission was to serve as the public face for the collections and scholarship undertaken in the museums. This was not an entirely new role; exhibition was an important facet of the museum building from its opening. But the founding of the Exhibit Museum was a formal recognition that producing vibrant exhibits and educational outreach required a dedicated staff and administrative structure. The Exhibit Museum does not curate significant collections; nor does it have any academic curators. Instead, the museum's professional staff relies on the collections and expertise of the research museums, and collaborates with faculty from a range of departments beyond the museums (e.g., geology, astronomy, Native American studies, museum studies, and many others) to develop exhibitions and educational programming.

From the beginning, the Exhibit Museum has been committed to presenting natural and physical sciences (botany, zoology, paleontology, astronomy, geology) and anthropology exhibitions. The latter largely focused on non-European cultures - especially Native American - and on prehistoric archaeology. In contrast, archaeological collections associated with classical antiquity (the Mediterranean world and ancient Near East) have been housed in a separate museum, now called the Kelsey Museum of Archaeology. As such, the Exhibit Museum of Natural History is typical of many natural history museums in North America and Great Britain that were founded in tandem with the ideologies of social Darwinism prevalent during the early years of anthropology. The natural history museum became the institutional setting for the study and display of colonized peoples (from Africa, the Americas, Asia and the islands of the Pacific) - peoples who were perceived as less 'civilized' than Europeans, and who did not possess their own histories. Indeed, it was European scholars who were charged with writing these histories. Though the ideologies that served as the foundation for the natural history museum were jettisoned long ago, the original framework defining the institution's purview remains. This has been the source of considerable debate in many natural history museums over the last fifty years. Indeed, the display of Native peoples in the Exhibit Museum has been the subject of heated contestation for the better part of the last twenty years.

The most significant and sustained concerns have been focused on a group of fourteen dioramas of miniaturized historical scenes of Native American life. Members of the Museum staff created these dioramas in the 1950s and 1960s, based on archaeological and ethnographic information provided by university researchers (fig. 1). They are regarded as relatively accurate historical interpretations of

Indian life prior to the arrival of Europeans, and were among the museum's most popular exhibits, particularly with children, one of the museum's primary target audiences. For the last twenty years however, Native American students and some members of the Native American studies faculty have voiced concerns about the dioramas and called for their removal.



Fig. 1 - Native American dioramas in the Exhibit Museum of Natural History prior to the decision to remove them from view. Published with the permission of the University of Michigan Exhibit Museum of Natural History.

A number of objections were raised, but a few were particularly persistent. Since all the dioramas are historic, they convey a sense of Indians as having existed only in the past, that Indians, like the dinosaurs, also on view in the museum, are extinct. With the exception of four dioramas depicting the 'seasonal lifeways' of Michigan's indigenous peoples, each of the dioramas represents an entire culture and thus reinforces stereotypes and overly simplified views of Native American society. Many critics had problems with the specific idiom of representation, miniature dioramas that presented 'little Indians' and that trivialized Native Americans.³ Ultimately, most of the concerns arose from the perception of Indians as objectified artifacts displayed in the same general context as rocks, plants and animals – as part of nature's history.

Various interventions were conceived and deployed to address these issues. Roughly ten years ago, Lisa Young, a member of the Museum of Anthropology's research staff, worked with Native students, tribal consultants, and anthropology students rewriting the diorama labels so that they presented a more accurate temporal and geographic context for the narratives portrayed in each diorama. In addition, Native American graduate student Veronica Pasfield helped develop an exhibit case that was placed opposite the dioramas that presented information about contemporary *powwows* (Native

³ Though this was a common criticism, there is ample evidence demonstrating that there is nothing inherently wrong with miniaturization as a mode of representation. In fact, it is an interpretive strategy that encourages close looking. The miniature is recognized as an effective means for exaggerating the content of that which is depicted and of engendering a sense of awe in the observer. There are many examples of miniature dioramas of Native Americans that live quite happily in museums throughout the US, including tribal museums. For additional insight into the power of the miniature see MACK 2007.

American festivals) in Michigan. In the end, these interventions proved inadequate. The additional context that the new labels provided and the balance offered by an exhibit on contemporary Native American communities could not offset the overpowering visual and material presence of the dioramas themselves.

The same Native American voices that had for years called for the removal of the dioramas continued to press. In 2009, the director of the Exhibit Museum, Amy Harris, decided to remove them, after a process of consultation with the Native community and with the support of the LSA dean and the Native American studies program faculty. This was a controversial decision. However, rather than simply take them off view she chose to develop an exhibition, *Native American Dioramas in Transition*, around their removal that provided an opportunity for expressing views about what the dioramas represent and why or why not they should be removed (fig. 2 and 3).⁴ The exhibition was on view during the first term of the *Museums in the Academy* theme year, and then in January 2010, they were removed, put in storage, perhaps to be used later in some other context. They were replaced with a geology exhibit – rocks.



Fig. 2 - Native American Dioramas in Transition, an exhibition that addressed why the dioramas were being removed from view. Published with the permission of the University of Michigan Exhibit Museum of Natural History.

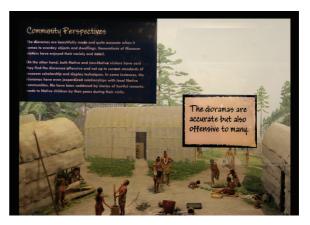


Fig. 3 - An example of the interpretative labels prepared for *Native American Dioramas in Transition*. Published with the permission of the University of Michigan Exhibit Museum of Natural History.

The Exhibit Museum responded to the concerns of a small but significant group of individuals — members of the communities on exhibit in the museum. This episode in the history of the Exhibit Museum begs a number of important questions concerning the role of museums in contemporary society, specifically on university campuses. Indeed, the 'diorama dilemma' deserves a proper critique that is beyond the purview of this short paper. Exhibition is a kind of narrative, a type of story telling. In this particular situation, it wasn't the content of the story being told, or who was telling it; the crux of the problem was where the story was being told.

There no longer is a public space on the University of Michigan campus devoted to the representation of Native Americans. If stories about America's indigenous peoples are going to be told in the future, existing venues either need to be reconceptualized or another venue will need to be created – perhaps a museum of cultural history that tells stories not only of Indians but of peoples all over the world, including Europe. In sum, the controversy over the Native American dioramas serves as a poignant example of just how susceptible our museums are to the social and political dynamics of contemporary society.

⁴ The responses to an article by Janet MILLER (2009) about the removal of the dioramas offer some of the different views that were expressed.

The theory and practice of repatriation

For the Museum of Anthropology, the tensions lie less in the representation of Native Americans than in the physical remains of America's ancient peoples and the objects they made, which are maintained in the museum's collections. The Museum of Anthropology curates archaeological and ethnographic materials from around the world, with collections numbering more than three million objects. The museum was created in 1922, though the collections it curates began coming into the university as early as 1840. Today, the museum has twelve curatorial divisions, eight half-time curators, and associated researchers, and staff and is the physical home of doctoral students in anthropology specializing in archaeology. The archaeological divisions or 'ranges' are organized by geography (Africa, Asia, Europe, Great Lakes, Latin America, Near East, North America) and research focus (zooarchaeology, ethnobotany, human osteology, and analytical collections [material sciences]). There is also a division of ethnology and the Asian division includes ethnographic objects from that region, with total ethnographic collections of c. 14,000 objects. In addition, the museum has collections of more than 60,000 photographs, and field notes, maps, drawings, and records from the many field projects it has sponsored.

One of the most enduring foci of Museum of Anthropology research has been in the archaeology of Michigan, with a particular emphasis on prehistoric periods. The Great Lakes division curates some of the largest and most important collections in the museum, with more than one million objects from some 2,000 archaeological sites in Michigan and Ontario. The North American Division is similarly large, and contains diverse collections from the Eastern and Western United States. In both of these divisions, a small portion of the collections (less than one percent) derive from burials and include human skeletal remains (many formally curated in the osteology division) and funerary objects. And it is the status, history, processes, and perceptions around these materials that have been the locus of considerable controversy for the museum. While this is a long and complex story, extending back to at least the early 1970s, here we limit our focus to the museum's activities over the past two decades.

Since 1990, the Native American Graves Protection and Repatriation Act (NAGPRA) has provided a framework for the repatriation of Native American skeletal remains, funerary objects, sacred objects and objects of cultural patrimony to tribes to which they are culturally related, or in the terms of the law, "culturally affiliated". The law provides a description of categories of evidence for determining cultural affiliation and a set of procedures for museums to conduct and disseminate collection inventories, engage in consultations with tribes, and carry out repatriations.

The initial phase of NAGPRA implementation in the Museum of Anthropology occurred in the early 1990s, shortly after the law was passed. With supplemental funding from the college, the museum devoted three years and thousands of person-hours to conducting an inventory of NAGPRA-relevant collections, which largely consist of human remains and associated artifacts from prehistoric sites in Michigan (though also include materials from across the United States) and made determinations, where possible, of cultural affiliation. Letters requesting information for tribal consultations were sent to tribes when the inventory was initiated. In general though, little effective consultation took place during this period, a consequence of both the time pressures the institution was under to meet federal reporting requirements, limited outreach on the part of the museum, the lack of response from tribes to initial letters, and the lack of preparation of both museum and tribal authorities as logistics and best practices were still being formulated.

After the initial inventory was complete, no specific funds were dedicated to NAGPRA until 2007, when the Provost provided two years of supplementary funds to allow the museum to meet a new NAGPRA

⁵ See 43CFR 10, www.cr.nps.gov/local-law/FHPL_NAGPRA.pdf (accessed September 14, 2011).

requirement, the 'future applicability' requirement to report any NAGPRA-relevant collections that had come into the museum since the original inventory was completed. Several consultations and a number of repatriations were conducted during the mid- to late-1990s, but progress was slow, and a variety of interactions and experiences (including conflicts over the repatriation of a Canadian First Nations collection and DNA research on some of the Great Lakes human remains) led to increasing tensions between the museum, a number of native students on the campus, and representatives of Michigan's tribes. While some of the basic work of NAGPRA (consultations and repatriations) continued to occur, communication was poor to hostile and mutual distrust and rumors exacerbated an inherently difficult situation.

Another issue that complicated the relations was that, during the inventory, a significant portion of the museum's NAGPRA-relevant archaeological collections (i.e., human remains and funerary objects) had been deemed to be 'culturally unidentifiable'. That is, the museum determined that they could not, with currently available information, be affiliated with contemporary tribes – because they were too old, lacked sufficient information on their provenience or origins, or for a variety of other historical or contextual reasons (an assessment not necessarily agreed upon by tribal members or native students). While the formulators of the NAGPRA regulations recognized that this category of materials would someday have to be addressed, the reserved section of the regulations on culturally unidentifiable remains was not approved until 2010. During this interval, museums were required to retain possession of these remains, though they could seek special approval from the Department of Interior for their transfer to tribes if the institution and tribes reached a mutual agreement.

In the absence of federal regulations, museums took a variety of approaches to the transfer, or 'disposition', of these "Culturally Unaffiliated Human Remains" (CUHR). Some institutions working proactively to transfer remains to tribes – most often based on geography rather than a clear cultural relationship (that is, remains were transferred to tribes that could be argued to be contemporary stewards of the lands from which they derived, even if a cultural affiliation could not be determined). Other museums resisted such transfers, strictly following the NAGPRA guidelines that collections should be retained, and privileging the value of the collections to research over contemporary tribal interests. The Museum of Anthropology fell on the latter end of the spectrum and did not support the deaccessioning and transfer of unaffiliated remains prior to the passage of the relevant regulations. During this nearly 20-year interlude, scientific research continued to be conducted on Museum of Anthropology NAGPRA collections.

Not surprisingly, the museum's stance generated intense negative reactions from Native American and other students, faculty, and tribes. Given the poor communication between the museum curators and other stakeholders in this issue, many of these conflicts played out in public – in articles in the university and city newspaper, in protests at the annual student run *powwow*, and in other public events. In addition, both student groups and tribal representatives presented their grievances directly to the university President and Regents.

By 2009, the inflamed emotions and political sensitivity around the issue led the University's Vice President for Research (responsible for federal compliance) to create a high level university task force to make recommendations on how to improve the situation. During the 2009-2010 academic year, the task force consisted of twelve members drawn from a range of academic units. It included two native faculty (a mathematician and historian) and one native doctoral student and no representatives from the Museum of Anthropology.⁶ As the committee was deliberating, new regulations were finally issued concerning the disposition of culturally unaffiliated remains in March 2010.

⁶ In 2010–2011, the committee was expanded to include the museum's director (Sinopoli) and a representative from a Michigan tribe.

There is much that could be said about the process and consequences of this additional level of oversight concerning repatriation – both positive (investment of new resources and staffing for NAGPRA activities) and negative (what seems to the museum at least, to be a continued scapegoating and exclusion from major decisions affecting its core activities). But that is the topic for a different paper. Here, we simply note that from the museum's perspective, the process and consequences of these developments have been and continue to be painful and challenging for the museum's curators, staff, and associated graduate and undergraduate students. While we hope that we are moving toward a more productive 'new normal', the addition of these tensions to the very real economic, structural, and organizational tensions that all of our museums are now experiencing has indeed led us to feel, as the title of our paper indicates, "besieged".

Conclusions

We would argue that 'culture wars', at least the ones that are fought in museums, are not necessarily a bad thing – valuable lessons have been and will continue to be learned from the difficult processes of reconciling such conflicts. And we would argue that here we have a viable and compelling justification for the value of museums, as sites of social and political mediation. Obviously, this is easier to say when phrased as an intellectual position, and harder to espouse when actually "seeing action" in these wars.

It seems that in considering how we might mitigate the challenges that face museums in the academy, we need to think about strategies for realigning museums within the academy. It is the general perception that though museums are valued, they are not seen as central to the mission of the university, they are not essential. Indeed, museums are generally perceived as having migrated away from the core of what universities are about: research and teaching. While there are reasons to reject both of these perceptions, they nonetheless exist, and we are hearing a number of justifications from administrators for reducing allocations to museums. One of the most common concerns the value of maintaining collections once they've been digitized. If one has good digital surrogates of these objects that can be stored on a computer at very little cost, why continue to maintain (at considerable expense) collections of 'real things'? Add to this the fraught nature of contested objects, such as those now being claimed by source communities; some administrators are of the mind that we should just "give the stuff back" of sell it off. To those of us who work with these collections, such positions seem absurd. But unless we can articulate why these things are important to our institutions, at this time, the future is bleak. What can we do to bring our museums closer to the core? How can we help university administrators justify the costs of maintaining museums and their collections?

To do this, it is essential that the scholars and scientists engaged in and with these institutions work to make the case for their continued value. At the University of Michigan, we believe that this work includes a recognition of the need to broaden the missions of our museums to better engage a wider spectrum of the university community, as well as the diverse stakeholders outside of the university who have interests in the collections museums hold, the exhibits they mount, and the educational and cultural opportunities they can offer.

Literature cited

Kennedy, R. & C. Vogel 2009. Outcry over a plan to sell its museum holdings. *The New York Times*. January 28.

MACDONALD, S. & J. ASHBY 2011. Campus treasures. Nature 471: 164–165.

MACK, J. 2007. The art of small things. Cambridge, MA: Harvard University Press.

MILLER, J. 2009. Native American dioramas at University of Michigan Exhibit Museum of Natural History to be removed. *AnnArbor.com*. September 18. www.annarbor.com/news/native-american-dioramas-at-u-m-exhibit-museum-of-natural-history-to-be-removed-jan-4/ (accessed September 14, 2011).

POGREBIN, R. 2011. Bill would make University sell a Pollock. *The New York Times*. February 12. RUTHVEN, A. 1929. *The University Museums building of the University of Michigan*. Ann Arbor: University of Michigan.

Contact

Raymond Silverman, PhD

Director, Museum Studies Program

Professor, Department of the History of Art, University of Michigan

Address: Tappan Hall, 855 South University Avenue, Ann Arbor, MI 48109-1357, USA

E-mail: silveray(at)umich.edu

Carla M. Sinopoli, PhD

Curator, Museum of Anthropology

Professor, Department of Anthropology, University of Michigan Address: 1109 Geddes Ave, Ann Arbor, MI 48109-1079, USA

E-mail: sinopoli(at)umich.edu www.lsa.umich.edu/umma

To touch the past: The painted pottery of the Mimbres people at the Weisman Art Museum, University of Minnesota

LYNDEL KING

Abstract

The Weisman Art Museum holds a large collection of Mimbres painted pottery (1000 to 1150), resulting from an excavation in Southern New Mexico by university faculty and students from 1929 to 1931. Pottery, jewelry, ceramic miniatures, animal bone awls, and other tools were transferred from the Department of Anthropology in 1992.

Today, no one in anthropology studies this collection. And, in the decades since the excavation, both the science of archaeology and perceptions about Native Americans' control of their cultural heritage have changed considerably. The archaeologists who excavated the graves in which these pots were found had no doubts about the validity of their actions. Today we are not so sure. Change has prompted questions including: should these pots have been unearthed at all; should they be reburied? The federal Native American Graves Protection Act (NAGPRA, 1990) requires museums to return grave goods or sacred objects to native peoples who claim them and can prove they are the legitimate descendants of the makers. These pots, and many other objects made by ancient people around the globe, have been enshrined in climate-controlled display cases, watched by guards and security cameras, allowing everyone to see them while protecting them from the ravages of nature and man. They are no longer where their makers intended, covered with earth and hidden from view, acted upon by time and the elements. University museums are often left with the result of past excavations that would be handled quite differently today. The question is not how to make these objects relevant to the public — they are greatly admired by our visitors — but how to fill our mission of education while respecting the original makers' intentions and the desires of their descendants.

Introduction

Mimbres pottery, made more than a thousand years ago, is remarkable for its arrestingly beautiful paintings on the inside of bowls. The outsides were rarely decorated and the pots themselves are not notable in form or technique. But the painted images have extraordinary appeal to modern-day people around the world. The Mimbres people did not cover every surface. They knew how to use the white space as part of the design. They knew how to use the shape of the vessel to enhance the design. People love to look at these pots and are always amazed by the same thing that entranced Alfred Jenks, who excavated them – the contrast between the highly developed sense of design and their "primitive" mode of life.

The Weisman Art Museum holds a collection of more than 2,000 Mimbres artifacts, ranging from stone tools, arrowheads and points, to beads and pendants, and more than 1,000 of the beautiful painted bowls that are the trademark of these people.

These shallow bowls were found in graves, covering the head of the deceased or stacked up beside the skeleton. They almost always have lines around the edges, and depict primarily insects or animals or human representations. Some are narrative. Scholars suggest that the lines at the edge represent the horizon for these people who lived in river valleys surrounded by mountains, and that the center of the concave bowl represents their world. We know that they made other shapes, as some gourd shaped vessels have been found, but it is mostly the bowls that were buried.



Fig. 1 - Mimbres bowl perhaps showing man in turtle costume

Many of the bowls have a so-called 'kill hole'. Speculation ranges from a hole to let the breath – the spirit – escape or to allow the pot to return to the earth as the body does. Others suggest that the hole is simply a ritualized ceremony of grief. Not all of the pots have kill holes.

Jenks and his excavations

Albert E. Jenks, the leader of the excavations that brought the collections to the university founded the Department of Anthropology at the University of Minnesota, one of the earliest in the nation. He joined the Department of Sociology at the University of Minnesota in 1906 and initiated the university's first anthropology courses. Four years later the department

was reorganized into the Department of Sociology and Anthropology and in 1918 the anthropology department split off. Jenks was chair of this department until he retired in 1938.

Jenks's approach to anthropology at the University of Minnesota was in line with the race-based nationalism then prevalent in American intellectual life. Racial thought formed the disciplinary base of anthropology at the time, and of Jenks' career. In 1916, the US government hired Jenks to find the ratios of white-to-Indian blood in a population of Minnesotans to solve a land tenure dispute. Using skull-measuring indexes, Jenks 'scientifically' determined the 'whiteness' of his various specimens, a dubious exercise in racialist pseudo-science already in disrepute with some leading anthropologists of the time.

Before he embarked on the Mimbres valley excavations, Jenks put his racial anthropology to work forming Indian and immigrant policies for the USA. He developed a chart for teaching prehistory that was based on a hierarchy of races.

Jenks had set his sights on the Mimbres valley in Southwestern New Mexico on a road trip to the region and was keen to give students hands on experience in archaeology, as well as undertake a major excavation himself. He persuaded the Minneapolis Institute of Arts, the local universal museum,



Fig. 2 - Article from Minneapolis newspaper about the excavations

to co-sponsor his archaeological excavations beginning in 1928. He excavated at Warm Springs, Cameron Creek, Hot Springs and Galaz, but the largest number of finds were at Galaz.

This was the era when museums were not merely repositories of knowledge they helped create it and participated widely in archaeology and other scholarship. The opening of King's Tut's tomb was a worldwide sensation in 1922 and the Mimbres pottery garnered local press of an equivalent level.

The London Illustrated News ran an article about the finds, with copious illustrations, and wondered at the "disparity between the highly developed sense of design possessed by the Mimbres craftsmen and their primitive mode of life" and proclaimed that "for their sheer ingenuity in combining the most complex geometric elements and for keenness in observing animal and bird life, the Mimbres potters are unique in all American prehistoric cultures". The headline was America's finest Prehistoric Pottery: Incredible Mimbres Art. Russell Plimpton, director and chief curator of the Minneapolis Institute of Arts, was shown happily participating in the dig. Headlines

reading A Thrilling Quest, and Jenks Strikes Rich Archaeological Vein, and Treasure Seekers in the Mimbres Valley imply that the 'loot' was the main purpose of the excavations, but to be fair, the excavators paid attention to scholarly conclusions as well.

Dispersal of the collected material

American law says that artifacts found on private lands belong to the landowner although it is generally illegal for individuals to own excavated human remains. The presence of archaeological sites does not restrict the rights of the property owner and the sites and their contents belong to the property owners to manage as they choose. Jenks had the permission of the landowners for his excavations. At the conclusion of the university excavations, true treasure seekers moved in with bulldozers, destroyed the site, and looted the remaining pots, much to the dismay of the landowners who could not stop them.

About 800 pots from the excavations were divided equally between the university and the Minneapolis Institute of Arts. All of the human remains, approximately 186 individuals went to the university of Minnesota anthropology department.

Richard Davis succeeded Russell Plimpton as MIA director in 1956. In the three years he was director, Davis unloaded some 4,500 objects from the museum's collection, including all of the Mimbres pots that had been deposited there from the digs in New Mexico. The university agreed to purchase all the artifacts from the joint excavations.

There is no written documentation of the terms of the purchase, but Eldon Johnson, who was chair of anthropology at the time, indicated that Davis considered these pots 'not art' – he was interested in Dutch old masters – and so nearly worthless. The university apparently bought all of the Mimbres artifacts from the MIA for about \$1 per pot. Mimbres pots have been sold for as much as \$150,000!

The human remains remained at the University of Minnesota, stored in the basement of the anthropology department along with the pots, jewelry, and other artifacts. They were used



Fig. 3 - The Mimbres pot that went missing

occasionally for research projects. A 1983 study entitled *Interobserver Reliability of Methods for Paleopathological Diagnosis of Dental Caries* by professors from the university's school of dentistry, was published in the *American Journal of Physical Anthropology*. There is no evidence that the remains were widely used for research or publication by the department and in 1987, they were transferred to the State's Bureau of Indian Affairs. They were placed in storage, where they remain.

In late 1982 or early 1983 a bowl was stolen from the anthropology department's insecure storage in the basement of a university building. The rooms were widely accessible to any graduate student research or teaching assistant, who all had keys. Eldon Johnson,

then department chair, believed that because of the subject of the painting, a collector might have commissioned the theft. The department must have been seriously concerned, however, to list it with the FBI. It was clearly more than a prank. The pot mysteriously re-appeared in the anthropology storage area a few years later.

Exhibition of the bowls

In the late 1980s, Eldon Johnson, who had engineered the purchase of the bowls from the Minneapolis Institute of Arts, approached the director of the University gallery to see if we were interested in taking over the trusteeship of the pottery.



Fig. 4 - Mimbres bowl

Though the department no longer had any interest in the skeletons, or in the pottery, Johnson realized that the bowls had value beyond anthropology research. He recognized that the department was clearly not a trustworthy caretaker, in view of the theft of one of the most famous of the bowls a few years earlier. He determined to transfer them to a part of the university that would do a better job of caring for – and using – the artifacts. They were inventoried and physically moved to the museum in 1994, the year after the museum opened a new facility.

In 1996 the Weisman Art Museum opened a major exhibition of Mimbres bowls entitled *To Touch the Past: The Painted Pottery of the Mimbres People.* The

museum engaged two scholars, J.J. Brody, an art historian formerly at the University of New Mexico who was renowned for his work on Mimbres pottery, and Rena Swentzell, a Santa Clara pueblo Indian, whose biography states that she is indirectly descended from Mimbrenos. Though she doesn't mention it in her approved biography, she also has a PhD in American studies.

In addition to these two scholars, the museum engaged two Native American artists as consultants, and hired a Native American artist as installation designer. The museum published a scholarly catalogue, with Brody and Swentzell essays published side by side to emphasize the difference in their points of view about the materials.

Between the times, decades ago, when the university excavated this pottery, and now, both the science of archaeology and perceptions about Native American's control of their cultural heritage have changed considerably. The archaeologists who excavated them had no doubts about the rightness of their actions. Today, we are not so sure. Should these pots have been unearthed at all? While the bowls were not made especially for burial – wear marks indicate that some of them were heavily used – they plainly were intended by those who buried them to remain in the ground. Should they, as Rina Swentzell said, have been left in the earth to leave room for our own creativity? Does knowledge of the past inhibit our own creativity? She believes it does.

To our Western-European way of thinking, the present and the future may use the past. The paintings on the Mimbres pots, created more than a thousand years ago provide knowledge, beauty, and inspiration for us today and will for generations to come. That justifies our unearthing them and displaying them in museums.

These pots, and many other objects made by ancient people around the globe, are enshrined in museums in climate controlled display cases, allowing everyone to see them while protecting them from the ravages of nature and man. They are no longer situated where their makers intended, covered with earth and hidden from view, acted on by time and the elements.

Museums and universities are among the institutions of the modern world charged with the preservation of objects that people have created in the past. They preserve objects and extract

knowledge from them. We believe that these ancient objects serve legitimate purposes in the present and future. The notion that this is wrong or unimportant is unimaginable in the halls of any university.





Fig. 6 - Mimbres bowl

Fig. 5 - Mimbres bowl

Decisions and alternatives

In 1990, the United States federal government passed the Native. NAGPRA, as it is commonly called, provides a process for museums and federal agencies to return Native American cultural items – human remains, funerary objects, sacred objects, or objects of cultural patrimony – to lineal descendants and culturally affiliated Indian tribes. All federal agencies are subject to NAGPRA, as well as all public and private museums that have received federal funds – in essence, nearly every museum in the United States.

In 2002 the Minnesota State Native Affairs Council published in the Federal Register its inventory of the Mimbres human remains that had been transferred from the university. It stated that the notice of the inventory had been sent to eight tribes that might reasonably trace a shared ancestry to the Mimbres. To date, the remains are still in storage.

One difficulty is that no one can, according to strict NAGPRA rules, claim lineal descent. The Mimbres people inhabited desert valleys in what is now southwest New Mexico. They are known to have lived along small rivers flowing from the surrounding mountains starting around 550 CE. For a relatively short period of time, they made the distinctive pottery vessels that they are associated with today, probably between 1000 and 1150. Sometime between about 1130 and 1150, the Mimbres culture either ceased to exist or underwent radical change. It is still a mystery what happened to the Mimbres people. There are no signs of famine, warfare, or disease that could have wiped them out. But their departure apparently happened rather suddenly, and some scholars believe they may have organized a mass immigration due to environmental stress. All native groups in the American Southwest can probably claim indirect descent from the Mimbres people, but there is not a clear line to any one group.

The presence of a flourishing market in Mimbres ceramics also muddies the waters. The museum was told that if given to one of the most conservative groups who are among their possible descendants, the pots would be ground up and the dust buried, to make sure they could never be seen by anyone again.

If they were repatriated to other groups, they might be reburied but within five years, someone would have found them, excavated them again, and they would appear on the private market. The most

cynical view was that they after being repatriated, the pots would not be reburied at all but simply stored in a warehouse for a few years, and then appear on the market again.

Jerry Brody wrote that his "greatest unresolved conflict is between the deep pleasure he gets from Mimbres pottery and the empathy it stirs for those unknown people on the one hand and, on the other, his growing uncertainty about the ethics of preserving for the future things that originally were intended to be buried forever" (BRODY & SWENTZELL 1996). Rina Swentzell whose Pueblo Indian blood may link her to the ancient Mimbres people, also speaks of an unresolved conflict between intellectual knowledge of Mimbres art as a beautiful, powerful symbolic link with an otherwise lost past and ethical responsibility to those ancient people who buried that art with their dead.

Yet, these pots, and many other objects made by ancient people around the globe are enshrined in museums in climate controlled display cases, allowing everyone to see them while protecting them from the ravages of nature and man. They are no longer situated where their makers intended, covered with earth and hidden from view.

All museums, perhaps particularly museums in universities, represent, as Rina Swentzell characterized it, a European oriented perspective – "an insatiable desire to know, to understand, to intellectualize. Traditional Pueblo thought, on the other hand, values mystery". In the Pueblo world view, she wrote, "humans do not need to know everything that there is to be known. It is more important to retain a sense of the unknown and ambiguity in the world than to uncover whatever is not obvious or readily explainable. The human past […] is a universal past. No one can claim it and no one can ever know it completely" (BRODY & SWENTZELL 1996).

In fact, contemporary Native American artists in the Southwest have been greatly influenced by the discovery of Mimbres art. The revival of Native American Southwest pottery coincides with the discovery of Mimbres pottery in the 1920s. Bowls from the Swarts ruin inspired Maria Martinez at San Idefonso Pueblo, the most famous twentieth-century Indian potters from the Southwestern United States. At Acoma Pueblo, Lucy Lewis, another well-known artist, incorporated animal figures in the Mimbres style in her work.

Conclusion

Museums and universities are charged with the preservation of objects that people have created in the past. We preserve the past for use by the present and future. We create ideas around the past. The motto for my own university is *Driven to Discover*.

The excavation is flawed by the motives and attitudes of the archaeologists. At the same time, we've introduced to the world these wonderful artworks that lay unknown for thousands of years. Hundreds of scholars and artists come every year to look at these pots in our exhibits and study rooms. We can be fairly certain that this is not what the makers intended or ever imagined. We can put them back in the ground but we can't take back knowledge of them. So, for now, we will continue to live with the dilemma.

Literature cited

BRODY, J. J. & R. SWENTZELL 1996. *To touch the past. The painted pottery of the Mimbres People*. New York: Hudson Hills Press; Minneapolis: Frederick R. Weisman Art Museum at the University of Minnesota.

Contact

Lyndel King

Director and Chief Curator, Frederick R. Weisman Art Museum

Address: Frederick R. Weisman Art Museum, University of Minnesota, 333 East River Road,

Minneapolis, MN 55455, USA E-mail: kingx001(at)umn.edu

wamdir.umn.edu

Human remains in museum collections and their restitution to the communities: Museum of La Plata – Argentina

GRACIELA WEISINGER CORDERO & MARÍA DEL CARMEN MAZA

Abstract

The intention of this article is to reflect on the challenges that museums face when collections include the human remains of indigenous communities. To debate the topic, the Museum of La Plata is used as an example. Part of the collection concerns the final stage of the "Conquest of the Desert" epoch in which the army caught the last chiefs and a group of indigenous – elders, women and children – who still were resisting the offensive in Junín of the Andes. The museum held captive the living aborigines for their study until September 1894.

In Argentina, the first claims to the authorities of the university museum of La Plata were registered by the mid 80s. To date, the museum has repatriated the remains of a Tehuelche chief (1994) and a Ranquel chief (2001) to their communities.

The problem of the repatriation of human remains, as well as the cultural objects associated with them, is an attempt to allow these diverse aboriginal communities to manage their own cultural inheritance in the manner that they deem most appropriate. Bringing ethical principles into play, they recover their cultural identity. It also addresses the bases upon which the anthropologic science constructed its 'object of study': the appropriation of fragments of the human reality to investigate and display them in exhibitions and museums. However, the demands by the different indigenous communities for the return of their ancestors are increasing. This has caused a division in the scientific community with some agreeing in the matter of repatriation, while others see the remains as belonging to the museums and that if they are repatriated they will then be lost to scientific research.

Problems of restitution

Museums whose collections include human remains from ancient communities are confronted with multiple challenges. How are they to reconcile past cultural policies with the lawful rights of the descendants of those communities? How can museums resolve these social responsibilities? Do museums have the duty to restitute remains when claims are made by descendents and owners of primitive cultures?

There are over 350 million indigenous people throughout the world. In some cases they still keep their ancient nomadic ways of life or continue to organize as tribal societies. In the case of Argentina, these minority populations amount to less than 5% (García Canclini & Moneta 1999).

Nowadays, there is a clear tendency in the Americas to comply with the restitution requests concerning sacred cultural objects and human remains belonging to indigenous peoples, regardless of whether those objects or remains are unique or rare. Thus, we are facing regulatory changes in collections management.

Museum directors in our region know that not every piece in their collection is identical in terms of restitution principles. Human relics and remains elicit moral and religious considerations that make them different from any other object.

This article focuses on the collections of the Natural Sciences Museum of La Plata, and the changes in its exhibition policy for material of this nature.





Fig. 1–2 - Museum of La Plata. Photo: AGN; Map: Pixéfalo

The creation of the museum and the vision of that period

In 1884, the province of Buenos Aires ordered the construction of the Museum of La Plata, which was inaugurated in 1889. It houses the collection of the noted explorer of Patagonia, Francisco P. Moreno, who was its lifetime director. Already famous in 1890, the museum soon reached both national and international scope. In 1905 it was incorporated to University of La Plata.

At first, the members of the indigenous communities were friendly with the explorers of Patagonia, including Moreno. The situation changed when the Argentine State, determined to advance through the lands of the Pampas and Patagonia in order to exploit them, undertook the so-called *Conquest of the Desert* (1878–1885).





Fig. 3–4 - Military campaign *Conquest of the Desert* 1878-1885. Image of the campaign, 1879. Photo: AGN; Map: Pixéfalo

This campaign resulted in the capture, in Junín de los Andes, of the last of the Indian chiefs, Inacayal and Foyel, and a group of natives composed of elders, women and children. Once they became prisoners, it was decided they should be disbanded: the children were given to families from Buenos Aires, the women were ordered to do housework, and the men were sent to the Martín García Island to break rocks to pave the city streets (1884). It should be noted that while this military campaign was being carried out, the government was making arrangements for the arrival of ships bringing thousands of European immigrants to the country to populate these territories, in line with the government's program, whose slogan was "to govern is to populate".

_

¹ AGN: Archivo General de la Nación (National Archive).





Fig. 5–6 - Immigration in Argentina. Photo: Album presented to President Victorino de la Plaza – ex Museo de la Casa Rosada. Map: Pixéfalo

Learning about these events, Moreno searched for the Indian chief Inacayal and his family, and took them to the museum (1886). The total number of live indigenous people added to the museum's 'heritage' was twelve. Some of them returned to their lands once they agreed to change

their identities. Inacayal refused to do so and remained a prisoner. He was photographed, studied, used as a servant, and displayed before the curious, both local and foreign. Soon afterwards, his wife and daughter died. Unable to live without a clan or community, in the following year Inacayal reportedly took his own life. The museum kept the live Indians captive in order to study them until September 1894, when the last of them, the young Yamana Maish Kenzis, died. His remains were in a showcase for over a century. Not just in Argentina, but also all over the world, science was struggling to understand the origin of man, and it was thought that this might be the way to do it.

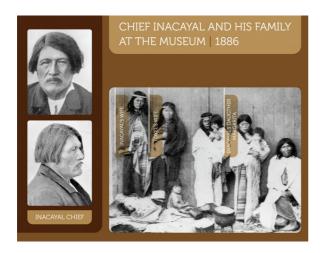


Fig. 7 - Inacayal and his family. Photo: AGN

In 1875, in Nancy, France, the meetings of the International Americanist Congress started. The aim was to contribute to the advancement of ethnographic, linguistic and historical studies pertaining to the Americas, especially regarding the times prior to Columbus, and to facilitate contact among people interested in these studies.

Moreno's project envisioned a museum that would explain, through exhibition, the evolution or physical and moral history of 'the Argentine man' (MORENO 1890–91).

The museum inventory published in 1910 shows that it owned 5,581 objects, including skeletons, skulls, scalps, brains, death masks, loose bones, and stuffed bodies. A great part of it comes from the Moreno's founding collections as well as from items gathered during expeditions conducted by the museum itself, and by the work of other scientists, explorers, and amateurs. It was customary to exchange with foreign institutions the objects obtained during such explorations. The exchange also included selling indigenous human remains to European museums and research institutes.

The exhibition and its changes through time

By 1927, the museum showed an ostensible change in its exhibition message by referring to this heritage as "native heroes who defended the homeland of the Pampas" (TORRE 1927). The central showcase featured the human remains of cacique Inacayal and his wife Margarita, as representatives of the ancient lords of the Pampas.



Fig. 8 - Anthropology department 1891. Photo: Museo Magazine 1, 1890-91, picture VII by F. Moreno

The person responsible for such change was the German anthropologist Robert Lehmann-Nitsche, who, in the aftermath of World War I played an active role in the anti-republican movements of some German groups living in Argentina, through multiple organizations in Buenos Aires supporting the Kaiser and the Empire. These movements glorified warriors' bravery and patriotic courage. Lehmann-Nitsche was also in touch with the German and European academia, as well as with several German scientists living on the American continent.

Another major institutional change took place in the 1940s, when fewer objects were exhibited. Until then, especially in Paris and London, exhibitions were massive but explanations were scarce. Thus, between 1884 and 1940, rooms crowded with the largest possible numbers of items were the norm. The dual function of the rooms, which served both as repositories and exhibition areas, made it necessary to attach showcases and cabinets to the wall, and often occupying the central floor areas as well. This type of furniture, which usually featured displays behind glass on the upper part and for storage blind areas with shelves and large drawers. In the second half of the last century museums started to provide more information to visitors about the importance and significance of less crowded objects.

In 2005, the Museum of La Plata started to remove human remains from permanent exhibitions, in line with a radical change in the institution's vision.



Fig. 9 - The Museum of La Plata today. Imitations of human remains. Photo: Collection of the Museum of La Plata

The claims

In the 1960s, the Society for American Archaeology (SAA) drafted its first code. Before then information about past people and past ways contained within artifacts or obtained from them tended to be lost once the items became included in the archaeological record. This was because cataloguing, describing, and creating timelines based on the artifacts were the only data permanently recorded. The new code of the 1960s contained four generic statements that emphasized archaeological practice with a patrimonial vision. The culture-historical phase of archaeology came to an end. This change had its genesis in 1958 with a new archaeological theory: the 'processual archaeology' or 'new archaeology'. This new vision stated that "American archaeology is anthropology or it is nothing" (PHILLIPS & WILLEY 1958, 2). The scientific method became rigorous and it was possible to learn something about the life of the people who used the artifacts. This idea implied that the goals of archaeology were, in fact, the goals of anthropology, that is, to answer questions about humans and human society.

Restitution claims became public in the 70s, in several places worldwide (SERBIN 1980). North American and Australian communities originally led the way, but the turning point in the concept of the culturalistic archaeology that influenced the management and intervention of cultural assets over the 20th century developed almost thirty years later, in the Code of Ethics debated and sanctioned by the

2nd World Archaeological Congress, held in Barquisimeto, Venezuela, in 1990. Its principles acknowledge the importance of the fact that indigenous cultural assets belong to the indigenous communities. Also, native methods of interpretation, care, management and protection of their cultural property are both acknowledged and accepted.

The 1991 National Museum of the American Indian Act and the Native American Graves Protection and Repatriation Act (NAGPRA)² demanded significant changes in policy. In compliance with the former: "most of the national museum collections were moved to a new museum run by a committee of indigenous peoples"³. NAGPRA applies to human remains and objects of cultural importance discovered after November 16th, 1990 but not to those found on private land. The act was passed after a long campaign carried out by indigenous spiritual leaders and organizations followed by *The Longest Walk*, a demonstration that set off from San Francisco and arrived in Washington to petition President Carter.

In Argentina, it was only in April 1994 that the remains of Inacayal were taken to the Tecka valley, amidst protocol ceremonies, indigenous rituals and political speeches at every stop. Restitution of the remains of Ranquel Indian chief Mariano Rosas, alias Panghitruz, took place in 2001. Every restitution called for a specific, exclusive law to be passed so that return was possible and legal. In June 2010 the bone remains of a man and a young woman on display in one of the museum rooms since 1896 were returned to the ACHÉ community of Paraguay. The young woman, called Damiana, was buried during a special ceremony held in Paraguay.





Fig. 10–11 - Ceremonial act of restitution of Mariano Rosas´ remains and Mariano Rosas´ burial, Leuvucó, La Pampa, Argentina, 2002. Photos: Página 12 Newspaper (1); <u>luisroldan.blogspot.com/2010_07_01_archive.html</u> (2)

In the meantime, the museum continued to receive claims to the remains of Chipitruz, Indio Brujo, Gherenal and Calfucurá. The latter, perhaps due to his status, has four claimants. The claims are being dealt with by the National Institute for Indigenous Affairs (INAI). Additionally, INAI is handling the claims for other human remains by the Aché (people) of Paraguay.

Controversy over the recognition of the ethnic and cultural pre-existence of indigenous peoples prompted new legislation. In late 2001, the Argentine Congress stated that "the remains of indigenous people, whatever their ethnicity, which are part of museums and/or public or private collections, should be made available to indigenous peoples and/or communities claiming the said human remains"⁴.

² The Native American Graves Protection and Repatriation Act (NAGPRA), Public Law 101-601, 104 Stat. 3048, is a United States federal law passed on 16 November 1990 requiring federal agencies and institutions that receive federal funding to return Native American cultural items and human remains to their respective peoples.

³ Public Law 101-185, 20 November 1989.

⁴ Law no. 25.517, 21 November 2001, Argentina, Indigenous Peoples Decree.

Determination of the ethnic

Parental inbred offspring is related to the process of ethnic belonging that defines an 'ethnic group' as "a community biologically capable of reproducing, which shares common cultural characteristics" (JULIANO 1987, 85). Since 1990, NAGPRA has set up broad criteria for identification procedures determined by lineal descent and by cultural affiliations between today's tribes and the human remains, funerary objects, sacred objects, or cultural heritage objects in federal museums or collections or excavated, intentionally or unintentionally, in federal territories. The regulations are divided into: *Criteria for determining lineal descent* according to the tribe's traditional kinship system, or according to the legal descent system (these standards call for the ancient person to be identified as an individual from whom descent can be traced) and *Criteria for determining cultural affiliation*, which entails showing proof of the identity shared by today's indigenous tribe and the original community the objects belonged to. The act lists all the possible ways to substantiate affiliation, including the submission of documentation featuring distinctive designs used by that culture in their manufacturing or distribution methods. Substantiation may also include evidence based upon geography, kinship, biology, archaeology, anthropology, language, folklore, oral tradition, history, or other relevant information or expert opinion.⁵

Pending decisions

Faced with a multitude of restitution claims and unable to accurately determine true ownership, it is advisable for museums or institutions to keep the remains or sacred objects in custody until the parties agree on who will receive them or until such decision is made by a court of law upon trial.

Currently, a great number of museums in Latin America have finished – or are in the process of – reorganizing 'human pieces to restitute' in order to prevent mistakes resulting from filing and cataloging errors.

A number of institutions related to these issues are trying to strike a balance between research scientific interests and acknowledgment of the natives, whose cultures (like any other) show religious and spiritual respect for the remains of their ancestors. NAGPRA, for example, considers the return of all remains claims legitimate "unless such items are indispensable for completion of a specific scientific study. Such items shall be returned to their tribes by no later than 90 days after the date on which the scientific study is completed". This, however, may lead to confusion since some remains or objects could take years to study, or not returning them might be justified by conducting permanent studies on them.

In the 1990s traditionally marginalized peoples, such as nationalist and indigenist groups expressed their opinions openly. Academics are being forced to consider ethical principles and the very foundations on which anthropological science has built its 'object of study' by appropriating fragments of humans and displaying them in exhibitions and museums.

The increase in the number of claims by different native communities for the restitution of their ancestors and the controversy over the removal of human remains from exhibition has led to arguments within scientific communities. Exhibition and captioning techniques are changing in line with the museum's educational role. As yet though, beyond recommendations by the codes of ethics of the various disciplines involved, laws banning the exhibition of human remains and the range of practices before death are scarce, if they exist at all. The International Council of Museums, for

-

⁵ By Public Law 101-185 of 1989, 800,000 objects which were part of the George Gustav Heye's Collection of the American Indian Museum in the city of New York were transferred to the Smithsonian Museum.

⁶ Public Law 101-601, 16 November 1990; 104 Stat. 3055, b) Scientific Study.



Fig. 12 - Scientists examine the boy of Llullaillaco. Photo: MAAM Catalogue

example, recommends working with the consent of the parties. Accordingly the community to which the human remains belong to should be asked for their consent for the exhibition of such remains. Today, the Museum of La Plata complies with this recommendation.

At the Museum of La Plata, one of the oldest in the country, claims by native communities are considered and usually granted. In Argentina's Northern province of Salta, a new museum, MAAM (High Mountain Archeology Museum) was inaugurated in 2007. MAAM is devoted exclusively to the exhibition of the Inca children found in 1999, at an altitude of 5,200 meters (17,060 ft) on the Llullaillaco volcano. The bodies, a teenage girl of 15, a boy of 7 and a girl of 6, all with their respective trove, were frozen only 500 years ago. They are the tourist site's major attraction. However, the community the bodies belong to was not consulted in advance. They are asking for the removal of the remains

and sacred items from exhibition, as well as their restitution.⁷

To whom does the past belong?

In every country, debates are taking place between members of the academic community who favor 'defending institutional property' and the descendents of indigenous people who claim for 'their property'.

UNESCO

United Nations position on the issue is formulated in article 12, part III, of its Declaration on the Rights of Indigenous People, which states:

"Indigenous peoples have the right to manifest, practice, develop and teach their spiritual and religious traditions, customs and ceremonies; the right to maintain, protect, and have access in privacy to their religious and cultural sites; the right to the use and control of their ceremonial objects; and the right to the repatriation of their human remains. The States shall seek to enable the access and/or repatriation of ceremonial objects and human remains in their possession through fair, transparent and effective mechanisms developed in conjunction with indigenous peoples concerned." 8

ICOM

The ICOM Code of Ethics (2004) especially refers to the handling of delicate cultural materials:

"Human remains and materials of sacred significance must be displayed in a manner consistent with professional standards and, where known, taking into account the interests and beliefs of members of the community, ethnic or religious groups from whom the objects originated. They must be presented with great tact and respect for the feelings of human dignity held by all peoples. Requests for removal from public display of human remains or material of sacred significance from the originating communities must

⁷ The law 25.517 of 21 November 2001 was already taking effect, and it says: "It is established that, the human remains of the indigenous peoples and/or communities which are part of museums and/or public or private collections should be made available to indigenous peoples and/or communities claiming the said human remains."

⁸ Adopted by General Assembly Resolution 61/295 on 13 September 2007.

be addressed expeditiously with respect and sensitivity. Requests for the return of such material should be addressed similarly. Museum policies should clearly define the process for responding to such requests."9



Fig. 13 - Dra. Silvia Armentano, current director of the museum. Photo: M. Carmen Maza

Proponents of safeguarding museum property argue that remains and sacred objects might be the last evidence of extinct races (descendents have often merged their ancient culture into others, incorporating foreign elements). They say it would be detrimental for museums if they were to be extensively deprived of these bodies and sacred objects, as they demonstrate other cultures' customs and lifestyles, and facilitate education through observation.¹⁰

Would museums really be damaged if they were to be extensively deprived of bodies and objects? How are we to proceed when claims include demands for a percentage of the income institutions receive from selling tickets for exhibits of indigenous human remains? For some

institutions, the object claimed is the most attractive one in their collection, drawing the largest amount of visitors.

Identity and integration

Returning human remains and cultural objects aims to enable indigenous people recover their identity by attaining autonomy in the handling of their own property.

Burial sites, in which bodies were surely placed amidst ceremonial rituals – renders the site, and the objects contained therein, sacred.

Today, the descendents of those remains are part of living cultures whose ancestors are not quite distant. Since the end of the *Conquest of the Desert* in 1884 until now, just over 100 years have elapsed, just two generations. Thus, publishing images of those bodies constitutes an invasion of privacy.

Conclusion

The great challenge for museum and science professionals lies in generating harmonic cultural policies to bridge the gap between the desire for knowledge and respect for others and their views. Custody rather than property would be the key word to help museums face these social responsibilities.

Literature cited

GARCÍA CANCLINI, N. & C. J. MONETA 1999. *Las industrias culturales en la integración latinoamericana*. Mexico: Grijalbo.

JULIANO, D. 1987. El discreto encanto de la adscripción étnioca voluntaria. In: *Procesos de contacto interétnica*, ed. R. RINGUELET (Buenos Aires: Búsqueda), 83–111.

⁹ ICOM, Code of Ethics for Museums, adopted in Buenos Aires in 1986, amended and revised in Barcelona in 2001 and in Secul in 2004, 8.4.3 and 4.4.

Seoul in 2004, § 4.3 and 4.4. ¹⁰ Minutes of the16° Ordinary Session of the Academic Council, La Plata, 27 October 1989.

- MORENO, F. P. 1890–91. El Museo de La Plata: rápida ojeada sobre su fundación y dessarrollo. Revista del Museo de La Plata 1.
- PHILLIPS P. & G. R. WILLEY 1958. *Method and Theory in American Archaelogy*. Chicago: University of Chicago Press.
- SERBIN, A. 1980. Etnicidad y política. Los movimientos indígenas en América Latina. *Nueva Sociedad* 49: 57–71.
- TORRE, L. M. 1927. *Guía para visitor el Museo e La Plata*. Buenos Aires: Universidad Nacional de La Plata.

Contact

Graciela Weisinger Cordero

Researcher at the Social and Scientific Research Institute of the Universidad del Museo Social Argentino (UMSA)

Address: UMSA, Av. Corrientes 1723 (C1042AAD), Ciudad Autónoma de Buenos Aires, Sarmiento 1565 (C1042ABC), Buenos Aires, Argentina

E-mail: informes(at)umsa.edu.ar

María del Carmen Maza

President of ICOM Argentina, Adviser of the Museum and Historical Archive of the Faculty of Law, University of Buenos Aires

Address: Museum and Historical Archive of the Faculty of Law, University of Buenos Aires, Av. Figueroa Alcorta 2263 (C1425CKB), 1er. Piso, Buenos Aires, Argentina; ICOM Argentina, Perú 272 1º piso (1067), Buenos Aires, Argentina

E-mail: museo(at)derecho.uba.ar; presidencia@icomargentina.org.ar www.icomargentina.org.ar

Turning the museum inside out: The biological sciences at Macquarie University, Sydney, Australia

SARA ESTRADA-AREVALO, VICKI MICHAEL & ANDREW SIMPSON

Abstract

New biological sciences laboratories at Macquarie University have a range of advanced learning technologies to cater for large numbers of undergraduate students. This has provided the opportunity to develop an extended series of integrated exhibition spaces. This distributed model of university exhibition work, effectively turning the museum inside out, has not compromised the role of the fixed exhibition space, or museum, within the biological sciences precinct. Instead it has acted as a catalyst for rethinking student engagement with the museum. A working party was established, including student representation, to map collection content with staff expertise.

This project has enabled the development of an enhanced digital presence for the museum where multiple cross disciplinary narratives are being developed around collection objects. The rationale, process and preliminary outcomes are described in this paper. It represents a useful model of student engagement for a museum with restricted space and financial resources in any academic discipline. The processes generated by this change reinforce the primacy of an object-based pedagogy in tertiary education and more closely align collection content with institutional mission.

Introduction: Biology museum context at Macquarie University

When Macquarie University was established in 1964, the biological sciences were one of the foundation departments. The commencement of teaching prompted the need for the development of teaching collections. The biological collections have developed over the ensuing period, but it has only been in the last two decades that the collection has had a small (approximately 170 square meters) dedicated display space and hence museum (PEARCE & SIMPSON 2010). Situated in building E8A, the Biological Sciences Museum is organized with a conventional layout, the collection exhibited in display cabinets within a centralized location.

The museum utilizes traditional natural history exhibition techniques. It was originally designed in consultation with staff of the Australian Museum, one of the nation's largest and oldest natural history museums. It has a strong design aesthetic with standardized red and green colors intended to be representative of the faunal and floral biological realms. This gives the museum a distinctively different and separate atmosphere from laboratories and other teaching spaces within the biology precinct (PEARCE & SIMPSON 2010).¹

Anecdotal evidence from discussions with staff indicate that the original museum design and content were closely linked to units of study in the biological sciences at the time, thus fulfilling teaching support as one of the three broad areas of university museum functions alongside research support and community engagement. While all museums strive to produce dynamic and innovative programs often with meager funding and resources, it can be argued that university museums face additional challenges such as low levels of community awareness and even hindrances derived from the department with which they are associated (SOLINGER 1990).

Since 1964, the museum has only received sporadic and inconsistent support in terms of staff and resources from both centralized (university) and departmental avenues. Furthermore, the nature of units of study that are offered in both undergraduate and postgraduate teaching has changed

¹ Pearce and Simpson (2010) provide images of the current displays and a critique of their content.

dramatically in the intervening period, including a reduced emphasis on specimen based instruction and the integration of new technologies and topics with a biomolecular focus of teaching practice.

The museum currently hosts a number (30 to 35) of school groups visits primarily from adjacent geographical areas (PEARCE & SIMPSON 2010). The number of annual external visitors (700 - 1,000) is roughly equivalent to the current undergraduate cohort studying a suite of academic units some of which use the museum's exhibition resources in formal classes. However, many of these units, particularly new units that have commenced subsequent to the museums establishment, don't integrate the museum into formal teaching time.

As a result of this slow disconnection between the museum and the biological teaching programs, the museum became highly vulnerable despite the many pedagogic (and scientific) advantages of an existing discipline specific museum space and associated collection. The university administration and even from some staff members of the host department argued that the museum's space should be deployed for other purposes because of a lack of relevance to perceived academic needs.

Some perspectives on biological collections

Biological and natural history museums have for a long time been the main types of collecting institutions of biological specimens. These collections are many and varied, held either privately or by large institutions, such as universities or government instrumentalities. The collections have provided scientists with valuable information and our fundamental understanding about life on the planet.

They were once seen as the basis of progressive scientific research, but are now perceived by many as boring and uninteresting, lagging behind in a time when technology advances apace. They face an image problem (ALBERCH 1993). Many older collections were donated or bequeathed, had purpose built facilities to house them and, because of their subject matter, were used mainly by those undertaking descriptive taxonomy. The majority of species catalogued in these collections are usually only the focus of attention when another taxonomist seeks to reclassify them. So their value, apart from a cultural understanding how earlier generations of natural historians perceived the natural world, is often questioned.

University biological and natural history collections appear threatened with extinction. Some museums can be accused of behaving like isolated islands, abstaining from being a part of an ever-changing world. This approach means almost certain extinction. Others have been able to think more creatively and carve out new roles and forms of engagement to ensure survival.

Their collections, their greatest asset, remain the basis for improving and promoting their standing among scientific and public communities. Future directions can be established by considering some of the major problems that beset human society today. For these museums biodiversity, education, research and conservation are obvious foci. Museums must leverage their collections by putting them to work to face these challenges head on.

The Convention on Biodiversity came into force on 29th December 1993 (BEATTIE 1995, 3) recognizing the importance of biological diversity and its present and future value. It encapsulates the living part of the world and its vulnerability to exploitation and misuse. Biologists can turn their attention to assessing the damage already done to biodiversity and seeks ways to halt or slow this. Understanding the past is needed to preserve the potential of the future. The collections of natural history museums provide an insight to the past.

The business of natural history museums has been documentation of the diversity of life. The Earth Summit in 1992 indicated this was possibly less than 15% (ALBERCH 1993). Providing access to these collections for anyone interested in our planet's prospects, rather than just a select few, will help more

people gain an insight and an understanding of the human impact on biodiversity. By studying the history, patterns and processes of organisms at all levels of organization from genes to ecosystems and everything in between (KRISHTALKA & HUMPHREY 2000) the museums' challenge is to provide this data now, so it can be utilized for the future.

"Each specimen is unique and can provide a multi faceted dimension from its locality (spatial), its taxonomy (biodiversity space), and its time (date) – By this we mean 'As collections have aged, the year in which samples were obtained has become increasingly important' " (WINKER 2004).

Raven and Wilson (1992) expressed concern that with the current rate of species loss through extinction, there was only 50 years to solve the biodiversity crisis. Natural history museums need to open up their collections and have them ready to be utilized by researchers and the science community at large. This takes both resources and strategic will and applies equally to university museums and other natural history museums. Collections must be catalogued and made accessible.

Grinnell's idea of the natural history museum as a place where data on the history and distributional ranges of specimens is gathered and maintained has begun to provide much needed information on past life histories of species in decline (GRIESEMER 1990). Winker (2004) says that

"museum specimens are like the canaries in a coal mine, they are used as a biological filter or samples from experiments in natural environments. Not used for which they were originally collected (i.e. taxonomy), but are now becoming increasingly important for the information they can supply."

Winker (2004) believes that specimens have more value than the scientific papers written about them because in ten years the information will be irrelevant, but the specimen will keep being a source of information because the nature of the questions they can help answer will change.

Cotterill (1995) goes one step further and points out that it is not only the need for conservators to protect the integrity of the specimens but the abilities of biologists to interpret the information correctly and to record this information. He is, of course, talking about the continual "availability of human skills to maintain and study the specimens" as collections grow, systematists and taxonomists are in as much a decline as the specimens themselves. Who will be able to identify new species and record this information if no one is trained to do so? The role of a university natural history museum in training future taxonomists is therefore vital.

Opportunity for change at Macquarie

The opportunity to rethink the nature of the Biological Sciences Museum at Macquarie University came about as a result of the refurbishment of adjacent teaching spaces. In early 2006, staff developed a proposal to introduce a new digital microscopy facility that enabled group work and a biometrics capability. Part of the planning involved the acknowledgement that the museum space was under utilized in teaching programs.

The development of multi-use, multi-role functionality of the new laboratory spaces was intended to allow usage by other departments within the Faculty of Science, not just Biology. Any teaching programs from human evolution, psychology, geology and statistics could take advantage of the new teaching facilities.

Funding was secured for a major rebuild of the teaching space in 2007. One of the design elements included the introduction of double glass walls effectively creating new exhibition space along the length of the laboratories' outer walls. This design created an opportunity, therefore, to develop new displays along the main buildings of the biology precinct that could utilize specimens from a range of scientific disciplines. There was strong debate within the biology department about the future of the

fixed display space, i.e. the original museum. Some argued that it should be converted to other uses such as a staff tearoom.

Fortunately, there was a more compelling opportunity to link the museum and its collections with the new teaching spaces. A Biology Museum Advisory Group (BMAG) was formed with membership including biological sciences department academic and general staff, museum studies staff and postgraduate and undergraduate students. Their task was to reconceptualize the museum in terms of the new teaching laboratory development, and modern imperatives for usefully deploying the department's natural history collection.

Reconceptualizing the museum

BMAG has recognized that researchers can not only be valuable to science but they can connect with the community outside the university allowing the general public to see just what sort of research goes on in a higher education institution. Although the museum had been side lined in budget cuts for a number of years, a change in its exhibition potential has been enabled through the involvement of the university's museum studies program.

The original theme of the museum had been *Evolution*, *Biodiversity and Conservation* but the displays in the cabinets had ceased to be maintained and what information there was had not been kept up to date. After consultations with the Australian Museum (the major natural history institution in the state of New South Wales) it was decided that the university's biological sciences' staff could provide a unique focus and research quality for the museum's redesign.



Fig. 1 - An example of Macquarie University arboretum signage. Photo: Andrew Simpson

Apart from the refurbishment of teaching spaces, other projects that have been supported at Macquarie University also provide significant leverage for reconceptualizing the biology museum including the university's arboretum. The university is located in an outer suburban zone of Sydney with a significant remnant of bushland. The university recently provided funding through its Sustainability Office for the development of an arboretum on campus. The Macquarie University Arboretum comprises all the trees and plants on campus. These trees, growing in natural and planted habitats, provide a valuable resource for teaching and research and a pleasing and relaxing environment for the enjoyment of staff, students and visitors to the university. The arboretum also provides habitat for many native birds and animals. There is a network of signage on campus and the development of established walks that focus on campus history and the evolution of plants. These walks are becoming increasingly popular with members of both the campus and general community. Simpson

(2005) wrote about the value of campus surrounds in fostering natural history experiences as a way of generating interest in the environment.

Like the new external arboretum signage, it is proposed that didactic content for internal spaces would be aimed at school children, high school certificate students and undergraduates. Information would

be couched in 'jargon' free terms so anyone who might visit the museum would be able to understand the displays. Researchers will explain their research in an easy to understand and unencumbered fashion. An educational program will be provided so that schools can utilize this information as a supplement to classroom learning. The museum is also developing a website that will contain more content than the displays and hence engage with a variety of audiences with different levels of biological knowledge.

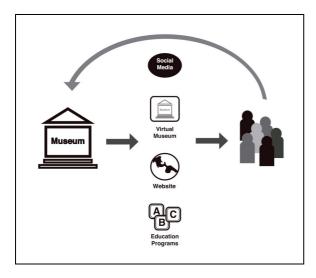


Fig. 2 - Conceptual diagram illustrating the relationships between the museum, the museum's digital presence and prospective audiences. Photo: Sara Estrada-Arevalo

It will provide a description of research being undertaken by academic staff, their recent papers, and the relevance of subject matter to the school curriculum. A virtual tour of the museum for students will be developed allowing access to extended information. Teacher's notes and links to other sites will also be accessible from the website. Having the website will allow those who cannot visit the museum in person to access the same information that those visiting are able, regardless of their level of understanding, thereby providing the same opportunities as walk in patrons, or those utilizing the teaching spaces.

The website will be for many, the first connection to Macquarie's new look Biological Sciences Museum. It is hoped that students from Australia and beyond will utilize the digital resources. Here,

we return to the one problem that besets all museums in today's economic climate; money. BMAG has recognized that establishing virtual access through a variety of social media strategies is more cost effective than expensive changes to the content of physical exhibition furniture.

The museum needs to take it slowly in an effort to get it right from the start. A new museum logo has been designed and some of the new spaces have conceptually formulated, however, these will not become public before all stakeholders are engaged. Loss of interest from schools because information isn't what a teacher wants students to learn could seal the fate of the museum and funds that may have been available will not be forthcoming. So it is imperative that egos within BMAG are not too fragile, because of this bigger strategic picture. Making a success of this venture also requires that the community outside the museum becomes aware of the museum's existence. If schools like what they



Fig. 3 - Proposed new logo for the museum designed by Sara Estrada-Arevalo



Fig. 4 - Conceptual diagram of new exhibition designed by Sara Estrada-Arevalo

see, it is hoped that the museum's existence will be passed on by word of mouth, through teaching seminars and through the university's teaching of degree graduates.

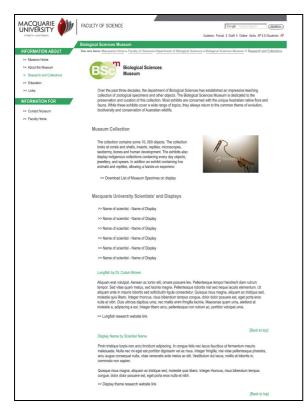


Fig. 5 - Proposed new web design for the museum. Photo: Sara Estrada-Arevalo

Conclusion

We propose that this process of reconceptualizing the museum involves essentially turning the museum inside out from being an inwardly focused unit that was disconnected from the processes of its host department and institution. It is seeking new engagement beyond its original walls by physically extending into the new teaching spaces, developing further lines of engagement through linking with other campus developments such as the arboretum, and extending its virtual presence through new media technologies to engage with a new diverse range of audiences with a primary focus of interesting the public in the urgency of issues around biodiversity and the role that a knowledge based organization can play in answering these new and critical challenges to human society.

We believe this model of reconceptualization can be undertaken by any campus-based museum seeking engagement and relevance with new and existing audiences.

Literature cited

ALBERCH, P. 1993. Museums, collections and biodiversity inventories. TREE 8 (10): 372.

BEATTIE, A. J. (ed.) 1995. Australia's biodiversity living wealth, exploring Australia's plants, animals and micro-organisms. Chatswood NSW: Reed Books.

COTTERILL, F. P. D. 1995. Systematics, biological knowledge and environmental conservation. *Biodiversity and Conservation* 4: 183–205.

GRIESEMER, J. R. 1990. Modelling in the museum: On the role of remnant models in the work of Joseph Grinnell. *Biology and Philosophy* 5: 3–36.

KRISHTALKA, L. & P. S. HUMPHREY 2000. Can Natural History Museums capture the future? *BioScience* 50 (7): 611.

PEARCE, M. & A. SIMPSON 2010. The exhibition of scientific principles: A case study from the Biological Sciences Museum at Macquarie University. *University Museums and Collections Journal* 3: 163–173, edoc.hu-berlin.de/umaci/2010/pearce-163/PDF/pearce.pdf (accessed November 3, 2011).

RAVEN, P. H. & E. O. WILSON 1992. A Fifty Year Plan for Biodiversity Surveys. Science 258: 1099-1100.

SIMPSON, A. 2005. University museums and formative experiences in natural history. In: *Proceedings* of the Third Conference of the International Committee for University Museums and Collections (UMAC), ed. P. Tirrell (Norman OK: Sam Noble Oklahoma Museum of Natural History), 103–108, edoc.hu-berlin.de/umacj/2003/simpson-andrew-103/PDF/simpson.pdf (accessed November 3, 2011).

Solinger, J. W. 1990. Museums and Universities: Choices. In: *Museums and Universities: New paths for continuing education*, ed. J. W. Solinger. (London: Collier MacMillan Publishers), 2–3. Winker, K. 2004. Natural History Museums in a postbiodiversity era. *BioScience* 54 (5): 455–459.

Contact

Sara Estrada-Arevalo

Student, Museum Studies Program (Masters graduate)

Address: Macquarie University, Department of Environment and Geography, NSW 2109, Australia

E-mail: litasa(at)yahoo.com

Vicki Michael

Student, Museum Studies Program (Masters graduate)

Address: Macquarie University, Department of Environment and Geography, NSW 2109, Australia

E-mail: vicki.michael99(at)gmail.com

Andrew Simpson

Director, Museum Studies Program

Address: Macquarie University, Department of Environment and Geography, NSW 2109, Australia

E-mail: andrew.simpson(at)mq.edu.au

Material models as recorders of academic communities: A new project on university collections in Germany

CORNELIA WEBER

Abstract

Transdisciplinary research on university collections is most rewarding. Such studies give insights into the history and the origin(s) of collections and knowledge as well as the material culture of universities. From this perspective, material models in university collections are excellent objects for study. In their dual role as both products and sources of scientific knowledge, models are key instruments of science. Until today, however, a full historical overview of the three-dimensional models employed across the different scientific branches has not been compiled. Against this background, the recently launched project "Material models in teaching and research: Indexing, documentation and analysis of models in university collections" can be considered a seminal research contribution to scientific material culture. It systematically records and documents three-dimensional models in German academic collections, and presents them via a globally accessible multimedia online-database. This article will provide a brief overview of the initial steps and results of this project and recommend transdisciplinary research as a possibility of promoting academic interest in university museums and collections.

Introduction

In 2004, a small team of researchers at Helmholtz Center for the Kulturtechniken, an interdisciplinary center of the Humboldt University of Berlin, started a project headed by the author on *University museums and collections in Germany* to enable transdisciplinary studies which open up a rewarding view on university collections. The aim was to catalogue German university collections and to compile extensive data on the holdings and history of these collections, in order to form a basis for specific research on the history and the origin(s) of collections and knowledge as well as the material culture of universities. The project was officially completed in 2009.¹

Today, the Helmholtz Center provides not only an online survey on the national university holdings with more than 1,000 collections, it also gives information on the different object groups present in the collections: chemical material, geological material, animals, plants, human remains, artifacts etc. Historically, the priorities of university collections have been research and university teaching. Therefore, they retain complete categories and groups of material unavailable elsewhere in the public sector which means that these holdings are unique and of great importance, in particular, for research. One of these object groups is three-dimensional models.

The new project *Material models in teaching and research: indexing, documentation and analysis of models in university collections* started in summer 2010.² It aims at the development and maintenance of an online information system which presents material models from different universities and disciplines. In their double role as both products and sources of scientific knowledge, models are key instruments of science (REICHLE, SIEGEL & SPELTEN 2008; DIRKS & KNOBLOCH 2008). Until now, however, a comprehensive historical overview of the material models employed across the different scientific branches has not been compiled. The systematic recording and documentation of these models in academic collections, which includes their presentation via a globally accessible multimedia online-database can therefore be considered a seminal research contribution to scientific material culture.

¹ www.universitaetssammlungen.de/ (accessed September 15, 2011).

² www.universitaetssammlungen.de/modelle (accessed September 15, 2011).

Academic collections are particularly suited for such a project since the material sources used in and produced by teaching and research have largely been preserved. Consequently, they provide researchers with a representative range of models covering disciplines, types and times (DE Chadarevian & Hopwood 2004). The documentation and analysis of model collections which have up to date remained invisible to the public will not only make available new important resources for research on scientific and cultural history, but also underline the importance of such objects as cultural goods worth preserving.

The model database is integrated in the already established information system on university museums and collections in Germany that serves as a starting point for further research. Later, we want to add additional object groups if funding is obtained.

Preliminary considerations

The idea of this project is based on the following considerations:

- 1. The number of objects kept in university collections is unknown. Many collections are not accessible and even the documented material is mostly registered on record cards, in inventory books or local databases and, therefore, not open to the public and available for global research and teaching.
- 2. University collections hold millions of objects. Therefore, it seems to be prudent to set limits and focus on particular object groups. In this way, it is possible to document heterogeneous holdings independent of disciplines and times, but with thematically closely connected objects and standardized vocabularies.
- 3. The maintenance of university collections is often inadequate. For the digital documentation there is in the majority of cases a lack of the essential technical, personal and financial resources and the relevant knowledge on information science particularly in the numerous small collections. The development of a comprehensive information system that jointly opens up, documents and presents the available resources is thus not just reasonable, but also most efficient. For instance, mass produced objects, which are kept in several collections, do not have to be described several times. For all the other objects it will be sufficient to verify the existent holdings. The greatest advantage, however, is that curators and collection managers do not have to deal with technical and methodical questions. Instead, they can concentrate on the opening up of their assets. For this purpose curators and collection managers can use a professional information system, which does not focus on a single collection, but tries to document the different academic holdings on a transdisciplinary perspective. This is of a great benefit for research and teaching.
- 4. The online information system provides gateways, so that meta data can be imported in supra regional access systems (e.g. in *Europeana*, a multi-lingual online collection of millions of digitized items from European museums, libraries, archives and multi-media collections³).

Model types

Material models serve highly diverse functions in research and education. On the one hand, they represent theories as well as aesthetic and educational standards. On the other hand, they are important tools of scientific research practice as experimental models. Furthermore, they belong to a broad spectrum of disciplines and represent very different object types. For example, the database documents models of theatre stages, planets, ships, brains, and so on. This diversity requires a classification that acknowledges the differences between object types. The database defines eight

³ www.europeana.eu/portal/ (accessed September 15, 2011).

thematic groups which are associated with different information structures and make it possible to take this diversity into account:

- Theatre and stage design models
- Ethnographic models
- Landscape models
- Mathematical models
- Models of buildings and civil engineering structures
- Models of organisms and biological systems
- Models of machines, vehicles, tools, and instruments
- Models of physical, chemical, and crystal structures

The database provides information profiles based on the association of models with specific thematic groups. If a model is linked to the thematic group 'organisms and biological systems', its database entry provides topic-specific options. For example, the user can associate a biological or medical model with a taxon, a specific organ, a type of disease, and so on. If a model is linked to the thematic group 'buildings and civil engineering structures', other options such as the type or the location of the building will become available.

The database

The database is still under construction but already open for the public. The structure we have implemented is as follows:

- A. General information
- B. Formal description
- C. Description of (model) contents
- D. (Description of) Reference object
- E. Inventory evidence
- F. Internal
- A. General information
 - a. Title in German (+ Model name in optional languages): Modell der "Royal George" von 1715 / Ship Model "Royal George" from 1715 / Modélisme naval "Royal George" du 1715
 - b. Original name: Modell eines Dreideckers
 - c. Photograph (incl. information on copyright holder) or picture gallery
 - d. External links (website[s] with further information if available)
 - e. Given options: Individual model, group or series (multiple individual models forming an overall model, e.g. organic development series)
 - f. Model type (e.g. mathematical model or model of living organisms and biological systems)
 - g. Last update of information

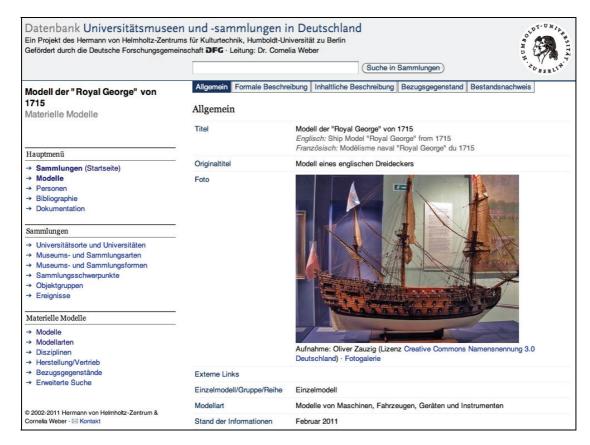


Fig. 1 - General Information: Ship Model "Royal George" from 1715

B. Formal description

- a. Scale (enlargement / reduction / no scale / original size)
- b. Size (width x height x depth)
- c. Weight (gram / kilogram
- d. Material (plaster, wood, glass etc.)
- e. Method of production (hand craft / industrial)
- f. Mode of production (series production / individual production)
- g. Given options: static or flexible/dynamic (yes/no)
- h. Given options: demountable not demountable one piece

Allgemein Formale Beschreib	ung Inhaltliche Beschreibung	Bezugsgegenstand	Bestandsnachweis		
Formale Beschreibung					
Maßstab	Verkleinerung 1:48				
Maße (Breite x Höhe x Tiefe)	Ca. 168 x 135 x 65 cm				
Gewicht					
Material	Holz · Metall · Textiles Material				
Herstellungstechnik	Handarbeit				
Einzel-/Mehrfachanfertigung	Einzelfertigung				
Statisch/Beweglich	Statisch				
Zerlegbarkeit	Zerlegbar				

Fig. 2 - Formal Description

C. Description of contents

- a. Area of research / discipline (e.g. geography)
- b. Designated use (e.g. tutorial, experimentation)
- c. Year of production
- d. Place of production
- e. Production / Distribution (linked to the people or corporation database)
- f. Further information on the model
- g. Publications (linked to the bibliographic database)
- h. Archive material (sales catalogues, drawings etc.)

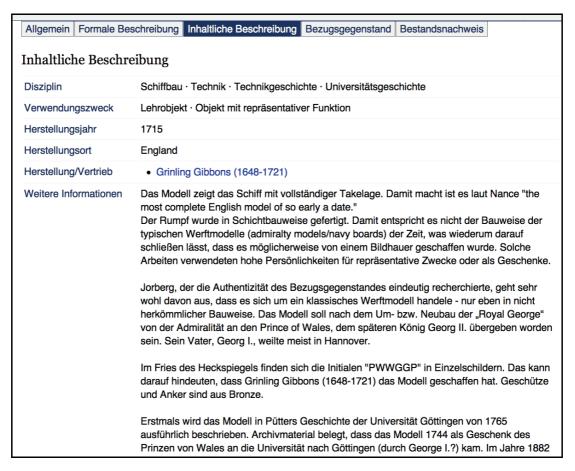


Fig. 3 - Description of contents (top part)

D. Reference object (dependent on the model type)

Example: Models of machines, vehicles, apparatus and instruments

- a. Reference object
- b. Type of device
- c. Kind of propulsion
- d. (Kind of) Commercial sector
- e. Purpose or use
- f. Producer
- g. Place of production
- h. Date of production
- i. (Involved) Person
- j. External links
- k. Description of the reference object

Allgemein Formale Besch	reibung Inhaltliche Beschreibung Bezugsgegenstand Bestandsnachweis
Bezugsgegenstand	
Bezugsgegenstand	HMS Royal George (1715)
Art der technischen Vorrichtung	Fahrzeug
Antriebsart	Windkraft
Wirtschaftssektor	
Zweck bzw. Verwendung des technischen Objekts	Militärisch · Repräsentabel
Hersteller des technischen Objekts	Sir Anthony Deane
Herstellungsort des technischen Objekts	Portsmouth (England)
Herstellungszeit des technischen Objekts	17. bzw. 18. Jahrhundert
Person	
Externe Links	
Bezugsgegenstand Beschreibung	Welches Schiff dargestellt wird, ist letztendlich erst im 20. Jahrhundert eindeutig geklärt worden. In Pütters Beschreibung wird anfangs kein Name erwähnt, nur dass es sich um ein englisches Kriegsschiff mit einhundert Kanonen handelt. Im zweiten Teil schreibt Pütter, dass es sich um die "Victory" handele, was aber nachweislich falsch ist. Friedrich Jorberg, Mitglied des Fachausschusses für Schiffbaugeschichte in der Schiffbautechnischen Gesellschaft, ist es mit Hilfe der Society for Naval Research in den 1950er Jahren gelungen, den Bezugsgegenstand eindeutig zu identifizieren. Bei dem Modell handelt es

Fig. 4 - Reference object

E. Inventory evidence

- a. Name of collection (usually linked to the collection database or to an external collection)
- b. Permanent depository
- c. Current depository
- d. Special status (e.g. missing, orphaned)
- e. Inventory numbers
- f. Old inventory number
- g. Object rights
- h. Restoration / Conservation condition
- i. Use (e.g. presentation, exhibit)
- j. Provenance
- k. Acquisition date
- I. External links
- m. Other

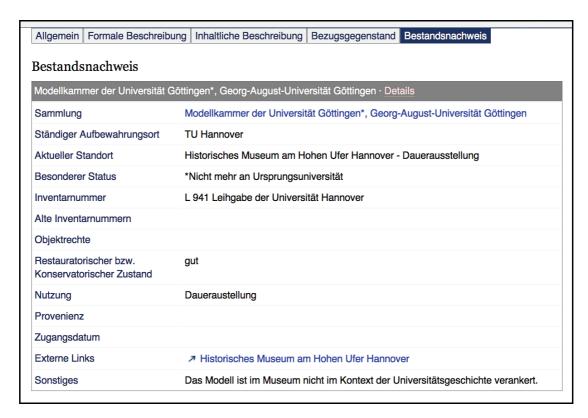


Fig. 5 - Inventory evidence

F. Internal (for various information concerning the workflow)

The main page offers several data-recall facility tools: a full-text search and different indices as well as a combination of various model characteristics:

- Index model types
- Index disciplines
- Index production/distribution
- Extended search (full-text, reference object, type of model, discipline, production/distribution, material, etc.)

Additional details are available via separate databases:

- Literature database
- People database

The literature database contains publications regarding the registered objects. The people database offers bibliographic data of people with relations to the objects: academics, technicians, preparators, model makers, instrument makers, etc.



Fig. 6 - Main page

Closing remarks

The development work is already completed and the system is open for everybody who wishes to enter data: researchers, curators and collection managers. It is intended to finish the data base project in summer 2012. Thereafter, it will be a great source for all kinds of research. In this way we can not only promote research on 'things that talk' (DASTON 2008) but also on university museums and collections in general.

The concentration on specific object groups is not only an appropriate way to open up university collections, it is also an efficient method to enable comprehensive transdisciplinary research on important holdings. Therefore, we should try to pursue an international database for specific object groups such as material models or devices in academic collections worldwide.

Literature cited

DASTON, L. (ed.) 2008. Things That Talk. Object Lessons from Art and Science. New York: Zone Books.

DE CHADAREVIAN, S. & N. HOPWOOD (eds.) 2004. *Models: the third dimension of science*. Stanford, Calif.: Stanford University Press.

DIRKS, U. & E. KNOBLOCH (eds.) 2008. *Modelle*. Frankfurt/Main: Peter Lang.

REICHLE, I., S. SIEGEL & A. SPELTEN (eds.) 2008. Visuelle Modelle. München: Wilhelm Fink Verlag.

Contact

Dr Cornelia Weber

General Manager

Helmholtz Center for the Kulturtechniken

Humboldt University of Berlin

Address: Unter den Linden 6, 10099 Berlin, Germany

E-mail: weber(at)mathematik.hu-berlin.de www.kulturtechnik.hu-berlin.de/weber/engl

A special exhibition about research projects – a new form of scientific communication

GABRIELE PIEKE

Abstract

As part of a recent development, special exhibitions can now be funded by research money in Germany. In this context, an interdisciplinary research association which investigates ancient civilizations from the 6th millennium BC to Late Antiquity under the title of "Topoi – The Formation and Transformation of Space and Knowledge in Ancient Civilizations" at Berlin, organizes its own special exhibition. It will display state of the art research temporarily to a wider public in summer 2012.

Introduction

A main task of university museums and collections has always been the linkage between research and a communication with the audience. As part of the large research group *TOPOI – The Formation and Transformation of Space and Knowledge in Ancient Civilizations*, several universities in Berlin and the Staatliche Museen zu Berlin are currently preparing a big special exhibition, which is designed to present their current scholarly results, at least temporarily, to a broader public.

It is a very recent development that the Deutsche Forschungsgemeinschaft, the German Research Foundation, has opened the possibilities for special exhibitions to be funded by their granted research money. The funded exhibition should of course aim to display state of the art research. The Berlin exhibition project emerges directly from the 'Excellence Initiative' of the German Research Foundation and the creation of large interdisciplinary working groups in order to enhance the quality of German universities and research institutions. As a result, so called 'Clusters of Excellence' have been created as the biggest entities of scientific projects in Germany. In this context more and more grant applications include a public presentation of their current research in form of a special exhibition with the objective of imparting their knowledge to the communities.

Under the main title *Topoi*, an interdisciplinary research association currently investigates ancient civilizations from the 6th millennium BC to Late Antiquity in Berlin. More than 200 scientists from diverse disciplines – such as ancient history, philosophy, linguistics, Egyptology, classical archaeology, prehistory, ancient Near Eastern studies and so on – investigate the formation and transformation of space and science in about 50 research groups pooled in five research areas. The applicant institutions are the Freie Universität Berlin and the Humboldt-University of Berlin. There is an important group of further participating institutions, like the Berlin-Brandenburgische Akademie der Wissenschaften or the Deutsches Archäologisches Institut (DAI). A main partner is also the Stiftung Preussischer Kulturbesitz with its famous collections of antiquities mainly based on the Museum Island in Berlin.

As part of this project there is also a research group called *Museum* which aims to assess how and with what effects ancient spaces, spatial imaginations, and spatial concepts are constructed, transformed, and received in exhibitions and museums. These investigations include a comparative approach to the tradition of the presentation of ancient cultures in museums and its impact on knowledge and thought about the ancient world. The group also seeks to survey and compare recent strategies and technologies of presentation in order to develop an appropriate strategy for further exhibitions and presentations.

In addition a special working group is in charge for the concept and organization of the special exhibition, which will present some relevant fields and research topics to a wider audience. The

planned venue is June to September 2012 in the Pergamon Museum on the Museum Island, hence in a close connection to the permanent exhibitions of the classical antiquity and ancient Near Eastern collections. As the Freie Universität and the Humboldt University are short of own university museums in the relevant fields, the exhibition has to be based on a close cooperation between the different collections of antiquities belonging to the Staatliche Museen / Stiftung Preussischer Kulturbesitz and the participating universities in Berlin. It is intended not only to strengthen the traditional alliance between the museums and universities, which dates back to their foundation in the 19th century, but in particular to present current scholarly results at least temporarily to a broader public. Thus, in the early days of the Humboldt University for example there was a close staff union in the archaeological fields and, for example, the professors for classical archaeology or Egyptology were at the same time directors or chief curators.

The exhibition

It is obvious that an exhibition on approximately 1,200 square meters cannot present each of the 217 research results and there are also some thoroughly theoretical questions which are not possible to be presented to a general audience. Therefore the decision has been made for the exhibition to focus on some main problems and themes which are representative, and not on the single research projects. The presentation under the title *Beyond horizon – Space and knowledge in the Ancient World* will start with an introduction and general overview on the period of time and dominions with which *TOPOI* is dealing, as well as a general overview on the relevant period of time and dominions, thus focusing on the Mediterranean region and central Europe.

The first room presents the general formation and transformation of space represented by the example of the Palatin Hill at Rome, beginning with the very first Casa romuli (Romulus hut) and the modulation of the several stages of construction during the Republican period (510–44 BC) and the Roman Empire (27–475 AD). A film and 3D-models display development and separate phases of the site.

Next to this the exhibition continues with the topic of discovery, use and control of space in a hall which shows results of some projects where archaeologists and geographers work hand in hand: they examined, for example, core samples which provided insights about the climate in a particular place during a certain period of time, and thus tell us whether a place was suitable for settlement or not or how the ancient civilizations dealt with the environment.

The invention of the first writing systems in the ancient Near East is of importance for the accumulation and transmission of knowledge in antiquity. Languages and texts play a key role in archiving and imparting knowledge, like cuneiform tablets in Babylon or papyrus in Egypt.

The next sub-theme is the observation of the sky. Knowledge about star constellations, phases of the moon and related aspects are attested on a very high level in many ancient civilizations and a number of objects, like circular ditches in Europe, papyrus scrolls or cuneiform texts document this expert knowledge. Further key objects like the famous *Berlin Gold hat* and a master copy of the *Sky disc of Nebra* illustrate the importance of sky observation and celestial phenomena also in preliterate culture.

The next room is dedicated to the major topic, measurement. Starting with a mise-en-scène of a Roman country road and presenting a copy of an antique measurement cart, a milestone and equipment like a groma, the principal Roman surveying instrument, it further exhibits weights, scales, linear measures, measures of capacity and time, like sundials or a water meter, in the relevant civilizations.

Another section represents the *Divine order of space* and deals with questions of the creation of the world, mythological ideas and the shape of celestial and earthly phenomena. A huge number of deities in different cultures are correlated to spatial issues such as sky, earth, sun, moon or water and weather. Good examples are Helios, Selene or Luna for the classical world or the Egyptian sun god Ra or the sky goddess Nut. The following smaller room displays the travel activities of deities and heroes like Gilgamesh or the Greek hero Heracles exploring the world through to its end. A copy of the Trundholm sun chariot is interpreted as a depiction of the travelling sun being pulled by a horse, while an Egyptian papyrus with the *Book of what is in the Underworld* illustrates the sun god Ra passing the twelve hours of the night.

The main room is devoted to the theme *Mapping the world*. Maps serve in general for the purpose of orientation and organization of knowledge. The chosen graphical layout and different forms of representations of knowledge are based on different prospects and various contexts. Displayed key objects are the oldest known map of the world from ancient Babylonia dating back to the 9th century BC and the Tabula Peutingeriana, showing the road network in the Roman Empire in an 13th century copy of an original map dating from the 4th century. For the ancient Egyptian culture, a facsimile of the *Turin Goldmine Papyrus* illustrates the oldest geological map dating back to about 1160 BC, next to different mythological maps painted on a coffin and papyrus focusing on the topography of the underworld.

Another subject labeled *Mapping body and soul* deals with a very different kind of space, the areas and parts of the human body. A focus in display lies on the work of the Greek physician, surgeon and philosopher Galen (129–199 AD), who was the personal physician to several Roman emperors. His opus magnum is the *methodi medendi* in 16 books. In addition medical instruments and texts demonstrate the approach of ancient Babylonia, thus meeting with aspects of religion and magic, whereas the Egyptians believed that a person has several components of a soul and physical body and that the heart was the seat of consciousness and mind.

Also curses and protections deal with the aspect of space, like the Greek (6.–4. century BC) curse panels made of lead. Their texts speak of tying up the enemy, or better parts of them. On the other hand many different kind of positive evocation magic is used for protection of rooms, areas or also the netherworld like watcher snakes and figurines places at each wall and Egyptian execration texts or proscription lists naming the enemies of the country. These inscribed bowls were subsequently destroyed to induce its magical protections.

Furthermore the orientation within a space is closely related to the knowledge of items, which were deciphered by trained specialists or priests. Thus certain parts of the body were closely related to oracle or the reading of signs and for the Babylonians the liver was a key organ, with a function as a microcosm in which the will of gods manifests itself. In addition astral signs were used for horoscopes or apotheosis, for instance with the famous Gaius Iulius Caesar.

A comprehensive field is, of course, cosmology, based on sky observation and overlapping with the divine order. At the same time it is connected to the interpretation of time and calendar systems. From detailed drawings of the sky, the zodiac system of the celestial sphere up to the Antikythera mechanism (150–100 BC), there are many stories to tell concerning this topic.

A rather less complex field are the sound spaces, illustrated by a number of original musical instruments like harps, lyras, flutes, rattles or wind instruments being used in ensembles. Further some reconstructed instruments show the ways and working of ancient notation and musical systems. Audio examples and films give the audience the opportunity to experience the sound itself and comprehend the importance of performances during processions.

The exhibition ends with the subject of the research group *Museum* and presents the reconstruction of ancient architecture and space in context of museums. 18th century cork models, different ideas for the reconstruction of mosaics or the Ishtar Gate, as well as current considerations in the process of a new display for the architecture collection in the Pergamonmuseum are emphasized in this room.

Contact

Gabriele Pieke, PhD

Curator, Staatliche Museen zu Berlin, Stiftung Preussischer Kulturbesitz

Address: Humboldt-Universität zu Berlin – Excellenz Cluster Topoi, Hannoversche Strasse 6,

10099 Berlin, Germany

E-mail: gabriele.pieke(at)topoi.org

POMUI. The web portal of Italian university museums

ELENA CORRADINI

Abstract

In recent years Italian university museums have faced difficult times as funding has become difficult and usage has declined. The situation was degenerating into a crisis. A solution was needed. How could the isolated, individual museums be re-vitalized into a sustainable, useful, accessible, cooperative group?

The answer was to build a digital gateway: a computer web portal through which teachers, students, academics and the general public can visit the individual collections digitally, while the curators are free to concentrate on preservation, cataloguing, research and display.

The web portal was developed at the University of Modena and Reggio Emilia during a course in computer cataloguing for the valorization of cultural heritage. It is called POMUI (POrtal MUseums Italian).

The use of POMUI will help preserve Italian heritage, promote university museum and contribute to social networking.

The crisis of university museums: The vision and the strategies

To face the crisis, Italian university museums must overcome centralist models of cultural heritage management and design a management model that is participatory, sustainable, subsidiary and accessible.

Participation: based on the involvement of the community and on voluntary intervention of those interested in giving support, such as students and citizens through their internship activities.

Sustainable: public intervention integrates ideas and resources coming from voluntary contributions. Many university museums make their resources available to address sustainability issues. The synergy between public and private actions can enhance the sustainability of museums and the management of their cultural heritage.

Subsidiary: confers upon museums the role of cultural garrison for the cultural heritage spread on the territory.

Accessibility: making university museum collections accessible to the widest possible audience is both an academic necessity and a social responsibility (CASATI 2006).

It is important to rethink the values for a contemporary society, to look for new solutions and remedies for past errors, to build new ways of life and models of civilization, to develop new projects and visions, and to value the past and what it teaches us. University museums, with their unique histories, activities, and staff, are a true heritage at the service of this deep rethinking. University museums are seen as authorities on the collections that they preserve. They are cultural subjects aiming at producing, preserving, safeguarding, valorizing, promoting and spreading the culture in each sector (Thomas & Cuenca 2010). Old development models have now reached a critical point: in today's information society and globalized world a well-organized museum and cultural heritage system represents a competitive advantage.

Working in a digital network

The ability of Italian university museums to work in a network, to promote local systems – territorial and virtual – and to valorize the available knowledge is a contrast ratio of the crisis. Network collaboration not only favors economic synergies, but it is also a fundamental cultural choice, a commitment to be more and better centers of knowledge production, activities, and services. In this context it is essential to create an interactive environment, specialized in spreading information and educational activities through the digital network: online access can break down geographical and physical barriers. The digital network is characterized by an ubiquitous and connective nature. The dematerialization of real objects allows us to keep the valorization and diffusion of them separate from their preservation. Creating a digital network of Italian university museums is a relatively simple and practical way to overcome differences and to better fulfil their mission, to group active forces and to promote exchanges between them and other institutions, to display virtually far more material than they could otherwise be displayed physically (Pugnaloni 2003).

There are two main objectives for a digital network: a public one, to build a strong image as a network in order to gain visibility and recognition; and a private one concerning the administration and the scientific issues related to safeguarding, preserving, documenting, managing, valorizing and diffusing the rich heritage materials of the collections (GASPARON & NYST 2006, 48). Thanks to the relations retrieval process, the web has endless possibilities for valorizing cultural heritage because it is a place for communicating contents to the general public and to specific target audiences (DUFF ET AL. 2010): the web provides the means for democratizing heritage.

In a new collaborative dimension the social media – the set of specialized tools designed to generate social interaction born from the Web 2.0 – started a cultural and knowledge revolution: it contributes to the construction of contemporary intangible heritage around the world in which the user or 'museum visitor' becomes an actor and interacts with the museums to further document them (MASSÉ & HOUTART MASSÉ 2010, 91). Social networks can help university museums to get to know their online audience, which is difficult to measure, and it is fundamental to design new strategic plans for them.

It is necessary to begin studying the diffusion of the new web interfaces based on the reference community, in order to examine the possible role that Italian university museums can play in the information society, especially within virtual communities. The community of museum professionals can take on an active role, producing cultural content, activating social tools, and designing interfaces for contents suitable for Web 2.0, that is to say, a new set of standards and services.

The community can reflect on possible dynamics related to changes in the way we use the internet to access cultural content of university museums on the web.

It is possible to argue that the internet and new communication technologies, unlike traditional media, promote a fluid approach to information, which means a greater openness and sharing in order to spread knowledge. In recent years the development of Web 2.0 has enabled greater participation by allowing users to create and share contents (SIMON 2010).¹

It is necessary to promote within Italian university museums the use of Web 2.0: it provides a set of applications that have made it easy, intuitive and free, to produce, provide and share online text content, photographs, audio-visuals, often constructed and manipulated by the users. It is important to remember that interaction and knowledge sharing help develop relationships based on interpersonal exchange processes and can also activate pathways of social learning where knowledge flows in all possible directions. Knowledge, therefore, is no longer hierarchically constructed but rather democratically conceived. What defines the success of the new platforms or the social networks like

¹ www.participatorymuseum.org (accessed September 19, 2011).

Facebook, Twitter, YouTube, Flickr or MySpace is the level of sharing in creating contents that are immediately available to other users with similar interests or similar areas of competence. Almost all platforms have a personal profile associated with blogs, photos, videos, chats and instant messages sent as text content.

Through the use of such tools, Italian university museums can draw on different strategies and communication media to highlight their activities and support the discussion and dissemination of new contents related to specific or temporary projects applications for iPhone, iPod, iPad; e-readers can also be used as town guides for museums or as GPS navigators on cultural visits.

The creation of POMUI, the web portal of Italian university museums

The web portal of Italian university museums POMUI² is the result of a first research undertaken at the University of Modena and Reggio Emilia within the master's course in computer cataloguing for the promotion of cultural heritage³.

POMUI is a new web entity that brings together all of the existing Italian university museum web portals and web sites and creates a new connection among them to enhance their overall visibility. It is intended to serve as a vehicle for information, knowledge and services, while highlighting the unique qualities of each University in presenting its museums online.

In particular, services are intended as the added value to those offered by individual museums, in response to the *Orientation act on technical-scientific criteria and standards of management and the development of museums decree of the Ministry of the Culture of 10 May 2001* where in section VII, *Relationship with the public and related services*, it states that "for each communicative and informative aspects one must bear in mind the growing importance of remote communication, in particular through the internet, aimed at making scientific and practical information available before and after the visit to the museum".

Italian university museums, like libraries and archives, must be aware of their role as a source of institutional information and a tool for spreading knowledge: the opportunity for offering users a clear and effective selection of contents with useful services for the public becomes highly important.

A web portal is a tool that offers services of complex interaction to its users. It is usually based on contents placed within other cultural web applications that can be selected by users through a special search engine. A web site is a more simply structured set of web pages that provides contents and services, without necessarily offering advanced navigation and research tools.

POMUI is a horizontal portal addressed to a wide audience: museum staff, museum specialists, university students and professors, and the general public.

It serves as an access system to the cultural heritage of Italian university museums, an experimental pole offering new ways to produce, interact, spread, and exchange university historical and scientific knowledge, a resource for the research community that enables democratization of knowledge and raises the social profile of scientific work and those who undertake it professionally. Moreover, it becomes a meeting place where teachers, students, academic and cultural institutions, social actors, and citizens can come together to contribute to the promotion and preservation of Italian university heritage (CASTELL 2009).

² www.pomui.unimore.it (accessed September 19, 2011).

³ www.cibec.unimore.it (accessed September 19, 2011).

POMUI aims to become the point of access for those who use the internet as a virtual clearinghouse of institutional information about Italian university museums, highly recognizable and identifiable, while promoting the visibility of its contents.

The *mission* of POMUI is complex and determined by the way in which knowledge is organized as well as the needs and expectations of users, faced with the multifaceted, information-rich universe of each university museum. Understanding users' expectations and endeavoring to meet their needs in order to win their loyalty is a primary mission of both the individual cultural institution that wants to create its own web site and of more complex entities that think of the web portal as a source of knowledge and services.

Good practices nationally emphasize two interesting features for the creation of POMUI: the attention paid to public communication as reflected in the structure and internal organization of the portal; the attention given to contents as a cultural stimulus. The contents are therefore retrieved, sorted, referred and selected by the web portal and then serve as a cultural stimulus, which unlike cultural information, relates to the knowledge processes that the user can activate starting from the informative data provided by the web portal.



Fig. 1 - Homepage

POMUI must consider the validity, affordability and significance of the resources that it collects and must also ensure their appropriate maintenance and management. The selection and evaluation of resources to be included in POMUI must meet specific technical and scientific criteria, aimed at quality: as soon as a web page or other digital resource is included in the web portal, it becomes an agent in the cultural project that POMUI envisages.

Phases of the research

Phase 1 – Web portals and web sites of Italian university museums

The first phase of the project was to look for web portals and web sites of Italian university museums. This survey showed that there were four different types of Italian university museums:

- 1. University museums portals are those websites defined as such, even if they do not display the standard features and functions of portals. Most of them are web sites that collect links for an individual university museum or other similar resources concerning the same thematic or cultural issue. As a matter of facts, these portals are not information collectors nor do they provide tools for researching, indexing contents, and surfing related web sites;
- 2. Web sites of complex organizational/managerial structures, where university museums and collections are grouped together (centers or systems);

- 3. Web pages within the main university web site, collecting and presenting information on museums and collections. These web pages provide a brief description of the museum structure and/or a list of links to specific university museums web sites;
- 4. Individual web sites for each university museum.

Italian university museums on-line have mainly used a broadcast information distribution model, as is typical for Web 1.0: this means that the contents are created and distributed by the institutions through the web.

Like in Germany (WEBER 2009, 34), the majority of web portals and web sites under examination have a low interactive capability but provide users with a high quantity of contents: in this context users tend to have the same passive attitude as they would otherwise have while visiting a museum.

A few Italian university museums offer catalogues or databases which, in most cases, are of interest only to expert users. The internal university public, however, which should be one of the main communities for university museums, seems to be of no relevance.

The present situation shows a lack of vision concerning the impact of consequences of the quick transformation process started through the use of digital technologies within the cultural heritage field: although this situation is slowly changing, most Italian university museum web sites are very content-light, only listing events, activities and directions for how to get to them (CARNALL 2009, 37). Currently, social networks are used by only a few university museums like the *Museo di Storia Naturale* in Florence, the paleontological collections at the universities of Chieti and Pescara and a few other museums that use only Facebook.

Phase 2 – Evaluation of web portals and web sites of university museums

An evaluation of web portals and web sites of Italian university museums using the *Museum and Web* kit,⁴ created as part of the MINERVA European project,⁵ aimed to create quality and accessible web sites for small and medium-sized cultural institutions. The MINERVA European project defines the guidelines for creating digital content and designs a *Good Practice Handbook* for enhancing the interoperability of digital resources.

In particular the section *Quality check* of the *Museum and Web* kit has been designed for the museum's web site self-evaluation, and the sub-section *Objectives evaluation* is essential for evaluating its contents. There are twelve objectives: 1. Museum identity; 2. Museum activities; 3. Museum goals; 4. Role effectiveness in the sector; 5. Standard rules; 6. Dissemination of cultural contents; 7. Supporting cultural tourism; 8. Educational services; 9. Research services; 10. Services for professionals; 11. Purchasing and booking services; 12. Promoting on-line communities. Each of the objectives incorporates a set of practical tests that can help to verify the existence of a series of aspects (from 4 to 12, according to each objective).

Phase 3 – Showing the results

In the third phase of the project, the results are shown following three steps: 1) evaluating single requirements: response to practical tests. Each test had a response in order to evaluate the level of satisfaction for each requirement corresponding to a different value: for complete satisfaction, the score was 1, for partial satisfaction the score was 0.5, for an absolute lack of satisfaction the score was 0; 2) evaluating the objectives: for each objective, all responses have been summed in order to get a figure – and consequently a percentage – that could represent the level of single-objective fulfillment; 3) evaluating the portal/web site: all figures obtained for each objective have been summed

⁴ www.minervaeurope.org/structure/workinggroups/userneeds/prototipo/museoweb.html (accessed September 19, 2011).

⁵ www.minervaeurope.org (accessed September 19, 2011).

in order to get a general indicator of content quality for each web site and then converted into a percentage.

Phase 4 – Presentation of the POMUI

Each web portal or website of complex organizational/managerial structure of Italian university museums has its own card (a page within the POMUI) that collects the essential reference data for the museums – name, reference structure, address, url – and the percentages for each quality objective derived from the *Quality check* survey according to the *Museum and Web* kit.

Further developments of the POMUI

The development of the POMUI represents an important turning point for the Italian university museum community presence on the web. For the first time the community has available a system built from the connection of already existing web portals, web sites and web pages. POMUI hopes to find its own place within the web's new horizons based on the principles of cooperation, interoperability and data reusability.

By developing integrated access tools and providing essential information on the nation's university museum heritage, POMUI ensures museums greater visibility and enhances their specific characteristics, even with the diversity of presentation on the web (VITALI 2010, 53-55).

More specifically, further steps of the project include developing:

- a database of bibliographic resources related to Italian university museums and collections;
- research guides, virtual tutorials and other materials for different audiences (teachers, students, genealogists, historians), including novices and unskilled users;
- specific thematic sections or sub-portals that describe and provide access to different university museums and collections;
- editorial and multimedia contents, including news, virtual exhibitions, photo galleries and so on to illustrate the multiple aspects of university museums and collections;
- customized web pages for hand-held internet portals such as mobile phones, iPhone, iPod, iPad, e-reader or the latest generation of hand-held game consoles;
- Web 2.0 tools for communicating with the users of the portal, allowing them to collaborate in creating its contents and enabling them to build communities related to specific topics and research projects.

In a future perspective of a semantic web, cultural web portals will need to have an architecture that is based on multilingual thesauri and common ontologies in order to make the quality of their contents become an intrinsic value for new digital resources that face the web. The thesauri together with controlled dictionaries and authority files are useful tools for cataloguing contents and for sharing terminology: choosing and cataloguing the materials to be included within the public cultural portal is a crucial element in instilling quality on the portal itself.

The suggestion to use Web 2.0 highlights the difference between the first stage of development of the internet – characterized by a relative static quality – and developing a future in which, thanks to the diffusion of new platforms and communication infrastructures, more dynamic and interactive qualities are fore grounded.

The social tools and interfaces for designing contents typical of Web 2.0 represent a significant change in the way we use the internet and a new set of standards and services. The pattern that emerges can be defined as a multi-channel model, where the web – through its distributed networks and especially through its social networks – connects not only to cultural institutions and their users, but also to individuals. New digital technologies and on-line communities will help to create virtual

places for Italian university museums, without limits of time or space, places where anyone interested in a particular topic can share and discuss experiences, thereby contributing to the growth of 'wikicracy' and closing the gap between Italian university museums and society (COTTICA 2010).

Concluding remarks

POMUI, the web portal of Italian university museums, creates connections among individual institutions and creates a unique virtual structure that is identifiable and recognizable. It is characterized by a unique and coordinated image, and central actions for the promotion and valorization of cultural heritage. In so doing, it coordinates and gives cohesion to single museum web portals, web sites and web pages.

POMUI should be considered the first step towards creating a series of connections and links across Europe, in particular the MICHAEL project (Multilingual Inventory of Cultural Heritage in Europe), ⁶ a continent-wide project which aims to provide simple and quick access to the digital collections of museums, libraries and archives from different European countries and the *Europeana* project ⁷ that enables people to explore the digital resources of Europe's museums, libraries, archives and audiovisual collections and promotes discovery and networking opportunities in a multilingual space where users can engage, share in and be inspired by the rich diversity of Europe's cultural and scientific heritage. Therefore, POMUI aims at promoting virtuous pathways for designing international projects, discussing systems for standardizing methodology, and for sharing best practices, projects, and ideas within a synergetic framework.

Acknowledgements

I would like to thank Daniela Nasi, Silvia Rossi, and Sara Uboldi of the University of Modena and Reggio Emilia for their valuable assistance and collaboration.

Literature cited

- CARNALL, M. 2009. Chasing the online audience. *University Museums and Collections Journal* 2: 37–39, edoc.hu-berlin.de/umacj/2/carnall-mark-37/PDF/carnall.pdf (accessed September 19, 2011).
- CASATI, S. 2006. Convegno: Cultural Heritage on line. The challenge of accessibility and preservation. *Digitalia. Rivista del digitale nei beni culturali* 1: 159–163.
- CASTELL, E. 2009. Accessibility to university museums: A strategical objective. *University Museums and Collections Journal* 2: 95–97, edoc.hu-berlin.de/umacj/2/castell-edmon-95/PDF/castell.pdf (accessed September 19, 2011).
- COTTICA, A. 2010. Wikicrazia. L'azione di governo al tempo della rete: Capirla, progettarla, viverla da protagonisti. Marsala: Navarra.
- DUFF, W. M., J. CARTER, C. DALLAS, L. HOWARTH, S. ROSS, R. SHEFFIELD & C. TILSON 2010. The museum environment in transition: The impact of technology on museum work. In: *Cultural Heritage on line. Empowering users: An active role for users communities*, eds. C. CIRINNÀ & M. LUNGHI (Florence: Fondazione Rinascimento), 103-105, www.rinascimento-digitale.it/eventi/conference2009/proceedings-2009/ Proceedings-conference2009.pdf (accessed September 19, 2011).
- GASPARON, D. & N. NYST 2006. Le Réseau des Musées de l'Université libre de Bruxelles (ULB): une initiative originale dans le contexte universitaire. *Opuscula Musealia* 15: 47–52, <u>edoc.hu-berlin.de/umacj/2005/gasparon-47/PDF/gasparon.pdf</u> (accessed September 19, 2011).

⁶ www.michael-culture.org (accessed September 19, 2011).

⁷ www.europeana.eu (accessed September 19, 2011).

- MASSÉ, A. & W. HOUTART MASSÉ 2010. Online collaboration and knowledge dissemination for university collections. *University Museums and Collections Journal* 3: 91–95, edoc.huberlin.de/umacj/2010/masse-91/PDF/masse.pdf (accessed September 19, 2011).
- PUGNALONI, F. 2003. The future of university museums system in Italy. *Museologia* 3: 51–54, <u>edoc.huberlin.de/umacj/2002/pugnaloni-51/PDF/pugnaloni.pdf</u> (accessed September 19, 2011).
- SIMON, N. 2010. *Participatory museum*. http://www.participatorymuseum.org (accessed September 19, 2011).
- THOMAS, Y. & C. CUENCA 2010. Saving our contemporary scientific and technical heritage with a safeguarding methodology. *University Museums and Collections Journal* 3: 97–103, edoc.huberlin.de/umacj/2010/thomas-97/PDF/thomas.pdf (accessed September 19, 2011).
- VITALI, S. 2010. The SAN Portal: A common gateway to Italian archival resources on the Web. The National Archives Systems. In: *Cultural Heritage on line. Empowering users: An active role for users communities*, eds. C. CIRINNÀ & M. LUNGHI (Florence: Fondazione Rinascimento), 51-55, www.rinascimento-digitale.it/eventi/conference2009/proceedings-2009/Proceedings-conference2009.pdf (accessed September 19, 2011).
- WEBER, C. 2009. Web communication. A content analysis of German university collections and museums websites. *University Museums and Collections Journal* 2: 33–35, edoc.huberlin.de/umacj/2/weber-cornelia-33/PDF/weber.pdf (accessed September 19, 2011).

Contact

Elena Corradini

Professor of Museology and Artistic and Restoration Critique; Director of the master's course in computer cataloguing for the valorization of cultural heritage

Address: Università di Modena e Reggio Emilia, Largo S. Eufemia 19, 41121 Modena, Italy E-mail: elena.corradini(at)unimore.it

www.pomui.unimore.it

The University Museums and Collections Journal (UMACJ) is a peer-reviewed, on-line journal for the proceedings of the International Committee for University Museums and Collections (UMAC), a Committee of the International Council of Museums (ICOM). The journal appears at least once a year. http://edoc.hu-berlin.de/umacj

Editors

Nathalie Nyst Réseau des Musées de l'ULB Université Libre de Bruxelles - CP 175 Avenue F.D. Roosevelt, 50 1050 Brussels Belgium

Peter Stanbury
Australian Society of Anaesthetists
Suite 603 Eastpoint Tower
180 Ocean Street
Edgecliff, NSW 2027
Australia

Cornelia Weber Humboldt University of Berlin Hermann von Helmholtz-Zentrum für Kulturtechnik Unter den Linden 6 10099 Berlin Germany

Copyright

© International ICOM Committee for University Museums and Collections http://umac.icom.museum

ISSN 2071-7229