Museologia - an international journal of museology

Vol. 2, Nr. 1-2 (Special issue)

Museu de Ciencia da Universidade Lisboa
Lisboa
2002

MUSEOLOGIA

an international journal of museology

ISSN 0874-8055

Volume 2 Number 1-2

Spring 2002

Museu de Ciência

Universidade de Lisboa

MUSEU DE CIÊNCIA
UNIVERSIDADE DE LISBOA

MUSEOLOGIA
an international journal of museology

Política editorial/Editorial policy
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ISSN 0874-8055
Depósito legal 156678/00

Printing/Impressão
Ciência Gráfica

Propriedade/Ownership
Museu de Ciência da Universidade de Lisboa

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VOLUME 2 No.1-2 (SPECIAL ISSUE) SPRING 2002

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Volume 2, Special issue, Spring 2002

MUSEOLOGIA – an international journal of museology

(ISSN 0874-8055)
Published by Museu de Ciência da Universidade de Lisboa.
Publicada pelo Museu de Ciência da Universidade de Lisboa.

Editorial Address/*Morada Editorial:*
Museu de Ciência da Universidade de Lisboa
Rua da Escola Politécnica 56
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http://www.museu-de-ciencia.ul.pt/museologia
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Subscriptions/*Assinaturas*:
Museologia can be obtained through subscription or exchange (1 volume, 2 issues). *A revista* MUSEOLOGIA *pode ser obtida por assinatura ou permuta. A assinatura é efectuada por volume (2 números).*

Subscription fees per volume for Portugal/*Preços de assinatura por volume para Portugal*: 20 EURO (Individuals), 10 EURO (Students), 15 EURO (ICOM/APOM/UL/AAMC Members/UL staff), 30 EURO (Institutions), and 25 EURO (ICOM/APOM/AAMC Institutional Members).
Subscription fees per volume for the EU/*Preços de assinatura por volume para a UE:* 30 EURO (Individuals), 25 EURO (Students), 25 EURO (ICOM/APOM/AAMC Members/UL staff), 75 EURO (Institutions), and 65 EURO (ICOM/APOM/AAMC Institutional Members).
Subscription fees per volume for other countries/*Preços de assinatura por volume para o resto do mundo*: 35 EURO (Individuals), 30 EURO (Students), 30 EURO (ICOM/APOM/UL/AAMC Members/UL staff), 90 EURO (Institutions), and 80 EURO (ICOM/APOM/AAMC Institutional Members).

Payment can be made via cheque in euros or credit card. Please see subscription form in this issue. Back issues, changes of address and requests for exchange should be sent to the editorial address. *O pagamento pode ser efectuado através de cheque em euros ou cartão de crédito (cf. formulário de assinatura neste número). Os pedidos de números antigos devem ser dirigidos para o endereço, fax ou correio electrónico indicados em cima, bem como alterações de endereço e pedidos de permutas.*

Cover Design/*Edição Gráfica*: Graça Ramalho

Make-up artist/*Paginador*: João Pequenão

MUSEOLOGIA is printed in recycled paper in Portugal with the support of FUNDAÇÃO DA UNIVERSIDADE DE LISBOA.

MUSEOLOGIA
an international journal of museology

Volume 2 N0. 1-2 Spring 2002

Intensifying Support For and Increasing Audiences in University Museums and Collections

Photograph by James M. Edmonson, Dittrick Medical History Center and Museum, Case Western Reserve University, Cleveland (USA).

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

Barcelona, 2-4 July 2001

Contents

EDITORIAL

University museums

FERNANDO BRAGANÇA GIL*

What should a university museum be? My pondering over this matter dates back for thirty years, both as a university professor and as someone interested in Museology, especially museology of sciences. Through these years I tried to demonstrate – by thoughts and practice – the reciprocal interest of the integration of museums in universities. University museums therefore acquire a certain specificity within the general museum panorama that entirely justifies the creation of this new international committee of ICOM, the 'University Museum and Collections' (UMAC), aimed at uniting these museums and reflecting on their common problems. It is true that each university museum can join the particular ICOM's committee that better corresponds to its speciality; however, considered altogether, university museums transversely 'cross' all committees.

We can try to answer the question above, 'what is a university museum?' by stating the obvious and simple: a university museum is a museum that has a dependency tie with a university. In fact, universities that possess heritage of general interest, whether artistic or scientific in nature, should have the right – and the duty – to create their proper museums, providing the necessary conditions for the preservation, study and public fruition of this heritage by several means, of which the most common is the exhibition. However, this obvious and simple definition of a university museum is merely administrative and does not fully account for the distinction between these and their state-owned national or local, or even private, counterparts.

With the growing interest that science gained since the end of the 17th century, universities began to create their own museums as a complement for teaching and research, especially in the different areas of natural history. In reality, the existence of as extensive and complete as possible collections of life sciences and geology specimens proved essential

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when the research purpose of natural sciences was focused on marcoscopic natural variation. Natural history university museums were therefore among the very first museums in Europe and America.

In Portugal, the first officially created museums were also of natural history: i) the royal cabinet created in 1772 in the Palace of Ajuda, Lisbon, for the education of the princes José and João (sons of Queen Mary I), which included a botanical garden and a physics cabinet; and ii) the museum that started to be created in the University of Coimbra, one year later, as a consequence of a profound curricular reform. While the latter had a university character since its foundation , the former only became university *strictu sensu* when part of the royal cabinet collections were integrated in the Polytechnic School, created in Lisbon in 1837 and consequently, in 1911, in the Faculty of Sciences of the University of Lisbon[1]. Similarly to their counterparts abroad, these museums, and particularly the Lisbon museum, remarkably contributed during the late 18th and 19th centuries, to the inventory of Nature, by means of identifying and describing the new species brought home by the explorers of the Portuguese colonies in Africa, Asia and Brazil.

The relevance of natural history museums and their ties with the academic institutions increased after Darwin's contribution on the evolution of species, the study of which required the existence of collections as extensive and diversified as possible. On the other hand, the generalisation of culture aroused in citizens a considerable curiosity for the contemplations of the objects from Nature, which contributed, to a great extent, to the popularity of natural history museums. Meanwhile, at a slow pace, a certain conflict of interests between scientists and public visitors started to emerge. The public, in their majority, visited the museums motivated by the curiosity and pleasure of contemplating the products of Nature, particularly if they were exotic and therefore inaccessible to the layman. Scientists considered the museum as their 'working place', where they could find and study the objects they were scientifically interested in. Thus, exhibitions displayed collections as complete as possible, organised and preserved according to scientifically correct procedures to enhance object research. Simultaneously, common visitors became more and more bored with the immense galleries with shelves full of apparently a lot of the same specimens.

A few pioneers in the field of museology of sciences reflected on the conciliation of this contradiction and a major transformation in natural history museums occurred in 1891 with the construction of the natural history museum of Berlin. The conception of Berlin's museum was based in Moebius' theory, previously tested at the Zoology Museum in Kiel. Moebius's ideas were based on the principle of separation between the scientific collection and the display collection. While the former is aimed at research and should therefore be as extensive as possible, the latter should consists of a selection of the most representative specimens (or replicas) from the scientific collection, aimed at a lighter and more convenient approach by non-specialists.

Between the last quarter of the 18th century and the first half of the 20th century, natural history museums were places of scientific excellency, both for undergraduates and graduates – hence the natural association between museums and universities as far

[1] Today, the National Museum of Natural History enjoys full autonomy from the Faculty of Sciences and the same happens with the Museum of Science, created in 1985. These institutions are the two museums of the University of Lisbon.

as the natural sciences are concerned. Meanwhile, in the mid-20th century, new types of biological research (having the cell and the molecule as a research unit, rather than the animal as a whole) drastically diminished the importance of natural history museums as fundamental research centres. However, object based observation and study is still relevant, particularly as far as the applications of biological and geological sciences are concerned. And let's not forget the doubtless importance of displaying biodiversity, both of existing and extinct species and of materials – minerals and rocks – that exist on earth.

Museums of natural history therefore have an important role to play in pure and applied research, despite the diminished role of Taxonomy and Systematics in some biology and geology university departments. There is a clear reciprocal relationship between natural history museums and university departments and obviously these museums should stay in universities.

So far I only considered the importance for the university of scientific research conducted in natural history museums. However, we still need to consider their importance in undergraduate teaching, particularly university training of future secondary schools teachers. Even if scientific knowledge becomes more and more specialized, it does not seem acceptable, to say the least, that younger generations only study an animal or a plant through their cells, or a mineral through their crystalline structure. Natural history museums are the places where *macroscopic objects* from nature are preserved, studied and displayed and their visit should be promoted among undergraduates, particularly future biology and geology teachers.

We should also take into account another role of university museums included in the broader field of university social responsibility: the generalisation of scientific knowledge among the general public and particularly the promotion of scientific interest and curiosity among the youth. We will come later to this point, when we mention the institutions that, according to ICOM, are designated 'museums of science and technology'. These museums were originated in the 19th century and have experienced an extraordinary growth in the past decades. Usually, they can be *grosso modo* grouped into two types, here designated for the sake of simplicity 'contemplative/historical' and 'participative/interactive'. The latter, the 'science centers', have known immense popularity – and the consequent multiplication – due to their entertaining and potentially educational role[2]. In spite of modest – I would almost dare to say 'ashamed' – attempts to integrate the two exhibition philosophies and consequent achievement of unified science and technology museological entities[3], science museums and science centers are evolving separately and almost seem to ignore each other.

Museums of science have their origin in scientific and technological instruments that became obsolete and were replaced by more modern ones. The memory of these objects is preserved through rigorous selection and consequent incorporation in a museum. University teaching and research laboratories are excellent sources for collecting representative scientific equipment, as long as there exists a museum

[2] The real educational role of science centers and their relevance in promoting scientific literacy is still a matter of discussion, especially in view of the way they are currently presented and used.
[3] Since 1988, the author has extensively written on this subject. For a text in English, cf. Bragança Gil (1998).

and specialists to help the selection, incorporation and preservation processes. In fact, the selection of 19th century (and older) scientific instruments is quite simple, but the same does not happen with more recent objects, especially those still in use. Collecting of contemporary equipment requires knowledge and training – we should not forget that the present will soon become past and contemporary scientific and technical equipment are potential museum objects.

Several universities realised the importance of creating museums of science and the Museum of the History of Science of the University of Oxford, the Whipple Museum of the University of Cambridge or the Museo di Storia da Física of the University of Padua are major examples. In Portugal, historical museums of science were also created in the Universities of Lisbon and Coimbra. The Physics Museum of the University of Coimbra (fig. 1) – with its 18th century instruments collection – has a close historical link with the Pádua Museum[4]. In fact, Physics was taught for the first time on a regular basis in Portugal by Giovanni Dalla Bella, former professor in the University of Padua. Dalla Bella began teaching in Lisbon at the College of the Nobles and was later transferred to the University of Coimbra.

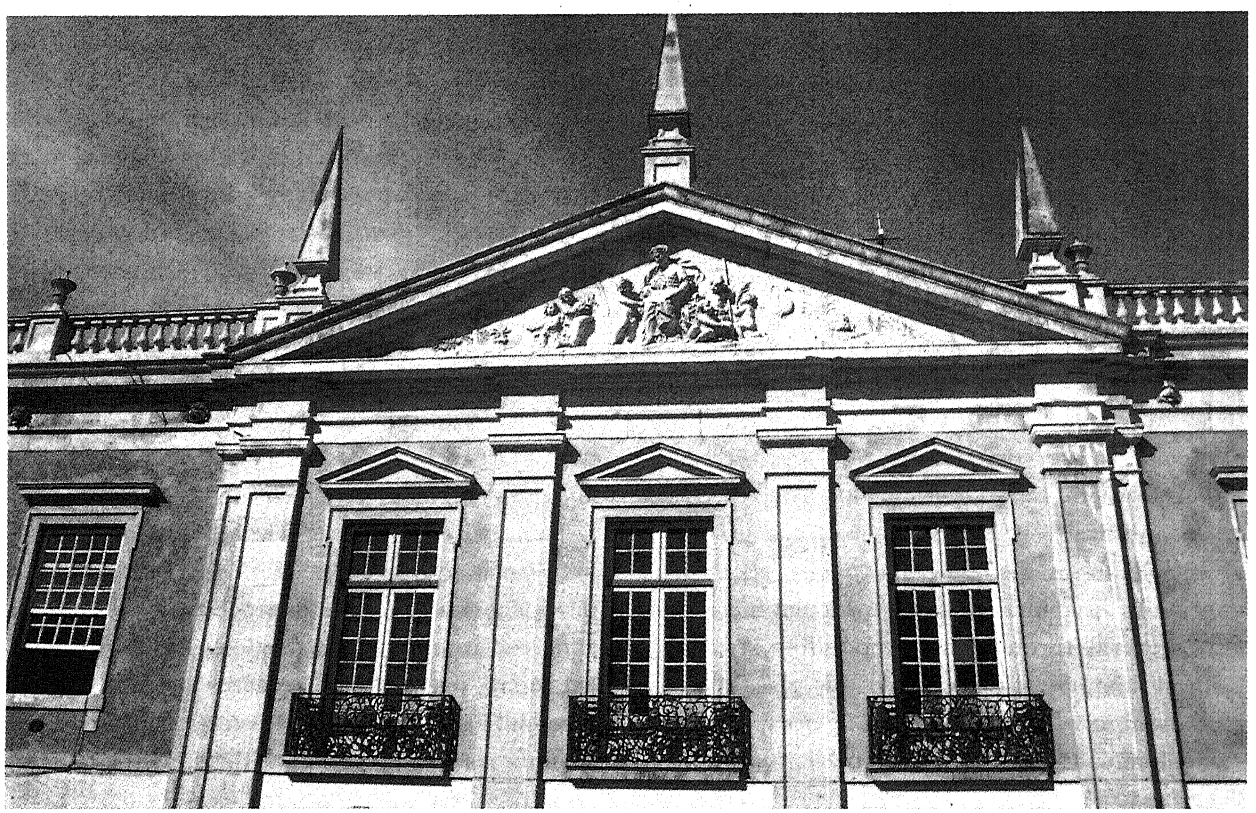

Fig. 1 – Detail of the façade of the so-called 'Museum Building' of the University of Coimbra, where the Natural History Museum and the Museum of Physics are located (Photo: F.B. Gil).

[4] Cf. www.fis.uc.pt/museu/index.htm (Museu de Física da Universidade de Coimbra).

In these two institutions he created a Physics cabinet and he draw much from his former Padua's experience in his work. At the University of Lisbon, the Museum of Science[5] has a collection of scientific equipment, mainly originating in the 19th century Polytechnic School.

The collecting of equipment to be incorporated in a historical museum of science requires the close collaboration of specialists from three domains: scientists, historians of science and museologists. I consequently ask: Is there a more adequate place to gather, promote dialogue and fruitful work among these specialists than a university museum? Scientists and historians work in universities – it's their natural working place. Museologists are sometimes part of the museum staff or the university museology department, assuming this exists[6]. The museology department should participate in the creation of the museums of the university – or their renovation, if

Fig. 2 – Façade of the former Polytechnic School, currently hosting the two museums of the University of Lisbon: the Museum of Science and the National Museum of Natural History (Photo: F.B. Gil).

5 Cf. www.museu-de-ciencia.ul.pt (Museu de Ciência da Universidade de Lisboa).

6 Museology is a field of knowledge still undervalued in the majority of universities, probably because traditionally museum staff training derived from professional practice in museums. However, the growing complexity and diversity of the 'museological phenomenon' necessarily lead to in-depth university teaching and research. Needless to say, such teaching and research should take place in specially created university departments.

they already exist – together with directors, curators and other departments directly related to the disciplines represented in the museums. This potentially rich interdepartmental collaboration in the creation and use of museums is one of the reasons justifying the existence of university museums.

Earlier I mentioned institutions with different characteristics and missions – the science centers. The existence of a science center in a university is less obvious (and therefore controversial), particularly when it aims at presenting a mere set of *edutainment* (education + entertainment) hands-on exhibits. However, science centers integrate better in the university's mission when they present a broader view of science and when exhibits are historically contextualised – i.e. if the synthesis of these two philosophies is aimed at and achieved. In this way, university museums of science and natural history can together foster an effective increase in scientific literacy among the public – both among the university community (professors, students and staff) and among secondary school pupils and general visitors, some of whom never entered a university before.

Moreover, the existence of participative scientific exhibitions in university museums can be justified in view of their role as 'test laboratory' for educational and museological innovation in the realm of the education and museological departments.

So far, the university museums mentioned in this text were directly involved in promoting the scientific, teaching and cultural missions of their mother institutions. However, other reasons were behind the creation of other types of university museums, namely the necessity to preserve and eventually exhibit artistic and archival patrimony, inherited from decades or even centuries of the university's existence. In older universities, the creation of these museums is frequently the only way to study, display and therefore protect heritage that would otherwise risk degradation and loss. One can object that heritage could be transferred to existing museums outside the university. However, such a solution is inconvenient because the transfer would out-root memories that are closely linked to the university's activities and contrary to the principle of *in situ* preservation (a golden rule for example in archaeology). Several of the art museums in universities – e.g. the Museum of Sacred Art of the University of Coimbra – were created with that particular purpose in mind.

A particularly interesting case occurs when university museums use their rooms and galleries to exhibit art and archival collections directly related to the history of their mother university – exhibitions that are obviously more relevant in the case of older universities[7].

At the beginning of this text I formulated the question: What is a university museum? The question is not easy to answer in a clear and straightforward way, due to a diverse reality that I tried to depict in its most general aspects. However, if asked to be more precise, I would say that a university museum is a museological institution that collects, studies and exhibits objects belonging to the diverse realms and aspects of a given university. Through these means,

[7] The Museum of Science of the University of Lisbon occupies today a space that since the beginning of the 17th century was used for teaching by several institutions. One of the Museum's permanent galleries is devoted to the history of these institutions, exhibiting original objects and documents belonging to the Museum collections.

it contributes, out of its own initiative or together with other university departments, to the promotion of the scientific, pedagogical or cultural intervention of the university to which it belongs.

As far as cultural intervention is concerned, museums have a fundamental role to play in the achievement of this mission of any modern university. In fact, museums are the most effective instrument that universities have to promote culture in the broadest sense of the term and bring it to the outside community. The environment of a museum, by definition open to everyone, the collections it hosts, the exhibitions it presents, the conferences and free courses it organises, the observations and demonstrations that can take place, projects the university into the community and promotes open and modern culture and mentality.

Acknowledgements

I would like to thank Marta Lourenço for translating this text into English.

Reference

Bragança Gil, F. 1998. Museums of Science or Science Centers: Two Opposite Realities? In M. A. Ferreira & J.F. Rodrigues (eds) *Museums of Science and Technology*, pp. 21-39. Fundação Oriente & Museu de Ciência da Universidade de Lisboa, Lisboa.

A panoramic view of university museums

PETER STANBURY*

University Museums are hidden treasures of the museum world. They are not well known even by those who work in other sectors of the museum profession. Yet university museums must have surprising strengths: many have survived for centuries; others have grown into large organisations and new university museums are still being formed today. Almost every university has a few museums, if you know where to look. And that is part of the difficulty because for many people universities are imposing institutions to which a visit is only made with some definite purpose. Even those that have the most reason to be there, the staff and students, have their heads bent on specific tasks.

It is important to understand that universities, as well as being places of learning and research, are also a part of the community in which each one is located. As such it is the duty of a university to share its resources with the population that supports it and with seekers of knowledge everywhere. University museums welcome any visitor seeking to know more about the world in which we all live. University museums are part of the huge family of museums and wish to work closely with their colleagues everywhere.

The articles that follow are papers given at the first conference of the newly formed International Committee of University Museums and Collections (UMAC), one of the international committees of the premier world body of museum professionals, ICOM (the International Council of Museums). These articles show a fraction of the variety of subjects which interest university museums. These subjects encompass an encyclopaedic range of collecting areas and many ways of looking at the intellectual concerns of collecting and collections.

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It could be said that university museums are the same but different to other museums. University museums have the advantage of being close to sources of knowledge and to enquiring students in their prime of life. University museums, however, sometimes are not well understood or resourced by university administrations and are assumed by many outside funding bodies to be financially comfortable because they are within the university. Some university museums struggle to survive and manage to do so only because of the dedication of a single member of staff who understands that every collection is unique and once broken up its uniqueness can never be reassembled.

The tasks of UMAC are to bring university museums to the notice of the public and the professional. UMAC's web page can be found at www.icom.org/umac, where lists of university museums in various countries can be found as well as news of forthcoming events and the aims and objectives of the Committee. These are:

clarify the role, requirements and relationships of university museums and collections with the university and its communities;

assist the preservation of academic and cultural heritage;

- promote university museums and collections within governments and their agencies, institutes of learning, the broad museum sector, the professions, business and the population generally;
- Provide advice and guidelines for those collections which are emerging, isolated, deteriorating or otherwise in need;
- Facilitate international and regional collaboration to stimulate networking, partnerships and research and to initiate exchanges of artefacts, exhibitions, standards, practices and other information;
- Encourage staff in charge of university collections to participate in museological training, mentorship and career development.

UMAC is grateful to the editor of *Museologia* for printing this selection of articles written by its members, and invites readers to join UMAC and to subscribe to future issues of *Museologia*. Thank you for reading these pages. I hope you find them stimulating. Please do consider them an invitation to visit or contact some of the university museums in your region.

Challenges facing university museums

SUE-ANNE WALLACE*

Resumo

Algumas universidades parecem mostrar entusiasmo em abraçar novos desafios, nomeadamente a tutela cultural de museus e de teatros. Os museus, em particular, há muito que fazem parte integrante dos campus e resultam de colecções de ensino especialmente nos domínios das ciências e das humanidades – desde herbários a colecções médicas até antiguidades e colecções de arte. Na realidade, as colecções de arte constituiram-se por vezes independentemente das actividades de ensino das universidades, colocando questões sobre a sua inserção nas funções nucleares de uma universidade contemporânea.

Abstract

Universities have apparently enthusiastically embraced new ventures in taking on responsibilities for cultural institutions, such as museums and theatres. Museums, especially, have long been integral to campuses, growing out of teaching collections, particularly in fields of science and the humanities – for herbaria and medical collections on the one hand and antiquities and art collections on the other. Indeed, art collections have occasionally developed independently from the teaching and learning functions of universities, posing questions about their 'fit' with the core business of the contemporary, corporate university.

The overarching theme for this conference is 'Managing Change: the museum facing economic and social challenges'. I want to explore one aspect of this theme in terms of the challenges facing museums as they develop more appropriate roles in the university environment, part economic, part social and somewhat political.

My field of practice is in contemporary visual arts and my research in patterns of patronage in the middle ages, so I have a bias towards the arts. However, having worked in the university sector now for five and a half years, four as an academic and one and a half as the Director of the Cultural Precinct at Queensland University of Technology (QUT) in Brisbane, I know the challenges facing our museum are to secure our academic position in the university, rather than focus on competition in the museological sector of the cultural industries.

While preparing to attend ICOM 2001 and UMAC's first meeting, I bought a large book by expatriate Australian writer and art critic Robert Hughes, titled *Barcelona*, published in 1992. Introducing his text,

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Hughes notes that his book of more than 500 pages was "meant to be thinner". He intended to write about this city's *modernista* or art nouveau period (roughly 1875 – 1910), concentrating on the city's architecture. However, Hughes realised that "so much of what was built in Barcelona in the late-nineteenth century was grounded in a strong, even obsessive, sense of the Catalan past, in particular its medieval past, that there was little point in trying to describe the newer without the older" (HUGHES 1992: ix).

While Hughes's comments provide a generous appreciation of the built heritage of Barcelona, they remind us that the historical perspective is critical for contemporary understanding of form and function. So I will start by briefly exploring the environment in which university museums have developed, before turning to consider the challenges of future directions.

Writing in 1972 in the book *Museums in crisis*, John Spencer claimed:

> "College and university museums have arrived at their present position through a series of accidents but accidents need not control their future existence. The peculiarly American concept of the [university] art museum as a means of education brought them into being and determined the direction of their growth. Their desire to emulate the large city museums has raised a few to enviable heights but will lead only to frustration for the greater majority" (SPENCER 1972: 142).

Spencer's paper 'The university museum: Accidental past, purposeful future?' concluded that university museums "have a more important role to play than they have yet recognised" (SPENCER 1972: 143).

Those big city museums that we may strive to emulate were largely developed to exploit a political purpose. Medieval dukes and princes of fourteenth- and fifteenth-century Europe amassed lavish collections of works of art to proclaim their political powers, becoming great patrons of architects, sculptors, painters and weavers. In so doing, they heightened secular patronage to rival that previously enjoyed by the church. In the eighteenth and nineteenth centuries, it was the world's great museums that usurped the status of the princely collections and their purpose too was frequently political. As Neil Macgregor, Director of the National Gallery London, noted recently when in Australia, the collections housed in the Louvre were intended to become the outward reflection of Napoleon's dreams of European domination.

By contrast, there is no real European model for university museums. Indeed, SPENCER (1972: 133) pointed out three decades ago, many still "resembled Yale Museum of 1870 with a strong desire to teach and precious little to teach with". Without the good fortune or astute skills to secure major gifts and collections, university museums are doomed in their efforts to ape national scientific and historical or civic art museums if they depend on their collections alone.

The Cultural Precinct at QUT, of which I am founding director, is located on our campus at Gardens Point, in the heart of the city of Brisbane. Last year, 58,000 people visited the Cultural Precinct, despite the museum not opening until mid-May.

The precinct includes a newly-created space for an art museum, now housing our collection of some 1,700 works. The collection started in 1945 as an adjunct to the teaching programs at the university, with the trainee teachers contributing weekly from their salaries to purchase works of art. Many artists teaching at the Teachers College, as it was then, also gave their work to the collection. Our Art Museum takes up the refurbished ground floor of the Chancellery, a classical columned building of 1937 treated in the Renaissance manner, and provides some 1,000 square metres of exhibition galleries, collection storage and office accommodation.

Close by is the Gardens Theatre, also part of the Cultural Precinct, a 400-seat theatre that the university acquired when the conservatorium relocated from Gardens Point to the south side of the city, across the Brisbane River. Since 1999, the University has refurbished the theatre, built an adjoining spacious foyer and completely rebuilt backstage to provide up-to-date dressing rooms, rehearsal studio, biobox and technical facilities. Major Australian architectural awards to both the Art Museum and the Theatre recognise the elegance and sophistication of these new facilities.

Located between the Museum and the Theatre is Old Government House, a gracious stone building operated by the National Trust of Queensland, the residence of the first governor of Queensland after the state separated from New South Wales in 1859.

Fig. 1 – Queensland University of Technology Cultural Precint, Gardens Theatre (Photo courtesy QUT).

It is a rewarding challenge to be creating cultural institutions for the performing as well as the visual arts, especially in a university that has enthusiastically embraced the current development of creative industries and innovation. I want to turn now to these recent policy directions that address agendas for innovation and creativity.

In a green paper released a few months ago – *Backing Australia's Ability* – innovation is outlined as the "development of skills, generation of new ideas through research, turning them to commercial success [as] key to Australia's future prosperity" (Commonwealth of Australia 2001: 3). To address the future in these terms is to acknowledge contemporary interest in the concept of creative industries. British policy has taken similar directions.

Britain's Blair Government coined the term 'Creative Industries', in 1997. In March 2001, the Blair Government outlined four key objectives for the creative industries, as drivers of the new economy: i) excellence; ii) access; iii) education; and iv) the creative economy.

Education has been a core function of the modern museum, particularly for those located within universities. Excellence and access, however, are the somewhat tired catch cries of the cultural policies of the early 90s – to recall those that I know of from Canada and Australia for example. What is new in their agenda is the concept of the creative economy that has been slowly taking shape over the past decade. The term creative industries has gained currency as "a usefully different way of thinking about creativity in the new, knowledge-based economy" (Cunningham 2001: 11). Professor Stuart Cunningham, head of the Creative Industries

Research and Applications Centre at QUT has provocatively asked "What's so new about it? Isn't it just arts and media business as usual – with some peppy branding?" In response, Cunningham has suggested that the concept of creative industries "can help [...] practitioners to think of creativity as part and parcel of the research and development base, the R&D of the country, and move beyond disabling models of straight subsidy for the arts and passive consumerism for mass entertainment and information media." (CUNNINGHAM 2001: 11).

At Queensland University of Technology, one of Australia's largest with 30,000 students and a workforce of approximately 3,500 across three campuses, taking on the rhetoric of the creative industries has been central to our re-examination of the role of the humanities in the University.

Queensland University of Technology is a university of technology. Some of the so-called 'pure' humanities sit awkwardly with our technology bias. Yesterday, 1 July 2001, the Creative Industries Faculty was launched at QUT, replacing the Faculty of the Arts and giving a new focus to the humanities. Some humanities subjects will no longer be taught at QUT. The focus will be on others, especially in the fields of the 'content' industries – such as publishing, film, broadcasting, music and interactive software – and performance – including dance, drama and visual arts – that have the potential to contribute to wealth and job creation through the exploitation of intellectual property.

Where does our university museum fit in this new environment? In Australia, two reports on university museums were undertaken in 1996 and 1998, published as *Cinderella Collections* and *Transforming Cinderella Collections* (UNIVERSITY MUSEUMS REVIEW COMMITTEE 1996, 1998). Professor Di Yerbury was chair, and Dr Peter Stanbury secretary, of the task force, a joint initiative of the federal government and the Australian Vice-Chancellor's Committee, initiated by CAUMAC, the Council of Australian University Museums and Collections at its formation in 1992. The principal objectives of the reviews were to discuss and formulate museum and collection policies, providing for establishment, continued existence and disposal of university museums, collections and herbaria. In all, two hundred and seventy six Australian university collections were identified. A further objective was to *recognise* those collections to be maintained in the long term; and to identify items of national and international significance. In 1998, eighty-five of the 276 collections were identified as being important to the work of the university in which they were housed.

Taking the *recognition* factor – that is what is important to the work of the university - in the context of the political discussion of the creative industries and 'content development' is critical in my thinking about future directions for the Art Museum and the Gardens Theatre at QUT. For the QUT Art Museum to add value to our University, we need to put our University into our Museum – and to exploit our university connections, rather than hankering after the environment of the civic museum.

The greatest challenge is that our most important role may not be to be subservient to the teaching needs of the faculties. As SPENCER (1972) pointed out, by and large our collections, with rare exceptions, do not have sufficient scale to provide comprehensive teaching resources. Yet, for most university museums the relationship of museum programs to curriculum and teaching are key performance indicators.

In 1999 our principal role was identified to support the University's commitment to serve the community of Brisbane and the people of Queensland. In achieving this, we have, for example, developed

Fig. 2 – Queensland University of Technology Cultural Precint, Art Museum (Photo courtesy QUT).

community programs drawing on the University's research on children's patterns of learning in museums. We are planning a new public program aimed at supporting research on lifestyle and social adjustments that retirees must make during their first few years living in communal retirement villages.

These successes aside, I see quite an expanded role that we should develop for our university. We are a gateway between the community and the University and our public interface provides an opportunity to develop public outcomes for university research in fields of the creative industries.

In closing, I want to return briefly to those other museums outside the university sector. The civic museum oscillates between what has been called "highly didactic displays" (Somers Cocks 2001: 21) in which the narrative subverts the role of the object, forcing it to play second fiddle to its contextualisation, and what I call the 'theme park, Disney' approach to display and programming. In recognising the marginalisation of the object, Anna Somers Cocks recently noted that "the container has become as important as the contained [...] [and that] architects have never been so much part of museum life as now" (Somers Cocks 2001: 20). Moreover, she remarked that largely due to the success of cities – like Barcelona – in stimulating its economy and regional pride through cultural policies, museums are now saddled with overtly political agendas to generate civic (including architectural) pride and identity. Canada has gone as far as to develop cultural policies as the fourth arm of foreign policy, a way of thinking that supports the development of

cultural export for highly strategic and political ends.

Whatever we as museum professionals may think of such directions, the performance outputs of many civic museum are amazingly impressive – the Guggenheim Museum at Bilbao can claim extraordinary visitation, a significant input to the city's economic development since its opening in 1997 and an impressive contribution to the city's architectural heritage. University museums aren't exempt from delivering such social and economic benefits, though in the majority of cases, the results are less spectacular. In her retiring address to the Australian Press Club, the chair of the Australia Council, Professor Margaret Seares, commented that cultural development has been perceived as "peripheral in terms of whole-of-government thinking" (SEARES 2001: 11).

Despite the *Cinderella* reviews and their seminal analysis in recognising the work of those Australian museums that contribute to their universities, university museums in particular have been largely perceived as peripheral in terms of the tertiary sector's role in education. They are acknowledged for their contribution to the university's status in society and rarely for their pedagogical influence.

In times of tight, fiscal accountability, such peripheral activity can be too easily lopped off the university's agenda – and indeed possibly should be if the deliverables are not a close 'fit' with the university's corporate goals. Along with their civic agendas, university museums can no longer afford to ignore their unique strength – their particular academic environment.

To conclude, SPENCER (1972: 139) exhorted us last century that each university museum should exist on its own unique terms and "should consider carefully its place in [its] university, [its] community and [its] region and then set its goals for its own unique situation." Spencer encouraged us to believe that rather than go for homogeneity, a greater diversity was needed in the roles adopted by university museums. "Few" he said "have attempted to exploit the strength of their position. Few have recognised the resources available to them. [...] By breaking out of the stereotype of the campus museum [...] they can create a future directed by reason rather than by chance." (SPENCER 1972: 143).

At QUT, we intend to create our future by focusing on the strength of our position in the university research environment. We have already secured our first research grant to investigate creative practice as research in communication design, the visual and performing arts. We are also showcasing university research to the public in new and exciting ways. While we still intend to measure our visitation rates, numbers of exhibitions and loans of objects, we will be drawing on the strength of our academic position, and in association with the Creative Industries Faculty, will put university priorities securely into our museum's future development.

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Role of university museums and collections in disseminating scientific culture

PASQUALE TUCCI*

Resumo

Partindo da definição de museus científicos como os contextos materiais onde os artefactos científicos e tecnológicos são preservados e onde a cultura científica é elaborada e disseminada, discutem-se então os diferentes meios de que dispõem os museus de história da ciência e os museus de ciência para cumprir a sua missão. Devido à sua origem, os museus universitários possuem pontos em comum com estes dois tipos de museus e também têm um papel a desempenhar, quer na investigação quer na inovação em museologia e em museografia das ciências. Sobretudo, constituem locais onde a cultura científica é disseminada.

Abstract

Starting from the definition of scientific museums as the material context where scientific and technological artefacts are preserved and scientific culture is elaborated and disseminated, the different ways in which museums of history of science and science museums accomplish their task will be addressed. University museums, due to their origins, have features in common with both types of museums. They can play a role in research and promoting innovation in scientific museology and museography but above all as places where scientific culture is disseminated.

Foreword

Philosophy which inspired the setting up of big institutions for conservation and arrangement of artistic and historical heritage (paintings, statues, bass-relieves, frescos, archaeological objects, scientific instruments, books, machines, manuscripts, botanical gardens, etc.) has changed very little since French Revolution. Historical heritage was disassembled: books in the libraries, manuscripts in the archives, objects, according to their characteristics, in the Museums. Very often these institutions were, and are again, hosted in buildings important from historical and architectonic point of view.

In art museums, in particular, communication between displayed material and public was very poor:

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little and unreadable captions were, often, the only bridge between museum and its public. Visitors have to feel the 'beauty' of the object, nothing else being needed for its understanding. Of course the museum language is complex and written messages represent only one aspect of it: 'evocation' and 'emotion' play an important role in museum communication. But these feelings were stimulated in art museums by the single object: rarely they were conveyed by the arrangement of the displayed material.

As matter of fact, the most important innovations in our century dealing with museology and museography have taken place in scientific museums.

When I speak of scientific museums I refer to four kinds of institutions: a) collections at scientific research institutes assembled for conservation and displaying; b) History of Science Museums; c) Science Museums; and d) Science Centres. Steven de Clercq has proposed a different classification, but it is uninfluent in respect of the problems I want to deal with.

We can speak about scientific museums of third generation starting from the beginning of the 20th century. In the 20th century the main innovation was the possibility for visitors to interact with the displayed objects. In the Deutsches Museum (Munich) the 'push-the-button' technique was introduced: in a diorama, the visitor, pushing a button, observes an automatic execution of an experiment or can follow the phases of manufacturing in an industrial plant. The Museum was planned in reaction to the Renaissance Cabinet of curiosities and in reaction to museums, heirs of the great International Exhibitions, which had the aim of demonstrating the beneficial influence of science and technology on the progress of society. The designers of the Deutsches Museum wished to give to scientific artefacts the same cultural dignity of artistic artefacts. In order to achieve this goal people had to be educated to science and technology. A big didactic effort of communication of the meaning of the displayed objects was made and new techniques of displaying were planned.

The diorama was a great invention for museums: it allows to stress the importance of the context against the 'beauty' or the 'rarity' of a single object. The fetishism of the object is replaced by its meaning inside a reconstructed environment. Later on, diorama techniques have been largely used in natural history museums and have replaced show-cases full of stuffed birds or of minerals. (This is not completely true for dinosaurs, where the display of single animals is very common, maybe due to their unexpected 'telegenic' success on the media).

After the second world war, new 'hands-on' institutions were established – Exploratorium (San Francisco), La Villette (Paris) – where visitors can touch the objects and interact with them in order to carry out some easy scientific experiments or to perceive the main characteristics of some natural phenomena. These institutions have not the aim of safeguarding historical objects but to teach science while stimulating the visitor's participation in doing something.

The idea of 'learning-by-doing' was inspired by a pedagogical attitude for making science more appealing, after the war disasters in which scientists had played an important role: in this way, some science communicators hoped to overcome a diffuse distrust in science, particularly alarming in young people. Moreover some intellectuals and scholars, above all scientists, thought that the history of science, and consequently, museums of history of science or the historical sections in science museums were useless in communicating science and scientific

culture. According to their view, science was progressive and cumulative: last scientific theories replaced old ones whose valid parts are included in the new theories. Why ought we keep in museums what has been superseded? Museums of history of science were considered little more than warehouse of old and useless objects. But in this way, science is presented unrealistically, as a one-way success-story with little attention for the often interdisciplinary and open-ended scientific process of trial and error (De Clercq 1997). And loss of historical perspective in scientific communication could be the source of gaps between scientific and humanistic culture.

Some years ago scientists, historians of science and intellectuals debated about domination of humanistic over scientific culture. Nowadays the situation is completely different. Science and above all technology are more and more pervasive in everyday life of billions of people. The problem is that rational awareness of their presence is very little diffused and humanistic culture is unable or, maybe, not interested, to face the new situation.

In order to improve the communication with its public and to increase the amount of visitors science museums have introduced 'hands-on' techniques. Beautiful collections of historical instruments have been sent to cellars where they are destined for destruction and dispersion: in my opinion the only tangible result has a loss of identity without a considerable improving of a museum communication. This was foreseeable: languages cannot be mixed artificially in order to compose a sort of a museum Esperanto.

Context and Museums

In this context university museums can play an important role of experimenting new ways of conservation and exhibition of the historical heritage and dissemination of scientific culture. Universities have for centuries created new scientific and technological knowledge and a great deal of material is stored in them: instruments and apparatuses, laboratory diaries, libraries of books and preprints and so on. All this material, and know how encapsulated in it, becomes rapidly obsolete for scientific researches: when it is no longer usable scientists consider it a obstacle for new researches. Sometimes experimental apparatuses are dismantled and some pieces are inserted in other apparatuses. In some cases material no longer used for research is sent to museums, national libraries and to state archives. But in this last decades some universities, continuing a long tradition lasting from four centuries, have decided to conserve their historical material, select modern material no longer used and have used the museum environment for initiatives of dissemination of scientific culture.

University collections have an important characteristic from a museological point of view. We know that the value of historical heritage doesn't consist in the 'beauty' or 'rarity' of the single object but in the fact that it indicates a research track. The instrument or the experimental apparatus was inserted by some scientist in a research path which allowed him to acquire knowledge about some natural phenomena. If we stress the importance of the single object we transform it in relics to be adored. Moreover, if we use the criterion of beauty there is the risk of large part of the historical heritage of late 20th century science of being scrapped as Paolo Brenni has stressed in an article on the magazine of the European Physics Society (Brenni 2000).

I have pointed out that after the Second World War scientific museology has been oriented towards the

division between conservation on one hand and science education and teaching activities on the other hand, relegating the former to science museums and history of science museums and the latter to Science Centres. But I'm not sure that this division has improved dissemination of scientific culture. We should ask if 'hands-on' techniques, without an historical perspective induced from exhibition of historical apparatuses and instruments, are able to disseminate scientific culture.

For scientific culture I mean a set of shared values about the nature of science and technology, about their methods for acquiring knowledge, about the differences between scientific truth and other kind of truths, if any. Scientific culture is a result of a good scientific training in schools or universities. But it is also the result of stimulations coming from the society around us: we acquire a spontaneous culture from relationships with other people, from the media, from publicity and so on. Evocation, allusiveness, metaphor, imitation are the main features of the transmission of the diffused culture inside the society. On the basis of these stimulations people build their ideas about science and form models for interpreting natural phenomena. Therefore, scientific culture depends not only on the amount of specific technical and scientific knowledge acquired in the schools or in the universities, but depends also on values which are rooted in society's diffused culture and are unconsciously assimilated.

Science museums and history of science museums are important devices for transmission of the diffused culture and in their history they have performed this task. They have just the characteristics which define the way in which the culture is diffused in society: evocation, allusiveness, metaphor, emotion.

Now, we have to understand if university museums can be useful in reinforcing the main features of science and history of science Museums. My answer is affirmative and I'll try to present the corresponding arguments.

University people who are interested in the preservation and conservation of historical heritage very often think that their activity is a spontaneous and not requested service that they offer to their university in order to improve the external image of the university. And they ask attention for their activity because it creates social consensus about the university institutional tasks. However, it is an illusion to think that this spontaneous activity is enough in order to influence universities in providing space, money and human resources to these activities. It seems to me that we need to be aware that the mission of universities is to carry out innovative scientific research and we have to be able to insert our museums' activities in this mission and context. On the ground of acquired experiences is possible to show that two types of research can be developed in university museums: a) research on historical heritage; b) research about new ways of exhibiting and communicating this historical heritage to the public at large.

Historical research

The aim of historical research is to reconstruct a past context on the ground of the preserved documentation (instruments included), selected and analysed according to criteria greatly influenced from the diffused culture in the society. In universities, this type of research takes advantage of the fact that the single object (letter, instrument, etc.) can be inserted in a meaningful context, because we can easily find tracks of it in the university museum, in the library,

in the archives, and so on. In the usual (non university) museum the link between the single object and the context in which it was used is complicated or even impossible to reconstruct: a cultural disaster for historical memory.

An important result of historical research is the publication of instruments, books, archives inventories and catalogues. These devices, as well as others such as papers or books about specific objects or collections, are important for the planner of the museum arrangement because she or he knows that she or he needs a deep knowledge of what is to be communicated to visitors.

Communication research

Moreover, it's possible to carry out scientific research also on new ways of exhibiting and communicating historical heritage. At the beginning of this talk I have said that interactive communication between displyed objects and visitors has been the main feature of 20th century museology and that scientific museums have been protagonists in this field. However, interaction is a business between visitors and one object at once: arrangement of the objects does not influence visitors' experience. But this way some important aspects of the museums communication are neglected. When a visitor observes a big steam engine in a museum he or she often associates with it the idea of industrial revolution. This happens because he has a scientific culture – although spontaneous, he or she has a representation of the behaviour of the natural phenomena and expectations on what science and technique can provide him or her. Thus, communication of the historical heritage must be continuously reconsidered by museums operators in relation to the changeable representations of science

Fig. 1 - Brera Astronomical Museum. Arranged by the Istituto di Fisica Generale Applicata of the University of Milan with instruments from the Brera Astronomical Observatory (Photo courtesy of Istituto di Fisica Generale Applicata, Sezione di Storia della Fisica).

and technique. These representations are determined not only by specific knowledge acquired in the school and in the university but also through the diffused culture in the society: it's this last one that determines people beliefs, suggestions, and ethical values about science and technique.

A better understanding on the way in which scientific spontaneous representations are formed can be achieved only through rigorous research programme. And the university environment is particularly suitable for this task. The results of this

research can be useful to museums operators, both in universities and outside, but also everyone involved in initiatives of scientific culture diffusion: scientific magazines and articles, video-documentaries and so on.

To conclude, university museums are a cultural wealth that must be safeguarded, studied and exhibited. And university museums operators must do a big effort to open their museums to scholars and to public at large. If museums operators realise that public at large, instead of being an obstacle to their activity, represent an opportunity for studying the way in which scientific and technological culture spreads throughout society, then they can find a role that legitimates their activities within universities.

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Recent museum ethical policies and their implications for university museums

BONNIE KELM*

Resumo

Hoje em dia, os museus têm o dever de se manterem informados sobre uma grande diversidade de assuntos éticos e deontológicos de grande impacto, sendo essencial que quem se encontra à sua frente não apenas demonstre padrões éticos de elevado nível mas também implemente as novas práticas e orientações emanadas das diferentes associações profissionais. Debruçando-se sobre este tema, os grupos de trabalho da Associação Americana de Museus (AAM), nos Estados Unidos da América, recomendaram dois conjuntos de orientações que foram posteriormente adoptados pela Direcção da AAM: o primeiro relativo à apropriação ilegal de objectos durante a Era Nazi e o segundo referente à exposição de peças cedidas por outras instituições. No caso dos museus universitários, estas orientações podem resultar em desafios particularmente novos.

Abstract

Today museums must be cognizant of a multitude of widely publicized ethical issues. It is important that museum leaders demonstrate the highest ethical standards and be responsive to new policies and practices instituted by professional museum associations. In America over the past several years, American Association of Museums (AAM) task forces have recommended, and the AAM Board has approved two important sets of guidelines: one concerning the unlawful appropriation of objects during the Nazi era and the second focusing on exhibiting borrowed objects. Both sets of guidelines may present special challenges for university museums.

As museums become more visible and accountable to the public, it is important that the actions taken by their leaders be 'transparent' and meet the highest ethical standards. Over the past several years, American Association of Museums (AAM) task forces have recommended, and the AAM Board has approved two important sets of guidelines – one concerning the unlawful appropriation of objects during the Nazi era and the second focusing on exhibiting borrowed objects. Both sets of guidelines make specific recommendations that delineate the scope of ethical activity in professional museums. These guidelines present special challenges for university museums, which are broached in this paper.

To begin, an overview of the activities responding to the astonishing scope of Nazi era appropriated art

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in the United States, is instructive. In June 1998 the American Association of Art Museum Directors (AAMD) issued the *Report of the AAMD Task Force on the Spoliation of Art during the Nazi/World II Era (1933-1945)*, the first set of guidelines that urged museums to review the provenance of works in their collections and to thoroughly research and report questionable objects. During the same time the Presidential Advisory Commission on Holocaust Assets in the United States (PCHA) was created to study and report to the President on issues relating to Holocaust victims' assets in the United States. In December 1998 the *Washington Conference Principles On Nazi-Confiscated Art*, was released in connection with the Washington Conference on Holocaust-Era Assets held in Washington, DC. In January 1999 ICOM issued *Recommendations concerning the Return of Works of Art Belonging to Jewish Owners*. In addition, a number of important books, as well as a variety of other conferences and commissions, have gathered and shared information in an attempt to address the magnitude of this situation. In time for the AAM 2000 Annual Meeting in May, in Baltimore, the first set of Nazi era provenance research and ethical guidelines from AAM were distributed (*Guidelines Concerning the Unlawful Appropriation of Objects During the Nazi Era* was issued by AAM, November 1999 and amended April 2001).

As the international program chair for AAM/ICOM (United States National Committee of ICOM), I was pleased to organize and chair the first formal session on 'Nazi Era Provenance Research: Finding Assistance and Drawing on Experience' at the AAM 2000 Annual Meeting. This double session brought together, for the first time, a group of the most prominent specialists and resource people involved with Nazi era provenance research. They are: Sarah Jackson, Director of Historic Claims at the Art Loss Register, London, UK; Louis Marchesano, Collections Curator at the Getty Research Institute for the History of Art in Los Angeles, California; Greg Bradsher, Director of the Holocaust Era Assets Records Project at the National Archives and Records Administration in College Park, Maryland; Dr. Constance Lowenthal, Director of the Commission for Art Recovery, World Jewish Congress in New York City; Dr. Jonathan Petropoulos, professor, author and Chair of the fine arts division of the Presidential Commission on Holocaust Assets; Teri Edelstein, Museum Consultant and the former Deputy Director of the Art Institute of Chicago; and Nancy Yeide, Head of the Department of Curatorial Records at the National Gallery of Art in Washington, D.C. The first half of the session focused on the resources that were currently available to assist museums with provenance research. It also featured a discussion of the resources that still need to be developed and/or implemented. The second part of the session highlighted individuals and museums that utilized available resources for specific cases and the outcomes of that research. Several key presenters provided information on how to establish a reasonable course of action for undertaking provenance research of museum collections. What should a museum do when it discovers a work with questionable provenance in its collection? Where do museum professionals go to find assistance and information? How does a museum go about establishing a provenance research project, when there are so many other competing needs for its human and financial resources?

This double session, followed by meetings in the late summer and early fall at the National Archives and the Metropolitan Museum of Art, made it clear that there was an urgent need for a guide to international resources for conducting provenance research as well as sample policies and model practices, related to the matter. As a result, three museum professionals,

Nancy Yiede, Konstantin Akinsha, and Amy Walsh collaborated with AAM to produce *The AAM Guide to Provenance Research* (YIEDE *et al.* 2001). The first book of its kind in the United States, it was designed to assist museum curators, dealers, and scholars with their research. In addition, the Muscarelle Museum of Art at The College of William & Mary was pleased to contribute to the recently published *Museum Policy and Procedure for Holocaust-Era Issues*, a collection of sample working policies and procedures representing best practices in the field, collected from accredited museums, including university museums, across the country.

Also available on its website[1], is the recent *AAM Recommended Procedures for Providing Information to the Public about Objects Transferred in Europe during the Nazi Era*. These recommended procedures have been formulated by AAM pursuant to an agreement reached in October 2000 between AAM, AAMD, and PCHA. Provisions of the Agreement include the following points: 1) a plan to expand online access to museum collection information that could aid in the discovery of objects unlawfully appropriated during the Nazi era, 2) the identification of the types of objects for which this information should be made available (currently only European paintings and Judaica) and, 3) the recommendation that museums identify all objects in their collections that were created before 1946 and that it acquired after 1932, or that underwent a change of ownership between 1932 and 1946, and that possibly could have been in continental Europe between those dates referred to as 'covered objects' throughout this document). In the event that a museum is unable make these determinations about an object, it should be treated as a covered object; and further 4) to make currently available object and provenance information about covered objects accessible online; and to give priority to continuing provenance research on those objects as resources allow.

The recommended procedures include a template listing 20 categories of information about covered objects that museums should compile and make available. AAM views these procedures as fundamental to the mission of museums to document and publish their collections and recognizes that, because of the Internet's global reach, posting collection information online should be a goal. Museums are encouraged to construct online searchable databases in which the posting of information about covered objects should be a priority. In order to expedite searches for information about covered objects in museum collections, AAM will launch a search tool called the Nazi-era Provenance Internet Portal. The information that the portal will use to assist searchers will be housed in a database. Details about the Internet portal and a timetable for implementation are also delineated in this procedural document.

Finally on this subject, AAM/ICOM (United States National Committee of ICOM) submitted a resolution that was adopted by the 20th General Assembly of ICOM, Barcelona, on July 6, on *Museums and Objects Misappropriated under the Nazi Regime.*

Challenges for university museums

In dealing with this subject, university museums often face special problems that have not been

[1] Cf www.aam-us.org/nazieraprov.htm.

recognized or addressed in any of the recent policy statements and guidelines. These are inherent problems for university museums, in that they relate to their relationship with their parent organization, the university, and its governance structure and policies. Starting at the very basic level many university museums in the United States (and it may be true elsewhere) do not own their collections. Often the collections are owned by the university and the museum is the designated trustee for museum quality objects that belong to the university. While it is true that AAM accredited university museums must have a certain level of autonomy, where the director is responsible for the day to day operations and all professional policy decisions, frequently the lines of authority are not that clear or simple in actual practice.

As a Board member of both AAM/ICOM and the Association of College and University Museums and Galleries (ACUMG), I have been in a position to hear of the difficulties faced by university museums in their attempts to comply with the recent Nazi Era provenance research policies and guidelines. While it is generally acknowledged that this type of provenance research is fraught with general difficulties and is also very time consuming, the problem is magnified for university museums because they may not even have a place to start. It has been noted that the vast majority of university museums and galleries in the United States are less than fifty years old, while their parent organizations often have considerably longer history. Typically collections from all over the university are rounded up and deposited at the new university museum as soon as it opens. This is sometimes done prior to the hiring of a professional staff and the objects are typically deposited with little or no documentation. Many of these objects were gifts to various departments over time, and in some cases the university may have no proof or record of ownership.

This is certainly true for my own institution. The collection at the College of William and Mary goes back to its founding in 1693. When the Muscarelle Museum of Art opened in 1983 the majority of the 3,000 objects deposited there had no appropriate provenance. Many were discovered in closets, offices and storage rooms of various academic buildings and held no clue as to who gave them to the College and when. This story is hardly unique among university museums. Many objects sharing this unknown history are considered covered objects under the recent AAM recommended procedures.

Frequently to add to the burden, university museums often deal extensively with less celebrated and/or unidentified artists as well. To complicate the matter further, a university museum's collection may be owned by more than one entity. Many state institutions have, over the years, created separate non-profit foundations or endowment associations to accept gifts for a variety of legal and financial reasons. Some universities that were initially private subsequently became state or state-assisted institutions. In our own case, some collection works are owned by the College, some are owned by the Commonwealth of Virginia and the more recent acquisitions are owned by the Endowment Association of The College of William and Mary. Seeking to carry out the professional practices regarding Nazi era works of art requires accurately identifying and receiving the cooperation of the legal owner of the work. Recent major media coverage of this issue has made gaining this cooperation easier (a few years ago it might have been impossible). I am currently aware of a university museum struggling to identify the actual ownership of a

significant Impressionist painting in order to proceed with its provenance research.

Even less pleasant, are the cases where the university administration has little understanding of, or interest in, the professional practices of their university museum. Some university administrations, in their zealous efforts to protect major university donors and important alumni, have prevented communication and full disclosure of provenance details from taking place, out of fear of alienating these VIPs. It was only a few years ago that such inquiries would have definitely offended or upset a museum's more difficult donors.

It is this last element that also contributes to potential problems for university museums compliance with another recent set of guidelines from AAM. These are *Guidelines on Exhibiting Borrowed Objects*, issued in August 2000 (the complete *Guidelines* are currently available on the AAM website). They are ethical guidelines that provide the museum profession with more detailed guidance on the development of institutional policies and standards for exhibiting borrowed objects, consistent with the AAM Code of Ethics. The principles that inform the guidelines include: adhering to an ethical standard that exceeds the legal minimum; acting in a manner that is consistent with the museum's mission; documenting

Fig. 1 – JEAN BAPTISTE CAMILLE COROT (French, 1796-1875). *Village scene*, oil on canvas, 15x17 inches. Bequest of John Presson, 1973.119, collection of the Muscarelle Museum of Art, The College of William and Mary (Photo courtesy of the Muscarelle Museum of Art).

activities; adhering to an ideal of transparency; and maintaining control over museum activities.

As a result of concerns expressed both in the public media and from within the museum community with regards to several high profile museum exhibitions where large financial contributions appeared to have possibly influenced the scheduling of those specific exhibitions, the AAM Board convened a task force to consider what constituted ethical activity in the exhibition borrowed objects. This a matter of public trust and accountability for museums charged with an educational mission and the preservation of cultural heritage. The Guidelines are the result of the task force's efforts and stress that the "actions related to borrowing objects for exhibition should be consistent with the museum's mission and with the policies and procedure that flow from that mission". In addition, museums should document the process of borrowing for exhibitions to protect their assets and reputation and to guide institutional actions consistent with their mission. "Adhering to an ideal of transparency museums should take reasonable steps to make their actions visible and understandable to the public, especially where lack of visibility could reasonably lead to appearances of conflict of interest". According to this document, the museum's governing structure must maintain the intellectual integrity of, and the museum's control over, all activities, including exhibitions.

Herein, again lies the potential problem for university museums in its relationship with its parent institution. Most often, university museums do not have Boards with fiduciary responsibility. They may have advisory boards, but the ultimate responsibility for governance is channeled through the university administrator who supervises the museum. Frequently, at accredited university museums this supervisor is the president of the university, a vice president or the provost, who then reports to the university's Board of Trustees.

Given this relationship, there is a great deal of opportunity for conflict with these guidelines to occur. The mission of university museums often includes a statement about service to the university, which is generally vague enough to allow a multitude of sins in its interpretation. Major contributors to the university at large may also contribute to the museum. Showcasing the collection of such an individual at the museum, might make perfect sense in relation to the museum's mission statement, but the museum's director or its advisory board might not be told about the extent of the donor's recent or pending gifts to the university or that individual's estate plans. University museums are often urged by particular academic departments to exhibit specific individual collections based on curriculum needs. That may be the communicated motivation. University museums are not often informed about pending major gifts in other academic departments. When exhibiting borrowed objects, it is very difficult for a university museum to make a donor relationship visible or transparent, when the details of privileged arrangements with the university are not known to them at the time. The appearance of conflict of interest is sometimes unavoidable in such cases.

This particular set of ethical guidelines has neither the moral gravity nor the weight of historical evidence that characterizes Nazi era provenance issues. With the latter, although university museums may have a dauntless task before them, at least they can harness the educational resources of the university to create a greater awareness of, and interest in, the situation at hand. Due to the interdisciplinary nature of Nazi era provenance

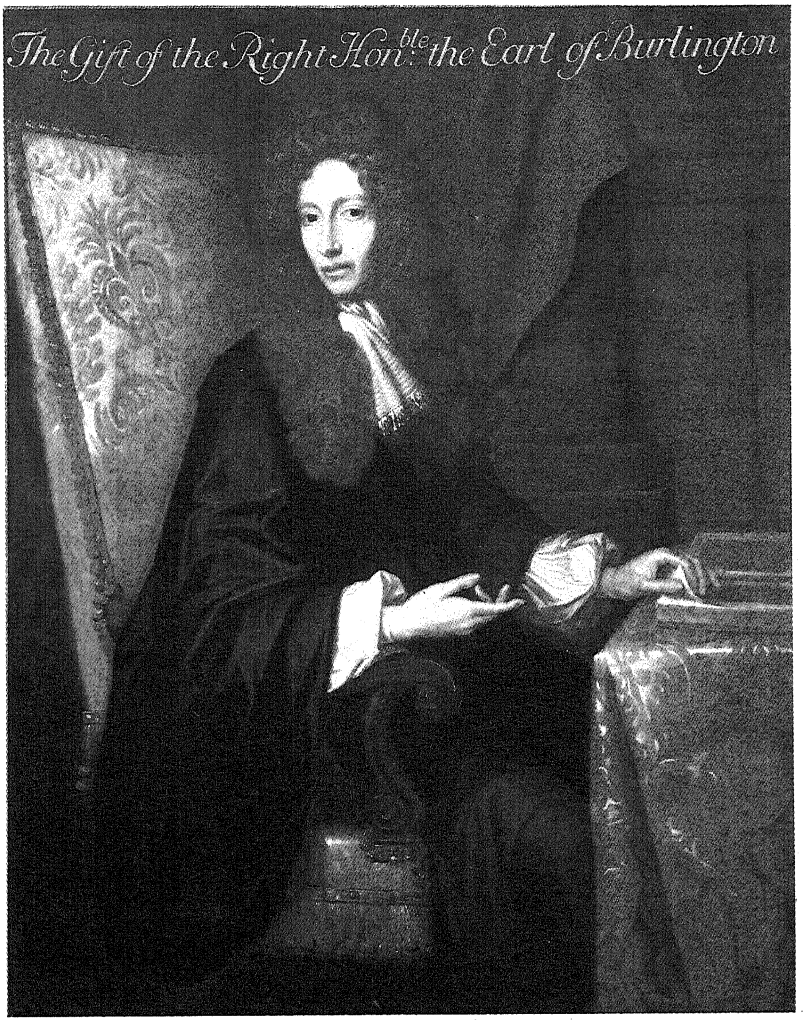

Fig. 2 – JAMES WORSDALE (English, 1692-1767) after Johan Kerseboom (English, d. 1708). *Portrait of the Honorable Robert Boyle*, 1720 or 1726, oil on canvas, 49x39 inches. Gift of the Third Earl of Burlington, 1732.001, collection of the Muscarelle Museum of Art, The College of William and Mary (Photo courtesy of the Muscarelle Museum of Art).

research it can easily become the focus of alumni lectures, academic curriculum, and international studies or law school seminars. Such endeavors may even lead to making progress in identifying long forgotten objects that came into the collection. Most accredited university museums have admirably adopted the AAM recommendations in their current acquisitions policies and procedures. It is the backlog of objects, seemingly without a past, that present the greatest challenge. On the other hand, the *Guidelines on Exhibiting Borrowed Objects* goes to the heart of the divisiveness of administrative and departmental interests inherent in many universities. The documents vague wording opens it up to various levels of interpretation (a specialty of universities!) and presents potential ethical dilemmas for

university museums. However, it is also true that at universities where there is a respect for professional museum practices, the AAM *Guidelines for Exhibiting Borrowed Objects* can serve as an effective defense against the parent organization using its museum for blatant funding cultivation.

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Miracle on the prairie: The development of the Sam Noble Oklahoma Museum of Natural History

MICHAEL MARES*

Resumo

Em 1983, o Museu da Universidade de Oklahoma, nos Estados Unidos, decidiu iniciar uma longa luta por um novo edifício, visto que o centenário Museu se encontrava instalado em antigos estábulos e celeiros. A Universidade foi irregular e inconstante no seu apoio ao projecto. Contudo, uma estratégia multifacetada e o envolvimento directo da comunidade local conduziram ao sucesso do empreendimento, após 17 difíceis anos em que a paciência e a tenacidade foram determinantes.

Abstract

In 1983 the University of Oklahoma's museum began a struggle for a new building. The century-old museum was housed in barns and stables. Support from the University was mixed. Grassroots efforts and a multifaceted strategy led to a successful result in 2000, after 17 difficult years requiring patience and tenacity.

An interesting place

If one were to select a patch of earth randomly and view its history back through time, few places on the planet would have a story as interesting as the piece of land known as Oklahoma. Hundreds of millions of years ago when there was only a single continent, Oklahoma lay along the Equator. As continents split and migrated, and as oceans rose and fell, Oklahoma began to accrue a detailed record of the life forms that developed both in the sea and on the land. Today the State of Oklahoma lies in the center of the continental United States, but the rocks that were formed so long ago tell the story of the time when much of the land was under a tropical sea. In the stones of Oklahoma one can trace the evolution of life, from plant to animal and from invertebrate to vertebrate. During the Late Jurassic and Early Cretaceous most of Oklahoma was below the bed of an ocean, but the eastern and western boundaries of the state were staging grounds for the evolution of terrestrial vertebrates, including giant dinosaurs and early mammals. Oklahoma's dinosaurs left a record that extends across more

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than 80 million years of time and includes some of the greatest reptiles that have ever been discovered. Oklahoma's story was not over, however, and the disappearance of the ruling reptiles about 65 million years ago did not mark the end of the fascinating story of life in Oklahoma.

The uplift of the Rocky Mountains in the Miocene meant that the tropical forests that covered much of North America would have to retreat, as wind and rainfall patterns were disrupted. Soon drought-adapted grasslands came to dominate the central parts of the United States and a new group of dominant

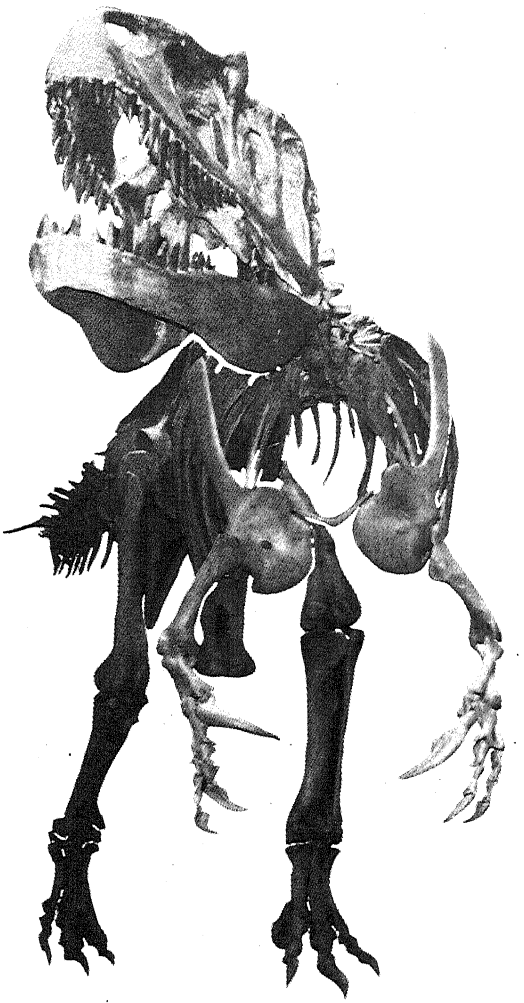

Fig. 1 – *Saurophaganax maximus*, a 36-foot carnivorous allosaurid dinosaur, and Oklahoma's State Fossil, on display at the Sam Noble Oklahoma Museum of Natural History (Photo: M. Mares).

vertebrates, the mammals, were quick to move into this habitat. The Miocene and Pliocene saw the development of herds of mammals that were adapted to life on the prairies. A diverse array of giant browsing and grazing mammals such as rhinoceroses, horses and camels inhabited Oklahoma more than 15 million years ago, along with various large predators. The richness of Oklahoma's mammal fauna at that time greatly exceeded the abundance of mammals that live in Africa today. As habitats and climates changed, however, the life of the prairies also changed, and the indelible records of species long extinct were left behind in the landforms of Oklahoma.

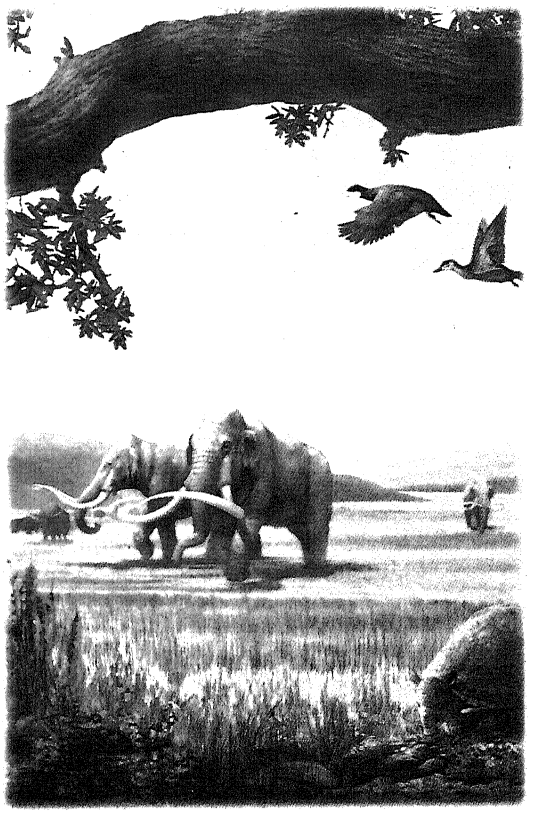

Fig. 2 – Oklahoma's Pleistocene as depicted by artist Karen Carr, from a mural on display at the museum (Photo: M. Mares).

In many ways the story of Oklahoma was just beginning, even though the extinctions of the Pliocene meant that hordes of species had disappeared forever. The onset of the Pleistocene, with the sweeping glaciers that covered much of North America, meant that Oklahoma's climate and fauna would also undergo great changes. Once again, Oklahoma's prairies and forests supported vast herds of ungulates such as giant bison and great predators such as the cave bear and sabre-toothed cat. As the Central American land connection was established across the Isthmus of Panama, new animals from South America began to appear. Oklahoma's fauna contained Northern Hemisphere species such as giant mammoths and mastodons, larger versions of today's elephants, as well as Southern Hemisphere animals such as giant ground sloths that provided a unique flavor to the land. Finally, near the end of the Pleistocene about 40,000 years ago, a new mammal appeared, an Old World primate that lived in large groups and that hunted the the giant mammals, possibly to extinction. Humans had entered the New World and some of the earliest records of their colonization were left in Oklahoma.

With the close of the Pleistocene and the disappearance of almost all of the giant mammals, it might appear that the most interesting parts of the Oklahoma story were over. However, the land now became a place for the unfolding of the human drama as reflected in the colonization of North America. The Native Americans who entered more than 40 millennia ago left many records of their passing, including the first recorded art object in the New World—the skull of an extinct bison with a zigzag ochre symbol that was painted on it almost 12,000 years ago. The great civilization of Spiro – the mound builders – also left behind an extensive record of their passing in the art and artifacts of the massive burial mounds of eastern

Oklahoma. Their magnificent artwork is today considered to be the pinnacle of pre-Columbian artistic development in North America. Eventually the harsh prairie land and tough eastern forests of the state would support only a handful of native tribes, who continued to live in Oklahoma until the great clash of cultures occurred, as Europeans colonized the North American continent and forever changed the lives of the natives.

Fig. 3 – A 1,000-year old Caddoan ceramic bottle from Oklahoma's pre-Columbian period on display in the Hall of the People of Oklahoma (Photo: M. Mares).

The Oklahoma story continued to unfold into historic times. In the 1500s, Spanish Conquistadors explored the area, although they never established settlements. Indeed, as waves of European colonists swept across North America in the 1700s and 1800s, few settlements were established in Oklahoma. Eventually, the United States moved to restrict the freedom that was enjoyed by Native Americans and a policy of removal and containment was established: native peoples were removed from their ancestral lands and relocated to Oklahoma, which became known as Indian Territory.

The story of Oklahoma was not over yet, however. Only nine tribes lived in Oklahoma before the relocation policies of the US Government were instituted. Once the territory was designated as a permanent home for Native Americans, 44 tribes from distant states and territories, as well as from Canada, were forced to live in Oklahoma. For a while it appeared that the tribes would be able to own portions of the territory forever. However, Manifest Destiny, the concept that the United States was destined to hold all of the land from the Atlantic to the Pacific, soon affected the destiny of the native populations of Oklahoma. The government decided to award much of central and western Oklahoma to white settlers, and did so with a unique concept of a Land Run. First in 1889, then again several times in the 1890s, races for free land attracted hordes of colonists, many of whom were Europeans who had come to the New World in search of new opportunities. This was a unique occurrence in world history. People lined up along a starting line and at the sound of a cannon raced into the wilderness to claim their portion of what was then called Oklahoma Territory. Norman—the town where the University of Oklahoma and its natural history museum would be built—was established in the first 24 hours following the first Land Run of April 1889.

As can be seen, Oklahoma is an interesting place. In many ways, its rich history makes it an ideal place to trace the evolution of life across time or the

development of cultures across both space and time. It is in this remarkable plot of ground that the forces of cultural development would lead to the establishment of a natural history museum. The story of the development of that museum is almost as fascinating as the story of the land itself.

A cabinet, museum, and apparatus

In 1899, only four years after the last Land Run opened the Kickapoo lands in central Oklahoma – the last land that had not been claimed by white colonists – the Territorial Legislature met in Guthrie, Oklahoma, then the capitol of the territory. The legislature ordered the establishment of a "geological cabinet, museum, apparatus, and library" that would "contain specimens of minerals, organic remains and other objects of natural history peculiar to this Territory and other states and countries." The act also established the museum at the Territorial University in Norman and named the Territorial Geologist as its curator.

Factors that led the legislature to establish a museum included the fact that Oklahoma had not been well explored biologically, geologically, or anthropologically; the territory clearly required an assessment of its heritage. Perhaps more important was the fact that as eastern states (and even some mid-western states) had been established, many had developed museums, including South Carolina, Pennsylvania, Massachusetts, Connecticut, New York, Illinois and Nebraska. A museum was a clear indicator of cultural progress, a sign that a state had moved from conquering the land to establishing an appreciation of the higher pursuits in life. Certainly for a raw territory in the West, a museum was required to show that the people living on the frontier had an appreciation for science and culture that was every bit as developed as those living 'back East'. The establishment of a museum might also help to show that Oklahoma deserved to become a state. Indeed, only eight years after establishing the territorial museum, Oklahoma became the 46th state in the union.

The three decades that followed the museum's founding were a difficult time in the life of the nascent museum. By 1903 the collections had grown to more than 10,000 specimens, including 4,000 Oklahoma plants representing more than 1,000 species. The museum was then housed in the university administration building, but the collections and building were destroyed by fire in 1903. Gradually, the collections were rebuilt, and at least twice in the next 10 years fires would again ravage parts of the collections. Nevertheless, the curators persevered. Gradually, the present-day museum took form.

Economic disaster and war

The next major development in the history of the museum occurred in the 1930s, a time of economic disaster in Oklahoma. Indeed, the suffering of the people in the state during the Great Depression became legendary with the publication of *Grapes of Wrath* by John Steinbeck, a book that has never been well received in Oklahoma. When Franklin Roosevelt became President of the United States, he immediately moved to initiate government employment programs. As this time, Dr. J. Willis Stovall had arrived at the University of Oklahoma. A vertebrate paleontologist, Stovall was able to utilize government labor to assist in his explorations of the fossil history of Oklahoma. He discovered many dinosaurs and other fossils during this time, keeping a large crew in the field during much of the year.

Fig. 4 – University Hall after the great fire of 1903 in which the museum's entire collection was lost (File photo).

At the same time, archeological excavations of the Spiro Mounds site in eastern Oklahoma also used extensive government labor to excavate what would become one of the most important archeological sites in the United States. Dr. Kenneth Orr, a University of Oklahoma anthropologist and museum curator, was a key investigator in studying the mounds. A mining company searching for buried treasure had almost destroyed the Spiro Mounds site. A move by university anthropologists led to the passage of the first conservation law for the State of Oklahoma. The law protected the prehistoric mounds, and the massive collections of artifacts and human remains that were discovered were transferred to the University of Oklahoma's museum.

Together, the archeological and paleontological collections amassed by scientists and government workers in the 1930s would total several hundred thousand artifacts. They were collections of great beauty and immense scientific and cultural significance, and they had become a part of the university museum. These two areas of research – vertebrate paleontology and archeology – would continue to drive the museum forward over the next 75 years, eventually resulting in the construction of a remarkable new facility to usher in the new millennium.

In 1939 Stovall had developed a plan for a new museum, noting: "If there is an index to the cultural values planted deeply in the hearts of the people of any community it will be reflected in the number and quality of their museums of art, science and history. The reason that the museum plays such an important part in the cultural elevation of a people is

that the museum furnishes a point of contact between the higher education institutions and the general public. The museum reaches out and touches the high and low alike. It thus elevates the ignorant and unschooled and in so doing prepares them for intelligent direction at the hands of an enlightened state." Stovall went about the task of combining the many natural and cultural collections into a single administrative unit, something he accomplished in 1943, assuming the post of its first director.

The Museum of the University of Oklahoma, as it was known, contained most of the collections that had been developed by academic departments, including Anthropology, Classical Languages, Plant Sciences, Geography, and Geology. At this time, Stovall moved collections from several departments (including storage under the football stadium) into a group of buildings that provided about 5,000 square feet of exhibition space and storage space in former stables and barns. The collections now had a home, but the buildings were inadequate to protect the collections or permit their enjoyment by the public. Stovall continued efforts to develop a new museum, but was unsuccessful in obtaining the funds for a new building. Certainly Stovall was not lucky.

In 1929, just before the start of the Great Depression, the state had identified funds for the construction of a new museum building. These quickly evaporated in the economic disaster that befell Oklahoma and the rest of the nation over the next decade. Similarly, just as World War II came to an end in 1945, the legislature and university again worked with Stovall to designate funds for a new museum. The end of the war led to the sudden passage of what came to be known as the G. I. Bill, a government program to provide a college education for all returning servicemen. Suddenly universities across the country were faced with hordes of returning soldiers who were going to be students. The money that had been designated for the new museum was quickly reallocated to build dormitories. Stovall died in 1952 without ever obtaining funds for a new museum. On his death, the name of the museum was changed to the Stovall Museum of Science and History.

Fig. 5 – The Stovall Museum's main building in the 1950s (file photo).

The middle decades, 1952-1983

The middle of the twentieth century saw the collections develop significantly due to extensive research by curators and their graduate and undergraduate students in academic departments. Additionally, the oil industry had become a major economic force in the state, and many wealthy oil pioneers and their families, as well as petroleum engineers and other geologists trained at the University of Oklahoma, had traveled the world, often collecting items of significant cultural and

artistic value. Many of these were donated to the Stovall Museum. The many collections from the Zoology Department also came under the care of the museum. The museum had many directors during the middle decades, and each in his way tried to develop a plan for the construction of a new museum building. Often these efforts would come tantalizingly close to success, but at the last moment funds were lost, potential donors died, or support for a new museum at the level of the university would evaporate. By 1983, the museum had collections stored in a rag-tag array of buildings, including decrepit World War II wooden army barracks, the original stables and barns that were given to Stovall in the 1930s, and attics and basements scattered across campus. None of the buildings offered protection from fire and some were so poorly constructed and such a great fire hazard that they were used to train firemen. Some of the greatest firetraps in Oklahoma – buildings with a projected 'burn-down time' of seven minutes – now housed the collective heritage of the state, an invaluable collection of more than six million specimens and artifacts.

The later decades, 1983-1995

I was named director of the Stovall Museum in 1983. The only reason I was chosen to lead the museum, which had had a number of directors and acting directors in the middle decades, was that I was the first Ph.D. curator paid through the museum, rather than being a curator paid by an academic department. There was no one else to ask to be director when a previous director left the university. My appointment coincided with a hiring freeze that was imposed by the governor for all state positions. I had been the head of a search committee that was seeking a new director when the freeze went into effect. Once again Oklahoma was subjected to a downward economic spiral as both oil and agricultural prices plummeted. Unemployment rose, incomes declined, salaries of state employees (including faculty members) were

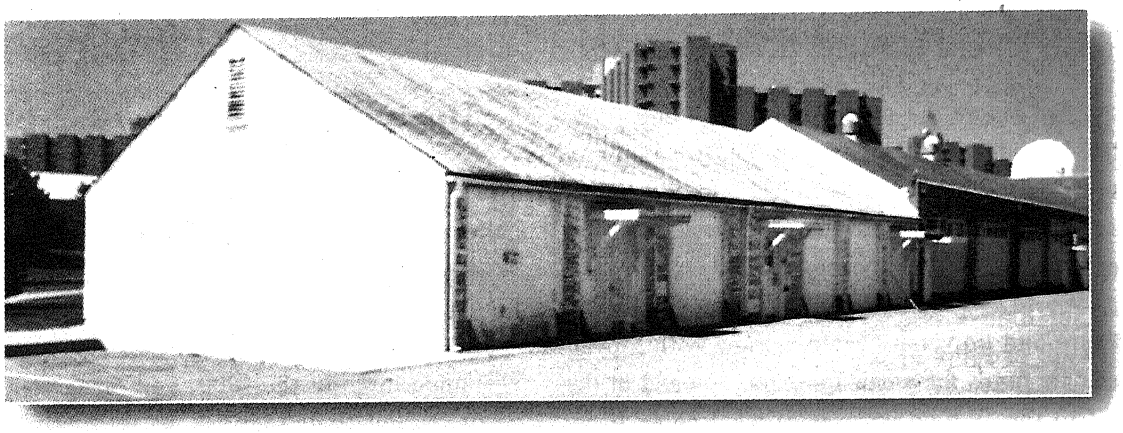

Fig. 6 – Some of the wooden stables that housed Oklahoma's collections of natural and cultural history for more than six decades (Photo: M. Mares).

cut, and there was little hope for improvement of conditions in the immediate future. Oklahoma was experiencing the 'Oil Bust', another depression, which, if milder than the Great Depression, was nonetheless a difficult time to even consider developing a new museum. The very idea of a new museum building during such hard economic times was ridiculed by many. There was no new museum on the university's horizon in 1983.

I came to the museum in 1981 and was told that I would be the first of several curators to be hired. By 1983, no additional curators had been hired, the director had left, and an acting director was running the museum. The university was unsure as to what to do with the museum. Hard economic times make it difficult to manage an organization effectively. The university entered a period of administrative instability. Presidents were replaced by interim presidents and these were replaced by new presidents. By 1995 I had reported to 10 different presidents and interim presidents. Some of these were professors or administrators with a history of service to the university and were familiar with the museum. In most cases, however, the fact that they were in an interim position made them unable to plan tong-term development strategies. Their job was to get the university through a period of instability until a 'permanent' president could be appointed. When such permanent appointments occurred within the context of economically challenging times, the last thing the new president wished to do was to consider building a new museum. Several presidents did not see the need for a museum on a university campus at all, viewing it not only as an unnecessary drain on scarce financial resources, but also a massive consumer of space – another scarce resource on all college campuses. Faculty did not support a new museum, feeling that any funds for such a project would be taken away from academic departments. Moreover, 'permanent' presidents were invariably not from Oklahoma, which meant that they had little emotional investment in the museum's holdings – the largest collection of the tangible heritage of the state. I called them the transient administrators, for they always had a bag packed and an ear cocked for a position at a more prestigious university. Their goal was to avoid controversy and keep the institution functioning during a straightened economic period.

The naming of a new president means that the overall administrative structure of the university will change as new provosts, vice-presidents, deans, and other administrators are appointed by the new regime. These university officials often reflect the general tone emanating from the president's office. If they have detected a lack of support for a new museum building, then each becomes more committed to making the museum disappear. During this difficult period the attitude toward the museum among higher administrators ranged from benign neglect to open hostility. Budgets were cut; staffing was reduced. There was little or no support for a new museum building. Soon there was talk of eliminating public programs and exhibits, downsizing research, and, eventually, selling the collections. It was difficult to fight what became a multi-front war with administrators. One never knew from where the next assault would come. Would the museum be closed? Would more staff members be eliminated? Would research programs be ordered to close? Would budgetary cutbacks continue? One president unilaterally gave the museum away to another city; I read about it as I opened the morning paper! He later asked me to sell some of the collections at Sotheby's in order to raise funds for a new museum. "What will you put in it after the collections are sold?" I asked. It was a challenging time to be a museum director.

A difficult period

When I became director, I immediately decided that it was my duty to develop and build a new museum for the University of Oklahoma and for the State of Oklahoma. The economic conditions of the state did not concern me. We were in danger of losing the state's heritage and clearly had the moral high ground in a move to a new museum. As I examined each collection, I was struck by the beauty and value of the objects. There were many unique pieces that would be star attractions at major museums around the world. The museum had the world's largest *Pentaceratops*, one of the greatest dinosaur fossils ever found. It also had the world's largest apatosaur (brontosaur) – perhaps the quintessential dinosaur. The Oklahoma specimen was fully a third larger than the famous Carnegie Museum specimen on exhibit in Pittsburgh, Pennsylvania. The precious Spiro Mounds artifacts that told of an artistic culture living in Oklahoma a millennium ago would be considered treasures in any museum, as would the small, but important, classics collection.

Clearly the curators, directors, researchers, students, and travelers had labored long and hard to amass a magnificent collection. Unfortunately, each day my staff and I faced a continued lack of support for a new building from the higher administration, as well as a lack of understanding of the importance of the collections or an appreciation of their value. To this one must couple the fact that Norman lies at the heart of Tornado Alley, an area famous for the most devastating storms on earth. Lightning, wind, and rain, not to mention tornadic winds spiraling at hundreds of miles per hour, could mean the instantaneous loss of Oklahoma's heritage. Each time a storm approached, the handful of staff members (we numbered only seven when I began) rallied to protect the buildings. Roofs, walls, and even floors leaked during every heavy storm. Pests as large as squirrels were able to enter the collections, at times damaging valuable objects.

Luckily, the museum was not lost to storm or fire, although there is little doubt that some administrators would have seen such an occurrence as divine intervention, removing, as it would have, a problem that would not go away. In subtle ways the administration let it be known that they did not support a new museum facility. Staffing and budgets continued to decline. I went through a period of five consecutive years without a pay raise, although faculty and administrators experienced significant increases during the same period. There was little or no support on the part of the university development office to identify potential donors who might be interested in a new museum building.

Through it all, we endured. How could we let these collections be lost in a fire or a storm because of simple neglect? Duty can be a heavy burden. Nevertheless, what was becoming increasingly clear was that the university would never take steps to build a new building unless pressure was brought to bear on the administration. I determined that the only pressure that could compel the university to support the development of a new museum was the pressure of the people. Ours was a public university. These collections belonged to the people. The museum had to become the museum of the people of Oklahoma.

This is your stuff

Within a few years after becoming director, I decided to begin backroom tours for people interested in the museum. I began to travel the state telling the people

of Oklahoma the story of *their* museum, *their* collections, and the potential catastrophe that was looming on the horizon with each summer storm. "This is your stuff", I said. "Look how we are taking care of it. Would you put your greatest treasure in a building that was deemed unfit for horses? Would you store your family's heirlooms in a barn? Would you keep items worth tens of millions of dollars in buildings that would burn down in seven minutes?"

Oklahomans have an abundance of common sense. As we led tours through the collection for first tens, then hundreds, then thousands of people, we were able to reach out to a core of potential supporters. They were not happy with the way the university was protecting "their stuff". On one rainy day we led a tour of the anthropology collections. Among the items the visitors saw were hundreds of beautiful baskets covered with plastic sheeting. As we walked through the dark and dismal hallway in the aged barn, water dripped on the plastic. Some people had tears in their eyes as I showed them the precious objects of their heritage. They saw rare Native American baskets, ledger art from the last century, Greek pieces made long before the birth of Christ, Spiro artifacts that were old 500 years before Columbus sailed to the New World, dinosaur bones that had cracked because of heat or cold, rare vases that had been broken by squirrels that had gotten into the collection. They were astounded and angered: "How could this happen? Why won't the university do something about this? This is disgraceful!"

I, of course, could not agree more with their feelings. Indeed, I was happy that someone was finally sharing my displeasure with the current situation and my concern for the magnificent collections. Even though I had increased the level of awareness of the museum among the people of Oklahoma (I wrote most of the news releases that told of the plight of the museum in the local media), I needed some way to reach more people. It was not possible to bring everyone in Oklahoma on a time-intensive backroom tour. I needed to find a way for people to understand the beauty and value of the collections without having to tour the facilities.

The Oklahoma Museum of Natural History

In the United States, one of the most effective ways of reaching the people is to deal with their elected representatives. Oklahoma's elected state house members and state senators represent the many local communities of the state. For the most part, they are people with deep roots in Oklahoma. I knew that if I could convince them of the importance of the collections and make them aware of the abysmal storage conditions of "their stuff", they would want to do something about it. A new museum could have a significant economic impact on the state. Oklahoma was suffering greatly in the strong economic downturn of the Eighties, and the state needed additional cultural and economic accoutrements to attract industry and tourists to the state. Surely a natural history museum would be a major player in a revitalized state economy. As I pointed out to them, "Oklahoma has done the hard part. We have built the collections. All that remains is the easy part, building a new museum". To their everlasting credit, most of the state's politicians, and especially the local delegation, became powerful and consistent voices for a new museum. As support from the citizens of Oklahoma increased over the years, the support of the elected officials became even stronger. I finally had important allies in my battles with university administrators.

In 1987 I was finally able to work with the local delegation to have a bill introduced into the legislature that changed the name of the Stovall Museum to the Oklahoma Museum of Natural History. We were now the state's official natural history museum. It was not possible to include funds for a new building at the time the law was enacted, but I was able to have phrases included in the bill obligating the state and university to work together to provide a museum building someday. Moreover, the university and state were also mandated to provide a staff of professionals of a quality merited by the valuable and extensive collections. The passage of this state law was a giant leap forward for the museum. Although we still belonged to the state's university, we now also belonged to everyone in the state in a tangible way. It was the law of the land. The collections really were "their stuff".

Traveling exhibits cover the state

Oklahoma is a state with a large land area (68,679 square miles; 177,877 square kilometers—about twice the size of Portugal) and small population (about 3.4 million). One major challenge that the museum faced was how to use the collections most effectively to reach the largest number of people in the state. With only about 4,000 square feet of exhibit space, it was impossible to host many visitors or to show many objects. On a good year we would have about 50,000 people visit the museum. Most visits lasted less than an hour, for in that brief time a person could cover most of what was shown in the small museum.

Under the tutelage of Peter Tirrell, my then Assistant (and now Associate) Director, the Stovall Museum developed one of the finest traveling exhibit programs in the country. Using grant funds and other sources of public and private money (there were no funds for exhibits in the museum's budget), the staff developed a wide array of self-contained, attractive, informative, and easily transportable traveling exhibits. Rental fees for the small exhibits (which could be shown in a few hundred square feet) were minimal, and the larger exhibits, which required up to 1,200 square feet, had very low rental fees when the quality of the exhibit was considered. We designed the traveling exhibits to be shown in schools, banks, government buildings, libraries, malls, smaller museums, and other venues offering modest security and ready public access. The exhibits reached almost every town in Oklahoma and were extremely popular.

For most people, it was their first opportunity to see a museum exhibit. We received letters that thanked us for providing "my first opportunity to visit a museum." From 1980 through 1994, more than two of every three people in Oklahoma had seen one of the traveling exhibits. The Oklahoma Museum of Natural History was becoming important to the people of Oklahoma. It was becoming a regular part of their lives. The museum's traveling exhibits made friends for the museum throughout the state. People in the small towns of Oklahoma appreciated the museum's taking its time and energy to bring exhibits directly to their towns. They had largely been ignored by state institutions in the past and it was refreshing for them to receive exhibits that were not only attractive and informative, but fun as well. It was something that everyone, from grandparents to grandchildren, could enjoy together.

Heritage at Risk

In 1988 I wrote a book called *Heritage at Risk*. It was a slim volume with beautiful color photographs of some

of the most valuable and exquisite objects in the museum's collections. The message of the book was contained in the title. The people of Oklahoma owned a remarkably extensive, superb, and valuable collection that reflected their heritage. This collection was in danger of catastrophic loss. Oklahoma's 'best kept secret' was a secret no more. I was asking the people to help me protect their heritage. This was "their stuff" and it was going to be lost... forever. If they did not act quickly, the many irreplaceable and lovely objects that were shown in the book for the first time would no longer belong to them. Their children would not have a great museum because this generation did nothing to help. The book gave them a taste of the glory of a new museum, while also showing the dismal conditions in which their heritage was kept. If they did not care, then no one would care. It was up to the people, for the university would not lead. As I wrote in closing:

> "The small and dedicated staff of the Oklahoma Museum of Natural History can work tirelessly to protect these precious items, can design interpretive exhibits that will bring information about these materials to the entire state, and can study the materials so that we learn to better appreciate our rich heritage. However, the staff cannot do a great deal to influence the construction of a new building for the museum or the addition of staff members. The real influence for a new facility and increased staff lies with the people of Oklahoma. These are your materials that are endangered. You need to let everyone know that the state, the university, and the people of Oklahoma must work together to protect these extensive, exquisite, and valuable collections. The are Oklahoma's heritage."

I used a small grant to publish the book and gave thousands of copies away at no charge to most state leaders, including politicians, business people, government and university officials, foundations, potential donors, and others who might be able to help in the drive toward a new museum. The book led to two groups of Norman citizens banding together under the names Heritage at Risk and Citizens for the Museum. They went door to door to gather signatures on a petition. The petition called on the City of Norman to sell property bonds (increase their property taxes) in order to provide an initial $5 million dollars for a new natural history museum.

This occurred at the end of the 1980s, a time when Reagonomics (anti-tax policies developed during the presidency of Ronald Reagan) meant strong anti-tax views by many people. To call for a tax increase during this period was to go against the trend against taxes that had swept the nation for most of the decade. The Oklahoma City paper in a headline on April 22, 1992 put it succinctly: 'Tax wariness casts doubt on museum plans.' To make matters more difficult, the people were calling for a single-issue question, which meant that like the gladiators of ancient Rome, the people of Norman would either give a 'thumbs up' or 'thumbs down' sign for a new museum. There would be no other questions dealt with in the special election. "Are you willing to put a new tax burden on yourself in order to help build a new museum?" That was the real question. It was that simple. Early on in the process, the president of the university told me to stop the election. I had wisely kept myself out of the citizens groups as we worked together to develop the election strategy. I had no power over the groups. These were simply citizens exercising their rights. I told the president, "Have you ever heard the word 'democracy'? I have no control over these people." "You will lose the election," he said. "We might," I replied, "but we've been in Norman for almost a century and the people like us. I think we will win."

As the election neared, it was becoming increasingly clear through polls that the museum bond election would be approved. When the votes were tallied, seven of every ten people had voted a tax on themselves to build a new museum. They made the city's money contingent on the university's raising $15 million in private donations and on the state's providing an additional $15 million. The snowball had been pushed down the hill. The museum project had a long way to go, but it would now be hard to stop. The people had spoken.

The state acts again

In November 1992 a statewide election was held for a higher education bond issue. Higher education in Oklahoma had not received a significant increase in funding through bond money for a quarter of a century. The entire bond election included several hundred million dollars of support for higher education, but within the large package was a $15 million allocation for a new natural history museum in Norman. I had lobbied our president to have the remaining $30 million that was required to build the museum included within the bond issue, but he felt that we could raise the money through private means. Had he supported the inclusion of the entire amount in the bond drive, the new museum would have been finished much sooner.

There was no guarantee that the citizens of Oklahoma would approve a major bond question for higher education, especially given their anti-tax feelings. However, when the votes were tallied, the question had been approved by about 60 percent of the voters. I learned later that some politicians and political leaders felt that the glue that held the entire bond question together, and that helped it garner the support of the public, was the museum's inclusion in the package. The people of Oklahoma loved their museum and they voted to support it. We now had $20 million dollars. Oklahoma was going to have a new museum.

How will we stop this project now?

When the City of Norman voted to fund the museum, it provided the first $5 million of a projected $35 million that would be needed to build a new facility. The state then provided an additional $15 million. This promise of funding, although not yet translated into actual funds, permitted me to proceed with site selection and the initial architectural work. As planning progressed, a site was selected for the new museum. Among seven possible locations, we picked a beautiful open area on the south end of campus near the law school.

We were under pressure to build a new museum in the heart of the campus or in or near the town's mall, a move favored by several business interests. However, I felt that the museum needed to remain a part of campus and should not be placed in a business area far from the university. For one thing, we taught many classes in the museum in fields ranging from botany to zoology, and from anthropology and history to geology. The collections provided unique opportunities to train undergraduate students and graduate students alike. Indeed, over the previous several decades, more than 100 advanced degrees had been awarded for research done on the museum's collections. Additionally, the museum needed extensive parking facilities, as well as room to expand in the future. There was no parking available in the heart of the campus. Finally, the state's finest museum deserved to be placed in a setting that permitted the natural beauty of Oklahoma to be

shown in a natural habitats park. The only location that offered all of these things was the site at the south end of campus. Originally, I was only able to control 10 acres, but soon this increased to 20. As presidents changed, it increased to 40 acres. Finally, when David Boren was named president, the site reached its final size of 65 acres. I was proud to have taken part in a small 'land run'—in the best Oklahoma tradition—that would ensure the beauty of the setting of the museum far into the future.

Gradually the building began to take shape, at least on paper. I had to use my imagination in working with artists so that they could produce renderings of the exhibits that potential donors and voters would find exciting and beautiful. We needed to help them visualize what could be. I needed to convince donors that a new museum would be one of the best things ever to happen in Oklahoma. This was not a simple thing to do, but it was, after all, their stuff, too, so I let the collections sell themselves. Eventually, with the significant assistance of the University Development Office, we began to attract donor interest. The person who was in charge of the campaign loved the museum and she and her assistant worked tirelessly to bring the museum story to the attention of donors. I was always ready to help and together we formed a dedicated team with a single goal: build the finest museum that Oklahoma has ever seen. We were not always supported by the higher administration of the university, but we persevered.

I was under great pressure to build an inexpensive prefabricated building. Why did I need so much money? Surely the $35 million that I was talking about was way too much museum for the university and for Oklahoma. Why couldn't I do it for $10 million? I replied with such questions as "What is Oklahoma's heritage worth?" I knew that the people of Oklahoma thought that it was worth a lot. I myself thought that it was priceless. "How can you put Oklahoma's heritage in a cheap building?" I asked. Plans came forth from various administrators to make the project less expensive. Why not build an exhibits building and leave the collections where they are – in the barns and stables? Why not build a cheap storage facility and forget about exhibits? Why not get rid of most of the collections and just build an inexpensive building for displays?

At one point I had to remove all of the offices from the blueprints for the new building because I was told that there would be no staff to fill them. I was able to accomplish this by labeling the offices as storage bins on the building's floor plans, much to the surprise of the architect. I also could not use the word library, since the very word made the president unhappy. There were several library spaces on the floor plans. Indeed, state law mandated that the museum maintain a library to deal with topics related to the collections and the mission of the museum. The libraries too changed their name, becoming 'student resource' rooms. The walls of the 'storage bins' were supposedly made of chicken wire, which the president found acceptable and inexpensive. The libraries had no bookshelves, for those would have been too obvious on the floor plans.

It was an uncomfortable period. At any point the whole project could come crashing down around me if my architectural trickery became known. Yet I also knew that I would deserve to be fired if I were to build a building that could not function. I felt that my first allegiance was to the people of Oklahoma, those alive now and those who would come later. They had paid for this building, not the president. I owed it to them. They had bought into the dream of a great new

museum. There was no way I could permit a pale imitation of the dream to be constructed. If I were to be fired, it would be because I had decided to do something sneaky for the good of the museum, not because I had acquiesced to something that would be bad for the museum.

I knew that it would be impossible to operate the building or develop the exhibits without a large staff and they would need offices. Experience had also taught me that it was useless to argue with the president. He was clearly wrong about staffing, just as he had been wrong when he tried to get me to sell the collections. I felt it was best to resort to a minor subterfuge in order to get the job done. Offices became bins; libraries became resource rooms. To do otherwise would have made me incompetent as a museum director. People would have to be hired to run the museum or there would be no public opening. This was the most popular public project in the history of Oklahoma. In the long run, he would thank me, for no one could withstand the heat if the people of Oklahoma arrived on opening day and there were no exhibits and no staff to operate the building.

My job was to get the building planning completed and to increase the excitement throughout the state about the exhibits and the new museum. Eventually, there would be irresistible pressure on the administration to act or heads would roll come opening day. The wait for action was nerve wracking, but waiting was the only strategy. With each permutation of the blueprints I had to see those ridiculous storage bins and resource rooms. Would we ever have a president that understood and supported the museum?

Each day, it seemed, led to new challenges to the museum project. Finally, one day in early 1994 we were asked to present the case for a new museum to a potential donor, the Noble Foundation, a foundation that belonged to one of Oklahoma's notable families and that had supported many cultural projects at the University of Oklahoma and throughout the state. Campaign Council Chair, W. R. Howell, CEO of JC Penney and I would make the case for a new museum. We would be given three minutes each to address the board. We learned later that the board did not know beforehand if they wished to support the museum project or what level of support they might be willing to provide.

We each spoke for the allotted few minutes. How does one sell such a massive idea in three minutes? Howell, a native Oklahoman, spoke eloquently of what it means to grow up in Oklahoma. He spoke of his desire to see Oklahoma's heritage on display. I then talked about the importance of heritage to the people of Oklahoma. I reviewed the remarkable collections and spoke about how a foundation seldom has an opportunity to touch the future of a state in as tangible, important, and permanent a manner as that afforded by the museum project. We owed it to our grandchildren. My three minutes flew by and the board meeting then continued for the rest of the day. That evening we would learn that the Noble Foundation and their affiliated foundations would eventually provide $10 million to the museum project. It was the largest donation in the university's history—by a factor of three. We now had $30 million. The new museum would carry the name of Sam Noble, who had passed away a few years earlier but who had been interested in natural history museums. The new museum would be called the Sam Noble Oklahoma Museum of Natural History.

A few weeks after the announcement of the Noble gift, I was told that a very senior administrator had called

his staff together and announced that the Noble gift had made his job much more difficult. "How will we stop this project now?" he asked. He should have asked me, for I knew the answer. There was no way he was going to stop the project. Moreover, I doubted that he would be in his position when the new museum was finally built. I was correct on both counts.

A new president

In 1995 the University of Oklahoma Regents, the governing body of the school (and a group that had been supportive of the museum project for several years), appointed David L. Boren as the 13th president of the university. Boren had been Governor of Oklahoma and a United States senator for 16 years. I did not know how good a president he would be, but I was certain that I would not have to explain to him the value of Oklahoma's heritage. I visited with him shortly after his appointment and he quickly indicated his enthusiastic support for a new museum. He saw immediately that a new museum would be important in strengthening the scientific and cultural infrastructure of the state and in forming a bridge to the people. Moreover, he also was quick to agree that a new natural history museum would be an excellent addition to the university, where students and visitors would enjoy it. He agreed with my assessment that the museum would be the 'front door' for the university.

Working with Boren was a pleasure. I was able to argue the case that the initial $37.5 million project, while significant, was too small for our needs, especially given the fact that we had been unable to estimate the costs of the exhibits with any accuracy. I said that we needed to increase the overall project to $42.5 million. He agreed. I also noted that we had never been able to develop a staffing plan since a former president had said that is was his intention that my total staff would not exceed six people. He asked for a staffing plan. We had one ready, for we knew that the time would come when people had to be hired. Working with the university regents, the legislature, and the higher regents (the governing board for all Oklahoma public education), Boren and I were able to garner support for an exhibits development plan and a staffing plan for the new building. Suddenly my bins and resource rooms again became offices and libraries.

In February 1996 President Boren climbed atop a bulldozer disguised as a *Triceratops* dinosaur and, along with one of the Noble family's grandchildren, broke ground for the new museum. It would cost $42.5 million and would include almost 200,000 square feet, with about 50,000 square feet dedicated to exhibits. Within days the contractors had arrived and building construction was underway. Exhibit plans were also taken to the stage where construction contracts could be bid. Oklahoma's new museum was being built.

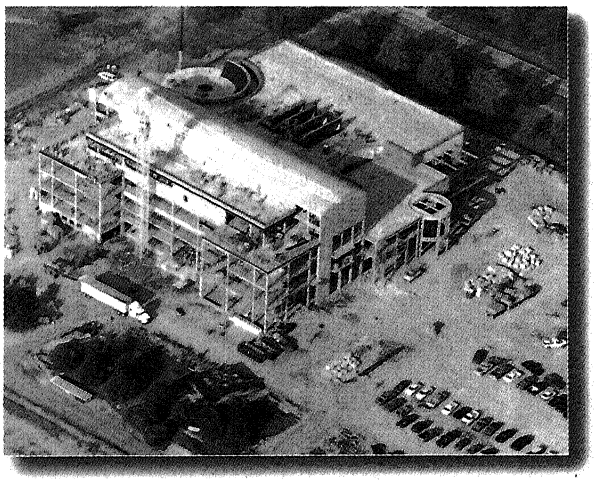

Fig. 7 – The new museum taking shape (© RogerBondy.com).

Touching the future

I will not detail the actual construction of the new facility. Suffice to say that there were enormous challenges in getting the project completed more or less on time and within budget. I visited the project each day I was in town for more than 42 months, clambering up ladders and into the most hidden recesses of the building. The eternal struggle between builder and architect took place, with me, the representative of the owner, having final say on almost anything to do with the massive and complex structure. I knew that if I relented in the quality of the final project, the impact would extend across the generations. If it failed to meet the collective expectations of the people of Oklahoma, I would be responsible. I had helped develop, articulate, and sell a dream. I would not permit anyone to interfere with the successful completion of the project. We had promised the people a great museum. If it did not come to pass and it were my fault, I knew that I could never feel satisfaction again in having lost my single opportunity to "reach through the dark curtain of time and touch the future," as I once noted to our supporters. It was a crazy time. Each day brought new challenges, whether from the building contractor, the dozens of graphic artists, the exhibit designers and contractors, the lighting specialists, the landscaping people, or any of the hundreds, if not thousands, of others involved in the project. I knew that I would be the target if the museum project did not meet the people's expectations. However, I also knew that I had very high – almost perfectionist – standards. If my expectations were met, theirs would be too. Although

Fig. 8 – The Sam Noble Oklahoma Museum of Natural History at night (Photo: Timothy Hursley).

I was not an elected official, the people of Oklahoma had given me something far more important than their vote. They had given me their hope. This museum was tangible evidence of their hope for the future. Their children and grandchildren would have a better world than their parents, and this museum would be a part of it.

Turning dreams to stone

On April 12 and 13 2000 the new Sam Noble Oklahoma Museum of Natural History was dedicated. All of the exhibits were not yet complete and we were still trying to finish some of the internal spaces. Nevertheless, the building – designed by Stuart Solomon of Solomon + Bauer of Watertown, Massachusetts and local architects William Kaighn and Associates – was beautiful. Oklahoma had never seen anything like it. It is the finest natural history museum in the region. The building has climate-controlled spaces for the collections, with the latest in high-tech security systems. The exhibits are breathtaking. Some of the greatest dinosaurs in the world are on display, including *Saurophaganax maximus* ('the greatest king of the reptile eaters') and Oklahoma's state fossil; the world's largest *Apatosaurus*; and the most complete and largest *Pentaceratops* in existence, an animal with the largest head of any land animal that ever walked the earth. The natural history dioramas permit the visitor to enter the exhibit space and become a part of nature. In the Hall of the People of Oklahoma are the Cooper Skull—the first object ever painted in the New World—and the priceless artifacts of the Spiro people. There is a large contemporary Native American art gallery with a breathtaking collection of Native American art. Opening day also saw an exhibit of artwork from throughout the world in the museum's Millennium Dinosaur Art Contest. In the south rotunda, the word's largest bronze mammoth is encountering a bronze sculpture of a Native American family. Both are

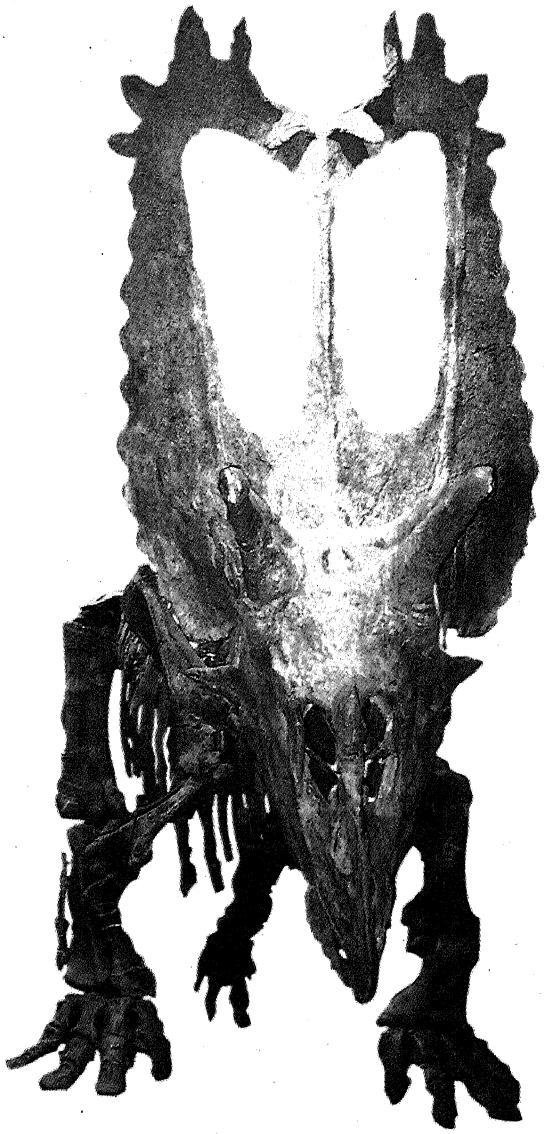

Fig. 9 – *Pentaceratops* on display in the museum. This individual animal has the largest head of any land animal that ever existed [almost 11-feet high (3.4 m)] (Photo: M. Mares).

standing on the floor along with the visitor. Standing by the family, you can feel the power of the mammoth and the challenge of survival faced by the early people of Oklahoma. Through the glass rotunda one sees the natural habitats of the state as a backdrop to the mammoth. The scene that is depicted in bronze could have taken place 15,000 years ago on the very spot on which the museum stands.

We completed our first year of operation in May 2000. Almost 300,000 visitors came to the museum the first year. I have yet to meet anyone who does not like it. I am proud to have played a role in the complex drama that surrounded the development of Oklahoma's new museum of natural history. The collections are safe. The people are satisfied. As you enter the museum there is a large donor plaque listing major donors. Before the many individual supporters is the following:

The People of Norman
The People of Oklahoma

It is a rare privilege to be a part of a project that is so large and involves so many people. Even more satisfying is having been able to work with the people of Oklahoma to turn a diaphanous dream into a beautiful stone reality.

The new museum will exceed all of our life spans, taking its message of Oklahoma's rich story far into the future, enriching the lives of our children and their children.

Together we performed a miracle on the prairie.

Are university collections and museums still meaningful? Outline of a research project

MARTA C. LOURENÇO*

Resumo

A investigação museológica sobre a importância das colecções universitárias e sobre o papel contemporâneo dos museus universitários é ainda escassa. Esta comunicação pretende esboçar um projecto de investigação, a desenvolver nos próximos anos, que tem como objectivo principal abordar estes tópicos no contexto das universidades públicas europeias e, em particular, no caso português. A comunicação apresenta igualmente alguns resultados de uma pesquisa prévia, conduzida em 2000, em Portugal (apêndice) e num número restrito de museus universitários europeus.

Abstract

The contemporary significance of university collections and the changing role of university museums has not been the subject of thorough scientific research. This paper presents the outline of a research project to be carried out during the next few years, which seeks to place these and other topics in the perspective of recent developments in public universities in Western Europe in general, and Portugal in particular. The communication also presents the results of an inquiry among Portuguese u-museums and collections (listed in the appendix) and a number of European u-museums, aimed at establishing a context for the research.

Introduction

Perhaps there is a crisis in university museums. In Portugal, there are certainly signs of difficulties, but recently also a few signs of hope. Although it is tempting to merely focus on problems, I will try to avoid this temptation and speak in more general, hopefully optimistic terms. I have always been captivated by the role of u-museums in contemporary society: what are their functions? In what way do these functions differ from past functions? In what way do these functions intersect those of contemporary universities?

These are complex questions, with a large number of parameters, making it impossible to provide straightforward answers. This does not mean, of course, that the reality of u-museums is unintelligible. On the contrary, we can and should do more in order to understand the nature of these issues. This Committee's role is crucial in this respect.

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I have to admit that I consider university museums different from other museums[1], although one may indeed argue that all museums are different. However, I do not think that u-museums are only different as far as management, organisation, ownership of collections or exhibitions are concerned. Differences lay at the very heart of what a museum is – differences lay in objects. Although we can of course find apparently similar objects in other museums, they owe their existence in university museums to different reasons. Through time, u-museums' incorporation policies and the use of collections were closely linked to the main mission of universities – teaching and research (DE CLERCQ 2001). U-museums are the only keepers of the material evidence of how scientific knowledge was constructed and taught, and of when the physical archiving of nature started.

This specificity is also suggested by the creation of organisations such as the University Museums Group (UMG) and the University Museums in Scotland (UMIS) in the UK, the Council of Australian University Museums and Collections (CAUMAC), as well as the long awaited creation of this ICOM Committee, UMAC. Journals have been devoted to the topic[2] and a European project on Academic Heritage was designed and implemented and is currently in progress[3]. Specificity has also been the subject of recent papers on u-museums (e.g. STANBURY 2000, DE CLERCQ 2001). These examples indicate that although very different among themselves, university museums share policies, methodologies, practices, and standards – they also have common aims, concerns and needs. They are united in diversity.

Specificity discourse, however, can be mistaken for arrogance – suggesting that university museums, being specific or special, are *better* than other museums. I do not share this view. On the contrary, I defend closer bonds between u-museums and other museums. Museums are socially perceived as cultural institutions and universities as scientific institutions. University museums were always divided between these two worlds. Statements like "we are playing in the wrong league"[4] or "Sometimes I have the impression of being a tennis player lost in the middle of a rugby team"[5] are an indication of this 'divorce'. From my point of view, I see no particular advantage of deepening the abyss between u-museums and non-university museums or, more generally, I see no reason whatsoever to separate Science from Culture. When I use the word *specific*, I really do mean specific, as in distinct, peculiar, but without particular values attached.

This project is centred on the specificity of u-museums in Europe, as far as functions are concerned. In particular, I will focus on teaching and research for reasons I will try to explain. Generally speaking, the project aims at clarifying to what extent teaching and research activities in u-museums: i) evolved through time; ii) influence incorporation policies; iii) determine the use of collections; iv) reflect teaching

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[1] I include under the designation of 'other museums' all museums that are not university dependent.
[2] For instance, *Museums Journal* No. 86 (1986) and, more recently, a double issue of *Museum International* (2000 and 2001).
[3] The European Network 'Academic Heritage and Universities – Responsibility and Public Access'. For details on the project itself and on partners, see: www.universeum.de.
[4] Anders Ödman, Director of the History Museum of the University of Lund (Sweden), quoted in the Bulletin of the European Museum Forum (January 2001). Consulted 4 June 2001, in stars.coe.fr/museum/bulletin_e.htm.
[5] An anonymous museum curator quoted in WEEKS (2000: 10).

and research activities in universities (outside the museums).

Of course, I am aware that many u-museums and collections do not fit into this study. Some objects are incorporated for commemorative, decorative or ceremonial reasons[6], which in itself is a sign of the complexity of incorporation policies – criteria other than teaching or research can lay behind the existence of u-museums.

Methodologies remain under discussion, but they are likely to include interviewing u-museums staff, collecting documentation, and site visits. At the moment, I am finalizing a survey on Portuguese u-museums and collections and data are being collected for comparison with other studies carried out elsewhere in Europe.

The need for more research

Since the 1960s, but with more global impact since the 1980s, much has been written about university museums, especially natural history museums[7] – probably because these felt threatened more than anyone else by the so-called 'crisis'. Authors like Nicholson (1991), Albrech (1993), Seymour (1994), Birney (1994), Steigen (1995), Mearns & Mearns (1998), Mares & Tirrell (1998), Krishtalka & Humphrey (2000), among others, suggested new directions for natural history collections. Meetings like the 'Natural History Museums: Directions for Growth', held in 1988 in Kansas City (Cato & Jones 1991) and 'The Value and Valuation of Natural Science Collections', in 1995, in Manchester (Nudds & Pettitt 1997) contributed to deeper reflection on contemporary issues facing natural history museums, mostly university dependent. There is also considerable literature on the more general problems concerning university museums, e.g. Bass (1984), Armstrong *et al.* (1991), Stanbury (1993), Arnold-Foster (1994, 1999), Kelly (1998, 1999), Arnold-Foster & Weeks (1999). In England, Scotland, Australia and the Netherlands, among other countries, governmental agencies wrote reports and issued recommendations which eventually resulted in policy change[8]. Although all these steps are instrumental to the reformulation of the contemporary mission of u-museums, I believe that there is also need for more in-depth research. Much more needs yet to be studied and published.

Museology provides the context for this research. Studying the functions of museums or the specificity of collections does not fall under the umbrella of subject-matter disciplines, i.e. the disciplines represented in the museum. It is not the object of study of archaeology, anthropology, or physics. It is one of the objects of study of museology. Although this plain statement requires justification, I will not try to do this here and instead accept it as a postulate.

Let us now look more closely into the importance of teaching and research in u-museums. I will also briefly discuss some aspects related to a possible museology that is specific to the u-museums' context and finish with discussing several issues arising from these reflections.

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6 James Hamilton, quoted in Kelly (1999: 20) groups u-collections into 4 groups: ceremonial, decorative, commemorative and learning.
7 I am including under the designation of 'natural history': botany, zoology, mineralogy and geology, palaentology and anthropology.
8 E.g. the direct non-formula funding in the UK and the museological policies of the University of Macquarie, Australia, approved by the senate and the Council of Vice-Chancellors of New South Wales (cf. Macquarie University Council. *Policy on University Museums and Collections*. 13 December 1996, unpublished document available on line at www.lib.mq.edu.au/mcm/.

The functions of u-museums

ICOM's definition states that museums in general have five functions – collecting, research, preserving, interpreting and exhibiting. According to WARHURST (1984) this definition, in essence, applies to u-museums as well, although those may place different emphasis on different functions. However, university museums are functionally special in two different aspects: they have an extra function – teaching – and they establish a different approach towards research.

Teaching

Education has always been one of the main purposes of all museums. As far as general museums are concerned, education is a term used in its broadest, even 'potential' sense. As Richard Grove put it, "museums have the power to quicken the mind and make it work in new ways, to exalt the spirit, to open avenues of perception and discovery [to visitors]" (GROVE 1984: 16). Needless to say, this statement also applies to university museums. However, in university museums education is frequently used in a more precise and determined sense – it means teaching and learning[9], formal university training (with classes inside the museum facilities), professor-curators, laboratories and collection-based curricula. Indeed, undergraduate teaching was one of the original functions of university collections (WARHURST 1984).

One of the aspects that increase the complexity of university museums is terminology. UMAC has an important role here as well, probably together with ICOFOM. As far as 'teaching' is concerned, it is crucial to distinguish between 'teaching collections' and 'collections of teaching objects'[10]. Actually, the same goes for research but we will come to that in a minute.

Objects were always used in teaching and learning. Looking at a functioning steam engine or handling a skin of a swallow is considered to offer more insight than looking at drawings in a book. Therefore, objects are particularly important when learning a subject – whether this is Astronomy, Physics or Zoology. In Physics or Chemistry, instruments are supposed to work well and to be modern and in Zoology or Mineralogy specimens have to be representative and in good condition. Moreover, Zoology teachers do not want just one swallow – they want several: young and adults, collected at different times of the year, different localities, etc. In a similar way, the same applies to Physics: teachers have to guarantee the widest range of equipment on a given topic.

Through time, these objects became the university collections that we are familiar with. With a difference – an assembly of Physics apparatus is only considered 'a collection' once the material has become obsolete or out of order; it is only then that instruments are incorporated in the local department or faculty museum[11]. Zoology material, on the other hand, is considered a 'collection' right from the beginning. The former are 'collections of teaching objects' and the latter 'teaching collections'. The

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9 Cf. chapter 17 – Museological Functions, in PETER VAN MENSCH (1992). *Towards a methodology of museology*. Unpublished PhD thesis, University of Zagreb.

10 Clarification on the term 'collection' itself is also important, particularly in the u-museums context. Although requiring adaptation to the u-museums context, some insight could probably be drawn from material culture studies.

11 This is not completely precise. Physics teachers do not acquire instruments by chance – they systematically select objects in order to cover the explanation of a given topic. It depends on what we consider a *collection*, but in view of this process an assembly of Physics instruments is, at least, a proto-collection. For more on this, see e.g. TURNER (1995).

importance of the steam engine – or, say, a thermometer – *for teaching and learning activities* declines with time once more modern equipment fulfils the pedagogical mission better while the importance of the swallow remains as time passes – or even increases in the case of rare or extinct organisms.

Research

Similar to teaching and applying the same reasoning, we could speak of 'research collections' and 'collections of research objects'. As with teaching collections, we are more likely to find research collections in Archaeology and Geology than in Chemistry or Astronomy. This is because the epistemological significance of the swallow to Biology is different from the importance of the obsolete steam engine to Physics. In other words, while the swallow conveys scientific information[12] to Biology, the obsolete steam engine does not convey any scientific information to Physics. This is a particularly interesting aspect – worth of more research – because the obsolete steam engine does not have epistemological significance to Physics, but indeed it has to the History of Physics. The distinct nature of these collections leads to two consequences: i) distinct views of research within different university museums (e.g. natural science and 'exact' science university museums); and ii) a functional shift, with the transformation of some museums into history museums, once their collections stop conveying scientific information due to lack of use.

Apart from the need to clarify research philosophies and methodologies between different university museums, another level of understanding is required. Since ICOM's definition explicitly considers research as functionally intrinsic to *all* museums, the next question worth asking is: what type of research and in what way are university museums specific?

University museums have a long tradition in fundamental and applied research. Research objects – say, archaeological artefacts or fossil bones from a given excavation – are systematically collected, incorporated and studied with the purpose of improving our understanding of the world we live in. These objects owe their sometimes ephemeral existence as 'museum objects' to research – not to aesthetics, not to rarity per se (although this can coincide). In universities all over the world, thousands of objects are abandoned once they gave to science all they could. Or even destroyed while studied! As Steven de Clercq puts it, "De-accessioning is [...] an exception in any well-run general museum. By contrast, in many research collections, selection and de-accessioning should be part of the professional practice of curators" (De Clercq 2001)[13].

This transient relationship established with objects in research collections indicates that research is highly valued in university museums, even more than the eternal preservation of objects (De Clercq 2001). Obviously, type natural history specimens are exceptions to the rule. Whether this research is *the* functional research ICOM's definition refers to

[12] Scientific information is a concept introduced by Ivo Mareovic, as opposed to 'cultural information'. According to Mareovic, quoted in Peter van Mensch's PhD thesis, the disciplines represented in the museum make use of scientific information, while museology makes use of the cultural information drawn from objects.

[13] Incorporation policies and de-accessioning are crucial and make all the difference. While other museums may incorporate objects for reasons depending on their scope and mission they always do so because the object has an intrinsic 'museological' value: the object should be removed from its environment and be preserved for the benefit and education of future generations. The concept of 'museological' value in u-museums may not coincide with this.

remains uncertain and subject to intense debate[14]. To complicate matters further, some people believe that research should not take place in [general] museums, but in universities – a statement that grants u-museums a special role, yet to be fully understood.

As far as a specificity of u-museology is concerned, more has yet to be studied. As seen above, university museums have specific aspects related to their functions. Eventually, the answer is likely to depend on the approach we take towards Museology – institution-oriented, object-oriented or function-oriented. Museology itself is still far from being accepted as a theoretical-synthetical science, with its own body of knowledge and its own derived methodologies. A specific terminology, however, is a *sine qua non* condition of a possible specific museology. There are signs that museology in the university context assumes a specific terminological body – a set of common concepts difficult to find elsewhere. For instance, expressions like 'scholar-curator' (as opposed to 'professional curator'), 'faculty-curator' or 'curator-professor', 'study collection', 'reference collection', 'research collection', 'teaching collection', 'public exhibition' *vs.* 'reserved exhibition', just to mention a few, are long-established within the u-museums community. Nevertheless, we should try to understand if this set of words is the expression of a specific terminological body or if they merely stand for professional jargon.

Some of the many questions left unanswered

In short, u-museums are functionally specific: they have at least one more function than other museums – university training – and they consider research intrinsic to their mission. However, more investigation has to be done on this matter, because the term research has its own pitfalls and is often used with different meanings. Some topics still to be developed as far as these two functions are concerned are:

1. The distinction between research *in* the museums and research *of* the museums and their functions – we should be more aware of the subtle differences between the two. We should also have a better understanding on how to cope with ICOM's definition (or specify the definition as far as u-museums are concerned?).

2. A problem related to the previous is that a clearer distinction between subject-matter research and museological research is also required. Both develop a specific relation with the museum collections and the museum as an institution and their purposes are frequently confused. University museums, at least in Portugal, tend to consider fundamental and applied research in the subject matter disciplines as the only research that can be called 'research'. Around a year ago, a university museum director in Portugal was complaining of not having qualified staff for 'museum' [sic] purposes. Understanding that he meant public exhibitions, I asked him why he did not hire education officers, or museologists. He answered plainly: "Museologists?? With this shortage of staff?

[14] Cf, for example ICOFOM Study Series 1 and 12.

Never! Whenever I have an opportunity – which is rare – I hire researchers [sic], not museologists. Museologists are a luxury I cannot afford. At this pace, we will not have a museologist within the next 60 or 70 years!".

3. Furthermore, due to lack of conditions and resources, many university museums are neglecting teaching and research in the subject-matter disciplines. The Natural History Museum of the University of Porto abandoned the word 'research' from its mission statement in 1995. Between November and December 2000 I asked 39 university museums and collections from Belgium and the UK whether there was *any* research on their collections happening at the time. I received 17 positive replies (out of a total of 30), but only one from a natural history museum. Among some of the answers were[15]:

"[Just] Students' studies. No real scientific research as such (there has been in the 19th century)".
Belgium, 6 December 2000

"[Only] Occasionally, due to lack of researchers interested".
Belgium, 8 December 2000

"It has been. Presently not".
Belgium, 11 December 2000

"There has not been any research done on the collection. It is a teaching and learning resource, and as such it is in constant use by academic staff and students".
UK, 14 December 2000

"Research has been done in the past on some of the vertebrate material though by whom and where [it was] published I do not know".
UK, 15 December 2000

"No research. Unfortunately, the situation of the invertebrate collection in [...] is dramatic!"
.Belgium, 26 February 2000

4. The role of university collections on teaching and learning is also changing. In many universities, disciplines like Systematics and Taxonomy were eliminated from the graduate studies curricula in the 1980s. A Portuguese u-museum director confessed that he now regrets having promoted this state of affairs by orienting students towards Ecology and Genetic studies. Although this trend is likely to be reversed in the future, it endangers collections putting them at risk of dispersion and neglect.

5. A more general issue is directly connected with the changing mission of universities, and how it is influencing u-museums. Universities are very dynamic institutions, suffering constant change due to internal and external social and economic pressures. Museums, on the contrary, are by nature institutions of 'permanence' and they tend to resist sudden transformations. This apparent 'conflict' is of great interest because it is unlikely to happen in other museums.

6. One last aspect related to the relationship with the university. In this paper, I focused exclusively on research and learning related to collections. Yet, another interesting aspect to be clarified in this project study is related to exhibitions. Many u-museums participate in the promotion of scientific literacy by producing exhibitions that present research carried out within the university (De Clercq 2001). Exhibitions in u-museums would require a separate study but I would like to shed some light on their

[15] I'll keep the names of the museums concerned confidential, although I may disclose the country and that they are all Zoology museums.

role as carriers of scientific research to broader audiences.

This project aims at looking deeper into and clarifying the specific functions of teaching and research in u-museums and collections. In spite of all the differences, all collections are academic heritage because they provide material evidence of the long-lasting human quest for knowledge. However, a Zoology u-collection is different from a Fine Arts u-collection. Or, to use Steven de Clercq's expression, "a Bird of Paradise is very different from a Stradivarius" (DE CLERCQ 2001). Generally speaking, we could perhaps divide university collections into two major groups, according to their role towards the subject-matter discipline: a) collections that are – or have the potential to be – epistemologically representative to their subject-matter discipline (where I would risk including Mineralogy and Geology, Zoology, Botany, Anthropology, Anatomy and probably Archaeology) and b) collections epistemologically representative for the *history* of their subject matter disciplines (Physics, Chemistry, Astronomy, perhaps Fine Arts, among others). The nature of these differences, among other factors, determines the way collections are used, known, and ultimately, protected.

Acknowledgments

I would like to express my sincere appreciation to Eszter Fontana, Peter Stanbury and to Joana Sousa Monteiro for the thoughtful comments that greatly improved this manuscript. I also thank those who responded to the inquiry on university museums and collections, even though most of the information provided could not be incorporated in the present paper. Finally, I am grateful to Kees Hazevoet, for our many stimulating conversations and for inspiring comments on the manuscript.

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Appendix

University	Museum or Collection	Observations
University of Beira Interior (Covilhã)	**Wool Museum**	Dependent on the Reitoria www.ubi.pt/museu/museu.htm
University of Coimbra	**Museum of Physics**	Faculty of Sciences www.fis.uc.pt/museu/index.htm
	Natural History Museum:	Faculty of Sciences & Technology www.fct.uc.pt/ www.uc.pt/botanica/jardim.htm
	Museum of Anthropology	
	Museum of Zoology	
	Botanical Garden and Museum	
	Museum of Mineralogy and Geology	
	Academic Museum	Reitoria
	Sacred Art Museum	Reitoria
	Museum of the Pathological Anatomy Institute	Faculty of Medecine
	Collection of the Astronomical Observatory	Faculty of Sciences & Technology www.astro.mat.uc.pt/obsv/museu.html
	Archeology collection	Institute of Archaeology
	Ethnology collection	Existence to be confirmed
	Collection of the Faculty of Pharmacy	Existence to be confirmed
	Collection of Experimental Psychology	Existence to be confirmed
University of Lisbon	**Museum of Science**	Reitoria www.museu-de-ciencia.ul.pt
	National Museum of Natural History:	Reitoria www.ul.pt/mnhn.html www.jb.ul.pt/
	Museum of Anthropology and Zoology	
	Botanical Garden and Museum	
	Museum of Mineralogy and Geology	
	Collection of the Faculty of Medicine	Faculty of Medecine
	Collection of the Faculty of Pharmacy	Faculty of Pharmacy
	Art Collection	Faculty of Fine Arts
	Collection of instruments of the Astronomical Observatory	Faculty of Sciences www.oal.ul.pt/oal/
University of Minho (Braga)	**House-Museum Nogueira da Silva**	Reitoria www.uminho.pt/unidadesculturais/museunogueirasilva.htm
University of Porto (*)	**Museum of Science**	Faculty of Sciences
	Natural History Museum:	
	Gallery of Mineralogy Montenegro de Andrade	
	Gallery of Paleontology Wenceslau de Lima	
	Gallery of Archeology&Pre-History Mendes Corrêa	
	Laboratory of Zoology Augusto Nobre	
	Botanical Garden and Museum	
	House-Museum Abel Salazar	Reitoria
	National Museum of the History of Medicine Maximiano Lemos	Faculty of Medicine
	Museum of the Faculty of Architecture	Faculty of Architecture
	Museum of Fine Arts	Faculty of Fine Arts
	Anatomy Museum	Faculty of Medecine
	Collections of engravings of Francesco Bartolozzi	Faculty of Sciences (Library)
	Collection of the Faculty of Engineering	Faculty of Engineering
	Collection of the Faculty of Pharmacy	Faculty of Pharmacy
	Collection of the Geophysical Institute	Faculty of Sciences
	Collection of the Astronomical Observatory	Faculty of Sciences
Technical University (Lisbon)	**Royal Botanical Garden of Ajuda**	Higher Institute of Agronomy
	Herbarium Prof. João de Carvalho e Vasconcellos	Higher Institute of Agronomy www.isa.utl.pt/herbario/
	Collection of scientific instruments	Higher Institute of Technology
University of Trás os Montes e Alto Douro (Vila Real)	**Botanical Garden**	Existence to be confirmed
	Museum of Geology and Mineralogy	Section of Geology (Area of Exact, Natural & Technological Sciences) www.utad.pt/Seccoes/geologia/Weddepmuseu.html

List of Portuguese university museums and collections (data from July 2001, except web site addresses, which were updated for this issue). Some museums have official existence, i.e. are mentioned in the university or faculty statutes, while others do not.
The *Reitoria* is the highest scientific, pedagogical, financial and administrative body in a Portuguese university.
(*) All the museums of the University of Porto can be seen atwww.up.pt/conhecaup/museus/museus/museus.html.

Louvain-la-Neuve: là où l'Université catholique de Louvain a créé une ville avec son musée

BERNARD VAN DEN DRIESSCHE*

Resumo

O Museu de Lovaina-a-Nova foi inaugurado em 1997. As colecções incluem artes decorativas, arqueologia e etnografia e as reproduções em gesso datam de 1864. A cidade universitária, concebida a uma escala humana e totalmente pedonal, possui cerca de trinta mil habitantes, dos quais quinze mil são estudantes. O museu será transferido em 2003 para um novo edifício de quatro mil metros quadrados, construído de raiz no centro da cidade.

Abstract

The museum of Louvain-la-Neuve was inaugurated in 1979. The collections (originally, the cast reproductions date back from 1864) includes Fine art, Archaeology and Ethnography. The university city, designed on a human scale and entirely pedestrianized, has approximately 30,000 inhabitants, 15,000 of whom are students. A new building (4,000 square meters) will be erected in the city center and open in 2003.

L'Université catholique de Louvain a 575 ans

Fondée en 1425, l'Université catholique de Louvain fête depuis l'année dernière son 575e anniversaire. La longue histoire de l'Université est célébrée actuellement dans des expositions promenades regroupées sous le titre 'Aller-Retour. Kennis maken. Town and gown' qui se tiennent à la fois dans la ville de Louvain (Leuven) et celle de Louvain-la-Neuve. Car il faut le rappeler ici, très brièvement, le dernier grand événement qui a marqué l'histoire de notre Université est celui de sa division, en deux entités séparées, pour des raisons linguistiques et politiques propres à notre pays.

En 1970 en effet, une loi accorde la personnalité civile à deux universités distinctes, l'une flamande qui reste à Leuven, l'autre francophone, qui émigre en Wallonie à une trentaine de kilomètres au sud-est de Bruxelles, sur une terre de près de 1 000 hectares . L'Université catholique de Louvain y crée une ville nouvelle, avec pour nom Louvain-la-Neuve, toujours en expansion aujourd'hui. Pour des

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raisons de stratégie propre à ses fonctions la Faculté de médecine sera cependant implantée à Bruxelles.

L'Université catholique de Louvain représente actuellement une large communauté internationale: 20.000 étudiants de plus de 100 nationalités différentes, un staff de 5.000 enseignants, chercheurs et collaborateurs, 200 unités de recherche, 150.000 anciens dans le monde entier. C'est une université complète, qui forme près d'un universitaire sur deux dans toutes les disciplines en Belgique francophone.

L'histoire commune de l'Université et dans sa phase plus récente celle qui, va de 1835 (soit cinq ans après la constitution de l'Etat belge) jusqu'aux années 1960 témoigne, comme dans d'autres institutions européennes, de la multiplication de création de collections destinées à soutenir presque toutes les disciplines enseignées.

Une longue notice non signée parue dans l'annuaire de l'Université de 1851 a fait le point sur "les collections scientifiques de l'Université de 1835 à 1850" et permet d'avoir une vision de la situation à ce moment[1]. Par ailleurs les mêmes annuaires de l'Université permettent de mettre en exergue la diversité des ensembles qui sont au moins répertoriés pendant un peu plus d'un siècle par la mention de leur localisation dans un bâtiment académique. On est surpris de découvrir ainsi que plus d'une quarantaine d'ensembles repris sous le vocable de 'Cabinet', 'Collection' ou 'Musée' ont existé. La dernière appellation qui est encore celle qui prévaut dans de nombreuses universités de par le monde ne correspond pas nécessairement à la notion actuelle de musée et certainement pas à celle numériquement plus réduite encore de musées ou collections universitaires régulièrement accessibles au public.

La plupart des ces collections ont soit connu des développements importants mais limités dans le temps (c'est par exemple le cas du musée de Zoologie ou de celui du musée Houiller), ont soit survécu mais sans avoir pu se développer pour constituer de véritables 'Musées' ou enfin ont tout simplement disparu. Seules les collections d'art et d'archéologie font exception et sont à l'origine du musée actuel dont le développement continue encore aujourd'hui avec le projet d'un nouveau bâtiment qui sera érigé sur la place principale de la nouvelle ville (VAN DEN DRIESSCHE 2000, 2001).

Des collections de moulages et d'originaux

Sans vouloir entrer dans tous les détails de l'histoire des collections qui ont été à l'origine de la création du musée sous sa forme actuelle, il convient d'en évoquer ici brièvement les grandes étapes. Un musée n'est-il pas d'abord constitué en effet d'un patrimoine?

L'origine des collections remonte à un ensemble de moulages et de photographies qui avait été rassemblés dès 1864 au lendemain de la Conférence des catholiques et d'une grande exposition consacrée au patrimoine religieux belge présentée à Malines. Une riche collection de moulage d'œuvres antiques, médiévales et de la renaissance fut offerte par le gouvernement grec, à titre d'aide à la reconstruction du patrimoine détruit pendant la première guerre mondiale et par l'Allemagne dans le cadre du Traité de Versailles.

[1]Notice sur les collections scientifiques de l'Université de 1835 à 1850. *Annuaire de l'Université catholique de Louvain*, 1851, pp. 237-288.

De nombreuses œuvres originales furent également acquises au cours du temps, le plus souvent grâce aux professeurs de l'université: un cercueil égyptien, des objets du Proche-Orient, pour un 'Musée biblique', des antiquités grecques, étrusques, romaines (Fonds Fernand Mayence), quelques sculptures anciennes et fragments d'architecture... D'abord installées dans les Halles universitaires de Leuven, elles furent ensuite aménagées sans être accessible au public, dans les bâtiments de l'Institut supérieur d'archéologie et d'histoire de l'art où elles étaient utilisées pour certains cours.

A la fin des années 1960, une succession de legs et donations enrichira ce patrimoine commun (Van Den Driessche 1997) dont une partie a été partagé lors de la scission de l'Université déjà évoquée.

Le legs historiquement le plus important remonte à 1966 lorsque Frans Van Hamme faisait don à l'Université de sa collection de sculptures, peintures, mobilier et arts décoratif du XIV^{e} au XIX^{e} siècle. Selon le testament, ce legs impliquait la création d'un musée spécialement destiné à la formation en histoire de l'art et archéologie "accessible au public et surtout aux étudiants [...]". Il coïncidait avec la séparation en deux sections de l'Université catholique. En 1975 ce sera la donation de 53 vases antiques (Grèce, Italie méridionale) par l'Abbé Adolphe Mignot. En 1986 Serge Goyens de Heusch, collectionneur et ancien directeur d'une galerie bruxelloise offre au musée 60 œuvres d'artistes belges du XX^{e} siècle. A sa suite, de nombreuses autres donations d'artistes ont enrichi les collections d'art moderne.

En 1990, au moment où de grands projets s'élaborent pour la construction d'un nouveau bâtiment, le musée hérite du legs de Charles Delsemme qui compte un ensemble important d'œuvres appartenant à différentes époques et cultures. En 1994 Eugène Rouir offre près de 1500 gravures couvrant l'histoire de cette technique des origines à aujourd'hui, avec des noms célèbres comme ceux de Dürer, Callot, Rembrandt, Canaletto, Goya, Picasso, etc. Cet ensemble constitue à présent notre Cabinet des estampes. En 1997 c'est la donation Noubar et Micheline Boyadjian qui entre dans notre patrimoine avec de nombreux objets d'art et de piété populaires, des tableaux de peinture naïve ainsi que trente-huit œuvres de Micheline Boyadjian.

Très prochainement enfin sera finalisée la donation de la Fondation Serge Goyens de Heusch pour l'art belge contemporain, comptant près de 1500 œuvres (peintures et estampes) d'artistes belges. L'inauguration de cette Fondation avait déjà eu lieu dans les salles du musée en 1983, à l'occasion d'une exposition temporaire consacrée à septante artistes belges.

Tous ces dons élargissaient notre patrimoine à l'art moderne et contemporain belge, à l'esprit du 'Musée imaginaire' de Malraux dans son regard sur les cultures du monde, à l'histoire de l'art de la gravure, et aux arts dits naïfs et populaires. L'ensemble des collections anciennes et celles acquises depuis l'inauguration du musée actuel illustrent une dynamique étroitement lié à l'aventure de la création de la nouvelle ville.

Louvain-la-Neuve: une nouvelle ville

La ville de Louvain-la-Neuve a été créée par l'Université catholique de Louvain au moment de sa scission déjà évoquée. Sur des terrains agricoles dépendant de la commune administrative d'Ottignies, s'est développé depuis 30 ans un réel projet urbanistique à la fois homogène et surprenant.

Depuis la création de Charleroi en 1666, Louvain-la-Neuve est en effet la première ville neuve conçue en Belgique. Concept des architectes J.-P. Blondel et R. Lemaire, la première pierre en a été posée le 2 février 1971 par le roi Baudouin I^{er}. Le choix délibéré d'une ville à taille humaine dont la matrice est l'université, la juxtaposition et l'intégration des bâtiments académiques dans un tissu urbain organisé sur une circulation piétonne, la circulation automobile et les aires de stationnement étant relégués sous une dalle, la place réservée aux espaces verts et à un lac constituent autant d'élements caractéristiques de la jeune agglomération.

La multiplication d'infrastructures socio-culturelles (un théâtre, l'aula magna avec une salle de spectacle de 1300 places, un centre culturel, un centre musical, le récent complexe de 13 salles de cinéma, le musée...) de loisirs, d'équipements sportifs et le développement d'un parc scientifique orienté vers la haute technologie sont autant d'atouts pour un avenir ancré dans un riche passé.

La ville compte actuellement environ 25.000 habitants dont 14.000 sont étudiants et marquent encore fortement le rythme de la vie selon le calendrier académique des périodes de cours et des vacances (LECHAT 2001).

Le transfert des facultés et services de l'Université s'est échelonné sur sept d'années. De 1972 à 1979, neuf facultés ont ainsi déménagé progressivement de Leuven à Louvain-la-Neuve; la Faculté de médecine élira domicile à Bruxelles. Je vous laisse imaginer ce qu'a pu représenter un tel transfert d'équipement, de bibliothèques, de laboratoires, de collections... sans qu'un seul jour de cours ne soit jamais suspendu! La Faculté de Philosophie et Lettres a été la dernière à rejoindre le nouveau site universitaire. C'est à l'occasion de son inauguration que fut ouvert le musée qui occupe 1.000 m^2 du rez-de-chaussée de son bâtiment, le Collège Erasme. Musée à vocation autant académique qu'urbaine. Il constitue à cet égard le premier exemple de ce type en Belgique.

Le musée actuel est un objet marqué, comme sa ville, par les transformations de la société et de l'Université subies ou promues à partir des années '60. Rappelons que le mouvement de 'mai 68' avait dénoncé un enfermement de la culture, dont les musées étaient considérés comme des témoins particulièrement représentatif. On rêvait d'un musée ouvert à la rue, et inspiré à la fois par la modernité et par la liberté d'un regard personnel, critique et conscient des stéréotypes véhiculés par l'architecture, les modes de présentation et les discours éducatifs.

Lors de son ouverture et malgré sa localisation le dialogue avec la ville était particulièrement prometteur dans la mesure où celle-ci se présentait comme un projet où la tradition devait s'inscrire dans une dynamique créatrice. L'idée de briser le 'ghetto universitaire' devait cependant, pour le musée, s'accompagner d'une installation dans un bâtiment à fonctions académiques ce qui a d'ailleurs marqué les limites de sa croissance (VANDEVIVERE & VAN DEN DRIESSCHE 2000).

Universitaire et public

"Un nouveau Musée pour une ville nouvelle et une université en renouveau!", c'est en ces termes que le Directeur du musée, Mr I. Vandevivere, synthétisait le projet du nouveau musée lors de son inauguration officielle.

De par sa situation actuelle le musée est inscrit dans la vie quotidienne des étudiants, des enseignants et

des habitants de la ville nouvelle. Son originalité tient précisément à la combinaison des fonctions académiques et urbaines qu'il harmonise depuis sa création. Conserver, étudier et exposer un patrimoine; inscrire ces fonctions traditionnelles du musée dans la formation universitaire et prolonger ces objectifs par une fonction d'animation socioculturelle voilà la fonction de ce musée depuis plus de vingt ans.

Si de 1979 à 1999 plus de 160 expositions temporaires ont été organisées, elles l'étaient pour créer un public plus large et pour participer à une dynamique culturelle dans la ville nouvelle, sa région et le pays. Avec le Théâtre Jean Vilar, la Médiathèque de la Communauté Française, l'asbl MUSIQUE-Louvain-la-Neuve et les diverses associations organisatrices de concerts, le Centre Culturel d'Ottignies, les nombreux cycles de conférences, le Musée a manifesté en effet sa volonté de participer et de générer un espace culturel permanent (par ses collections) et temporaire (par ses expositions). L'exiguïté des espaces et la volonté de générer une dynamique d'exposition nous a conduit dès le début à ne pas cloisonner de manière rigide le patrimoine permanent (à l'origine essentiellement de l'art ancien) des expositions temporaires (le plus souvent réservées à des artistes contemporains) (VANDEVIVERE 1979, 1980)[2]. Plusieurs expositions ont eu pour thème, la ville au sens large, l'art dans la ville, l'urbanisme, pour marquer la réalité de notre institution dans le processus de création de cette ville nouvelle.

Par ailleurs, le service éducatif privilégie l'accueil des groupes scolaires et d'adultes en dehors de la communauté universitaire, le service informatique développe depuis plus de 10 ans des bornes multimédias interactives pour le visiteur isolé et prépare actuellement un programme de bornes individuelles portables pour la visite individuelle, l'atelier de conservation et de restauration répond également à des demandes extérieures. Tous ces services ont inscrit, au fil des ans, le musée dans le projet de cette ville en développement et avec plus de difficulté dans la structure de l'université comme il sera expliqué plus en détail au moment d'évoquer ce point.

La localisation actuelle au rez-de-chaussée d'un bâtiment académique et l'absence d'identification architecturale d'un bâtiment autonome constituent cependant encore un obstacle pour bon nombre de visiteurs qui assimilent cet espace à un lieu réservé à la seule communauté universitaire malgré la dynamique de nos activités Quant aux étudiants régulièrement sollicités par des programmes attractifs d'expositions temporaires, ils restent trop nombreux encore à n'avoir pas mis à profit leurs années d'études pour découvrir la richesse et la diversité des collections permanentes.

Et pourtant l'option d'ouverture et de rencontre des différentes formes d'art dans une présentation mettant en évidence le dialogue a participé très tôt à l'originalité de notre démarche, bien avant ce qui devient déjà une mode aujourd'hui. Il est vrai que l'exiguïté de nos espaces (1.000 m^2 au total) nous avait amené à ouvrir des espaces de rencontres entre nos collections permanentes et des expositions temporaires d'artistes contemporains, entre l'approche technologique des arts et les œuvres présentes dans nos collections (VANDEVIVERE 1996).

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[2] Voir en outre le *Courrier du passant. Bulletin du musée et des amis du musée de Louvain-la-Neuve* **10**, 1989, 152 pages (10 ans du musée) et **64-65** novembre-décembre 1999, 108 pages (Le musée a 20 ans). Voir encore le *site web* du musée régulièrement actualisé à l'adresse: www.muse.ucl.ac.be/.

Maître-mot: dialogue

L'aventure de notre musée est autant le fruit des circonstances que d'un plan délibéré. Celui-ci se base sur deux principes muséologiques évidents mais néanmoins essentiels. Le musée est d'abord un *espace physique* de perception, d'interprétation et de délectation de l'objet. Cet objet y est valorisé dans sa nature et sa présence matérielle par la lumière autant que par sa disposition spatiale.

Le musée est ensuite un *lieu public*. Le visiteur y est déterminant pour la dynamique de l'institution; sans public il n'y a pas de musée. L'énergie qu'il apporte répond à celle de l'institution pour créer un forum. La réalité du Musée-forum (certains visiteurs ont parlé chez nous de parc-public) est favorisée par la structure piétonne ainsi que par la densité et la diversification des constructions de Louvain-la-Neuve, tandis qu'à son tour le musée joue un rôle urbanistique certain en particulier au niveau d'une identification culturelle et d'une polarisation du centre ville.

De la conjonction de ces deux principes, on induit tout naturellement une politique de présentation des collections et un accueil du public ainsi qu'un rapport avec d'autres institutions qui se fondent sur le dialogue.

Ce dialogue construit sur le triangle visiteur/objet/institution se prolonge en outre dans notre musée de manière privilégiée depuis 1985 avec l'association des Amis du musée et ses bénévoles. Avec les Amis ce dialogue a suscité de nombreux donateurs. C'est d'ailleurs cette *économie du don*, selon les termes de I. Vandevivere, qui préside à l'accroissement de notre patrimoine en particulier depuis les dix dernières années, comme évoqué précédemment dans la description de nos collections.

Enfin le dialogue se manifeste encore dans l'interaction entre permanence et mobilité (patrimoine et expositions temporaires), entre présent et passé (tellement important dans une ville nouvelle encore en création et cherchant ses repères), entre l'instant (vision fugitive – notre bulletin bimestriel s'intitule le *Courrier du passant*) et la durée (au musée, on y vient et l'on y revient) (VANDEVIVERE 2001).

Une structure au sein de l'Université

Tout ceci ne doit cependant pas faire oublier la position particulière d'une entité telle qu'un musée au sein de l'Université qui est une institution traditionnellement bien hiérarchisée et plus encore dans une période plus récente de son histoire très structurée administrativement. Celle de notre musée est particulièrement exemplative à cet égard.

Au moment de sa création, le musée actuel avait à peine le statut d'une unité inscrite dans l'organigramme du Département d'archéologie et d'histoire de l'art, qui est lui-même une composante de la Faculté de Philosophie et Lettres. Les gestionnaires de la première heure n'avaient pas de mandat officiel, mais étaient considérés comme appartenant à une structure provisoire, non définie, et qui fut maintenue pendant plusieurs années. Le développement des activités du musée, sa place au sein de l'université, de la ville et de la société, ses relations avec le Département d'archéologie et la Faculté de Philosophie et Lettres ont amené les autorités de l'université à en modifier le statut. Dans un premier temps (1994) le Conseil d'administration de l'université a défini la place du Musée dans la structure de l'UCL. Le 29 mars 1995, il décide "de localiser le Musée en logistique scientifique et de le doter d'une structure de gestion particulière". Cela

signifie, en ce qui concerne son statut : "que le Musée devient une entité autonome par rapport à la Faculté de philosophie et lettres ou au Département d'archéologie et d'histoire de l'art; que n'étant pas un département; le Musée a des activités de recherche et d'enseignement qui doivent être menées en étroite concertation avec les départements concernés et en particulier avec le Département d'archéologie et d'histoire de l'art". En ce qui concerne ses missions il est précisé que: le Musée est un outil au service d'activités académiques d'enseignement et de recherche; le Musée joue un rôle urbain d'animation de la vie culturelle.

En application de ces décisions, les autorités de l'université ont récemment défini une structure de gestion du musée et ont créé en 1998 un Conseil de gestion sur base de propositions formulées par la direction actuelle du musée. Ce Conseil a pour mission:

1) veiller au bon exercice de la fonction éducative et culturelle du Musée, dans sa commune, sa province, sa région et sa communauté;
2) arrêter la politique en matière d'acquisition, politique qui lui est proposée par la direction du Musée;
3) contribuer à la recherche des moyens financiers;
4) arrêter la politique en matière de personnel, politique qui lui est proposée par la direction du Musée.

La composition de ce Conseil de gestion, également proposée par la direction du Musée, reflète la volonté d'ouverture de la structure de gestion à un partenariat plus large. On y trouve ainsi, outre des membres appartenant à l'institution universitaire – l'administrateur général, le pro-recteur en Sciences humaines, deux autres membres désignés par le Conseil d'administration de l'université, le Directeur et l'administrateur du musée –, des représentants des secteurs particulièrement importants pour la dynamique du musée dans sa dimension culturelle et sociale à savoir: le Président des Amis du Musée, un représentant de la Ville d'Ottignies-Louvain-la-Neuve , un représentant de la Province du Brabant wallon, un représentant de la Région Wallonne (pour les compétences en matière de tourisme) et de la Communauté française Wallonie-Bruxelles (pour les compétences en matière de musées). Ce nouvel organe, s'il n'a pas encore à ce jour pu être réellement opérationnel, ne manquera certainement pas de devoir faire ses preuve pour le projet qui se dessine à l'horizon 2003 et par lequel je voudrais terminer.

Le musée à l'horizon 2003

Le premier projet d'agrandissement du musée a été présenté aux autorités, par les Amis du musée en juin 1989. Le terrain prévu, considéré à l'époque comme le seul possible pour une extension rationnelle au départ des espaces existants, était celui situé à flanc de talus en contrebas de l'église Saint-François d'Assise. Le bâtiment ainsi construit aurait été mis en liaison avec le musée actuel, via un passage souterrain, et permettait d'avoir une vue sur le lac. La notion de visibilité du lac au départ du musée pour mieux affirmer sa fonction de loisir a été un leitmotiv tout au long des projets d'agrandissement. L'architecte Jean Cosse en avait esquissé un premier schéma (cf. maquette fig. 1).

Très rapidement ce projet a pris une ampleur inattendue dans le contexte du festival Europalia Japon en automne 1989. Une autre proposition appelée alors 'projet post-Europalia Japon' a été remise aux autorités de l'Université. L'architecte Kisho

Kurokawa fut contacté et tomba littéralement sous le charme du projet urbain de Louvain-la-Neuve et de l'idée de se voir confier la réalisation du 'Musée du dialogue'. Visitant le site le 11 septembre 1990 il releva le défi de présenter gracieusement un premier projet L'avant-projet était à ce point déjà abouti qu'il fut considéré par beaucoup comme un projet définitif et il fit véritablement l'effet d'une bombe dans le milieu néo-louvaniste. Le bâtiment articulé en plusieurs espaces en partie disposés sur la surface du lac illustrait le principe de la symbiose prôné par Kisho Kurokawa dans d'autres projets architecturaux y compris de musées (KUROKAWA 1987)[3].

Pour répondre à une série de contraintes urbanistiques, qui n'avaient pas été formulées avec précision au départ, l'architecte adapta son premier avant-projet et en présenta en 1992 une seconde version. Pour toute une série de raisons, politiques, économiques, relationnelles... ce projet qui avait suscité autant d'enthousiasme que de réactions parfois négatives (il ne laissait donc personne indifférent) n'a pas pu être réalisé. Il a cependant eu plusieurs effets importants pour notre institution et pour le développement urbain. Ce projet a tout d'abord relancé la réflexion urbanistique pour l'achèvement du centre urbain, à savoir la

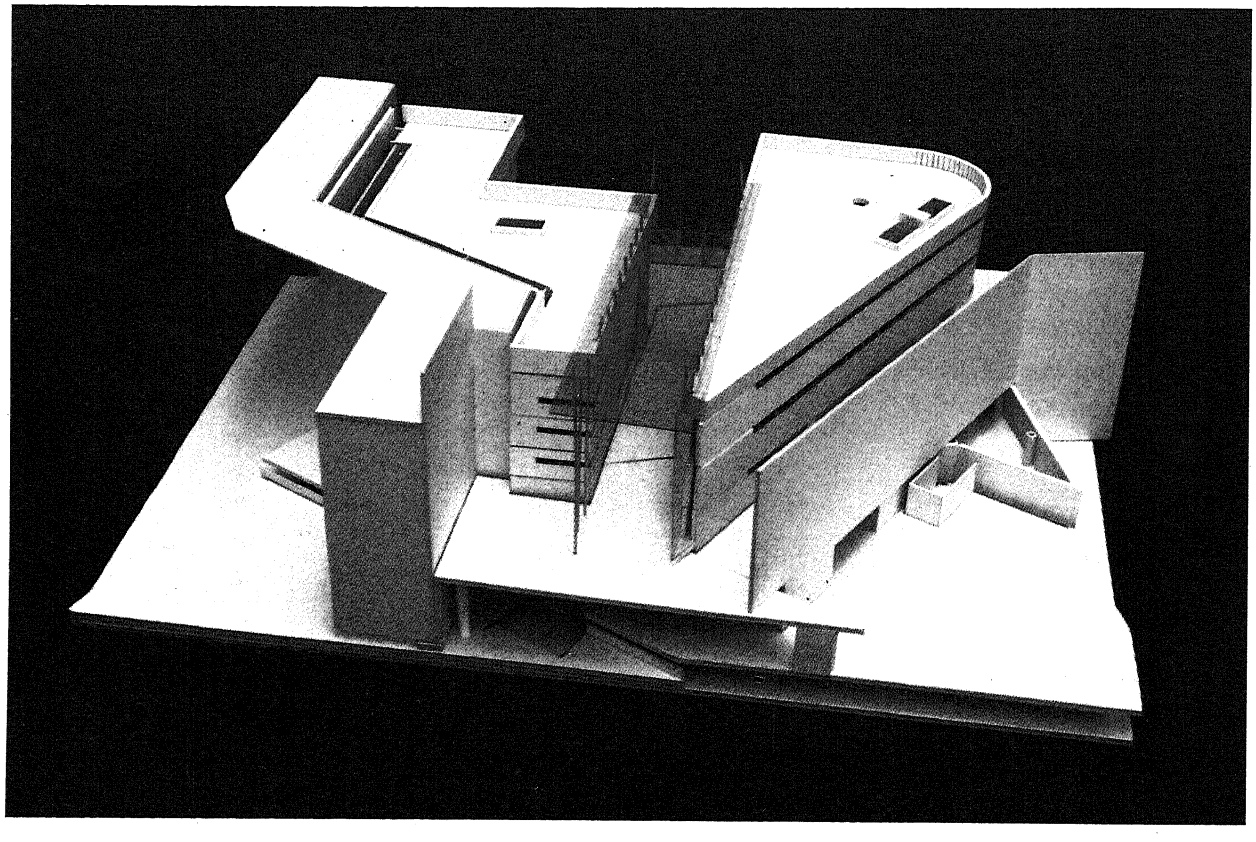

Fig. 1 — Maquette du futur Musée du dialogue à Louvain-la-Neuve (état 2001) (Photo © Ph. Samyn and Partners/Musée de LLN).

[3] Voir aussi le *Courrier du passant* **18** (mai-juin 1991): 6-44.

fermeture de la Grand-Place et sa mise en relation avec le lac. Le grand geste architectural et urbain du premier avant-projet de K. Kurokawa a en effet marqué les projets en cours d'élaboration actuellement.

Dans le cadre, d'une part de l'achèvement de la Grand-Place et d'autre part du redéploiement des surfaces affectées à la Faculté de Philosophie et Lettres, un nouveau projet architectural est en cours d'élaboration et devra être achevé en 2003. Le bureau d'architecture Philippe Samyn & Partners a été chargé de concevoir les plans de la Grande Aula (grand auditorium polyvalent de 1300 places) et ceux du musée qui avec le complexe des cinémas inscrit dans le projet 'Esplanade' achèveront le cœur de Louvain-la-Neuve.

Chacun des deux éléments qui composent l'immeuble du musée (l'un en forme de triangle, l'autre en forme de botte) comportera quatre niveaux, dont un en sous-sol. Avec un total de 4.000 m², la surface sera quatre fois celle qui est disponible aujourd'hui, tant pour les collections permanentes, que pour les espaces d'expositions temporaires, les locaux de services et les réserves. Le passage qui mènera le promeneur de la

Fig. 2 — Atelier éducatif sur le thème : 'Le baroque est dans le vent?' (novembre 2001) (Photo © Musée de LLN).

Grand-Place à la place Raymond Lemaire devant la Grande Aula lui permettra de découvrir, par de hautes et larges baies vitrée, l'intérieur de l'édifice et une partie de ses collections[4]. Ainsi le nouveau Musée, par son architecture et par sa situation, participera plus encore à la dynamique culturelle du site de Louvain-la-Neuve et il sera une vitrine particulièrement importante de l'Université catholique de Louvain au cœur de la ville qu'elle a créée il y a 30 ans aujourd'hui.

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[4] Voir le *Courrier du passant*, **67** (février-mars 2001): 5-7.

The current state of Higher Education Museums, Galleries and Collections in the UK

NICK MERRIMAN*

Resumo

Este artigo pretende efectuar um ponto da situação actual dos museus, galerias e colecções universitárias no Reino Unido através de uma série de estudos recentes sobre questões de gestão e recenseamentos de colecções. Em particular, apresentar-se-ão algumas formas inovadoras de colaboração entre instituições, bem como de alargamento de públicos.

Abstract

The paper will summarise the current state of the UK's higher education museums, galleries and collections (HEMGCs) by drawing on recent surveys of collections and management issues. In particular the paper will highlight some of the innovative ways in which HEMGCs have been working in partnership with others and broadening their audiences.

In this paper I would like to present some of the findings of a recently-completed national survey of all higher education museums, galleries and collections (HEMGCs) in the UK. A number of common themes emerge, many of which paint a rather depressing picture, in particular of the state of the small departmental collections which constitute the great majority of university collections. Nevertheless, there are encouraging signs of a slow renaissance of university museums in some areas, which are beginning to redefine their role both within the university and beyond.

History

As we all know, from their earliest times, but particularly in the 19th and early 20th centuries, collections were fundamental to the teaching and research of universities. David Murray, in his 1904 book, *Museums, their history and their use*, wrote:

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> "Every Professor of a branch of science requires a museum and a laboratory for his department; and accordingly in all our great universities we have independent museums of botany, palaeontology, geology, mineralogy, and zoology, of anatomy, physiology, pathology and materia medica, of archaeology – prehistoric and historic, classical and Christian – each subject taught having its own appropriate collection" (quoted in DRYSDALE 1990: 14).

Specimen-based teaching – and hence the importance of university collections – continued on well into the second half of the 20th century. However, problems really began to emerge in the UK in the 1970s as a result of a funding crisis when universities had their budgets cut by the government. This co-incided with gradual changes in teaching methods in many subjects, which shifted away from collections-based learning. Some university museums closed, other teaching collections were dispersed, many were neglected and suffered as a result.

The 1986 Museums Association conference highlighted what was by then becoming a crisis in university museums and collections: Alan Warhurst,

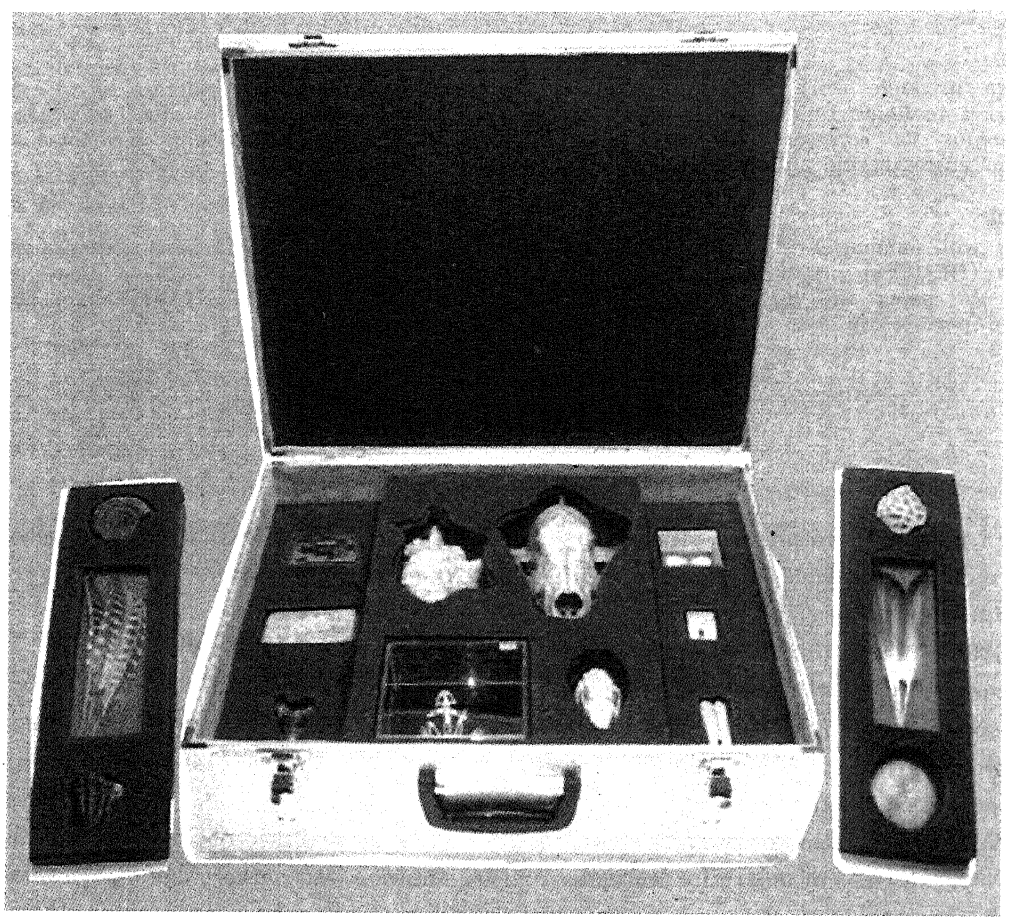

Fig. 1 - A 'loan box' of zoological material for use by local schools. UCL museum studies students have been used to develop a series of such boxes for its collections. They are made available together with teaching notes which show how they support school curriculum objectives (Photo courtesy Grant Museum of Zoology, UCL).

Director of the Manchester Museum, one of the leading university museums, argued that university museums suffered from a triple crisis (WARHURST 1986: 137): 1) a crisis of identity and purpose; 2) a crisis of recognition (by universities and by the wider society); and 3) a crisis of resources.

Responding to this crisis, the Museums and Galleries Commission, which was then the government's adviser on museums, called on the Area Museum Councils (regional support bodies for museums) to survey the collections held by universities in their regions.

In 1987 another significant step was taken with the formation of the University Museums Group, which was developed to give university museums a common voice in matters of advocacy and policy-making. Up until recently, however, membership was restricted to the directors of the main, well-established university museums (such as those in Oxford, Cambridge and Manchester) and so the smaller collections were un-represented.

The first survey of university collections was that of the collections of the University of London, and was published in 1989 (ARNOLD-FORSTER 1989). This was followed by surveys of Scotland in 1990 (DRYSDALE 1990) and Northern England in 1993 (ARNOLD-FORSTER 1993). There was then a hiatus for a few years followed by a concerted push in the late 1990s (no doubt consequent upon the impending demise of the Museums and Galleries Commission which had originally instigated the surveys), with reports on six other regions completed in the last two years (ARNOLD-FORSTER 1999, ARNOLD-FORSTER & WEEKS 2000, ARNOLD-FORSTER & WEEKS 2001, COUNCIL OF MUSEUMS IN WALES 2000, NORTHERN IRELAND MUSEUMS COUNCIL 2001, SOUTH WEST MUSEUMS COUNCIL 1999). This means that there are now nine reports available which provide complete coverage of the UK's university museums and collections[1].

1999 also saw the publication of two other significant reports, *The Management of Higher Education Museums, Galleries and Collections in the UK* (KELLY 1999), which examined the various ways in which HEMGCs are managed, and *Partners and Providers: the Role of Higher Education Institutions in the provision of cultural and sports facilities to the wider public* (BENNETT *et al.* 1999), which examined the ways in which HEIs are providing facilities beyond their own core university clientele.

The results of the surveys

I shall now to turn to the main substance of this paper, which is to summarise the main findings of these nine reports.

Statistics

- There are over 400 HEMGCs in the UK.
- 90 of these are registered as museums by Resource: the Council for Museums, Archives and Libraries.
- In England, 15 HEMGCs are 'Designated' as holding collections of national and international importance, and receive special government project funding in recognition of this[2].
- 32 HEMGCs in England receive special funding from the Arts and Humanities Research Board,

[1] Many of the reports have been written individually or jointly by Kate Arnold-Forster and Jane Weeks, who deserve a huge amount of credit for raising awareness of the plight of university museums and collections across the country, as well as highlighting progress made and ways forward for the future. I am happy to acknowledge their influence here, and my debt to their work in this paper.
[2] The designation scheme does not operate in Scotland, Wales or Northern Ireland.

which recently took over the scheme of special funding for university museums and galleries from the Higher Education Funding Council for England[3].

Common themes

Diversity

One of the clearest conclusions to emerge from the surveys is that there is a great diversity within the sector. As we can see from the statistics above, some 90 institutions qualify as museums under the registration scheme, meaning that over 300 others are not museums in the sense in which the public would understand them. This means that some 75% of the sector is occupied by collections which are not sufficiently accessible or well managed to meet the minimum official criteria for a museum. Of these, only 32 (in England) receive special funding in recognition of the role that they play. This divide between the 'museums' and 'the collections' is fundamental and colours all of the reports.

At one end of the spectrum, there are the large public museums such as the Manchester Museum, the Ashmolean Museum and the Fitzwilliam Museum, which have a large staff, a budget of several million pounds, their own dedicated buildings, and most of the services that would be expected from a great public museum. At the other end of the spectrum there is, for example, the Mining Engineering Collection in the Department of Chemical, Environmental and Mining Engineering in the University of Nottingham, which consists of 33 miners' safety lamps dating to the 19th and 20th centuries housed in the staff common room (ARNOLD-FORSTER & WEEKS 2000: 44). It has not been added to since 1985 and no-one is specifically in charge of the collection. This is not in fact the smallest collection revealed in the surveys, which showed a range from over 2 million specimens to just ten items.

This diversity make generalisation difficult, and because the majority of collections are the small departmental ones, the contribution of the larger museums tends to be under-emphasised when generalisations are made. This has to be borne in mind when considering the rather pessimistic conclusions of this overview.

The Impact of Changes in Teaching

All of the surveys found that in many subjects, changes in teaching methods have had a severe impact on collections. In biology, many departments have seen a switch away from whole organism teaching to genetics, which has led to a neglect of formerly heavily-used teaching collections (DRYSDALE 1990: 17). Similarly, departments of anatomy and pathology in some universities have moved to computer-based teaching methods and have disposed of their teaching specimens (COUNCIL OF MUSEUMS IN WALES 2000: 10). A Pathology Museums Group was formed in 1991 (TURK 1994) to try to find new homes for these redundant specimens, but nevertheless there have been instances where historic specimens have been simply thrown away.

The picture very much varies between universities and from department to department. There are, for example, still some biology departments that actively teach with specimens, and in departments of geology and archaeology, collections-based teaching is still used. However, it is fair to say that collections are used

[3] No similar scheme of funding exists for Scotland, Wales or Northern Ireland.

much less than they were in the past, and that only small sub-sets of the collections are ever actively used in teaching. Teaching has clearly been the main rationale for universities having collections, so changes in teaching practice which lead to a diminution of emphasis on collections can have severe consequences.

Lack of financial resources

The surveys found that the great majority of collections do not have a dedicated budget. For example, the survey of the Midlands region found that of a total of 48 collections, less than 20% have one (Arnold-Forster & Weeks 2000: 15). This naturally severely limits the ability of most collections to undertake any improvements.

Shortage of specialist staff

Another consequence of the under-resourcing of HEMGCs is an acute shortage of specialist staff to work in them. The majority of collections have no trained member of curatorial staff, and in many cases no-one at all has responsibility for the collections. In Wales, for example, there were found to be 22 university collections, but only two of them had full-time professional staff (Council of Museums in Wales 2000: 11-12).

Lack of clear structure of governance

Many university museums and collections do not have a clear place within the university management hierarchy. Few have direct reporting lines to the university's highest governing body, and for most, accountability is informal and runs through the heads of department. This in turn makes collections reliant on the goodwill of particular individuals, or vulnerable to unsupportive ones.

Lack of planning, policy and strategy

While many of the university museums that are open to the public on a regular basis – especially the larger ones – have forward plans, acquisition and disposal policies and strategies for improvement, the vast majority of university collections do not, and 'management' is a term alien to them (Kelly 1999: 37-39).

Lack of clear purpose and role within the university

All of the above is a reflection of one of the most fundamental problems affecting many HEMGCs, which is that many universities are unsure why they actually have them. As we have seen, nearly all were established to support teaching and research, but often the teaching role has declined, and the collections are not frequently used for research. Without a clear vision of their purpose within the university's structure, many university museums and collections can become extremely vulnerable in times of scarce resources, particularly if they do not have strong advocates within the university (Arnold-Forster & Weeks 2001: 22-3).

Low standards of collections management

From this general uncertainty as to purpose flow many of the problems besetting HEMGCs in the UK. Inadequate resourcing is the first consequence, which in turn leads to one of the most consistent problems revealed in the surveys over the last decade, which is low standards of collections management. Inadequate storage, poor security, minimal or non-existent documentation, and large conservation backlogs, particularly regarding such things as the 'topping up' of specimens stored in spirit, have all led to permanent depredations to

collections over the decades (e.g. ARNOLD-FORSTER 1999: 24-6).

Uncertainty as to ownership

A further problem complicating the situation is the lack of clarity about ownership of many university collections (e.g. DRYSDALE 1990: 35). Not only does this bring ethical problems in relation to spoliation, looting and the illicit trade, it can also make issues such as loans and remedial conservation difficult, and again may make the collections vulnerable to reclaim or transfer.

Lack of training and staff development

The final theme relates to the isolation of many of those working in the university museum sector. Often those in charge of collections carry out these duties alongside other ones, such as teaching or technical work, and they are usually completely isolated from the museum profession as a whole, and perhaps from collections-based colleagues elsewhere in the university. Indeed, many of those with collections responsibilities would not consider themselves to be part of the museums profession, and lack formal training in museum skills. This in turn can lead to some of the problems in areas such as collections management that have been mentioned earlier.

Positive developments

As I noted at the beginning of this paper, the greater part of this sector consists of smaller collections and thus their problems tend to dominate the surveys. However, this dominance masks considerable progress in many areas.

Perhaps one of the most significant developments of the last decade has been that several universities have in fact been giving careful thought to the role and purpose of their museums and collections. Interestingly, for some universities, possession of collections seems still to be considered as an important aspect of being a higher education institution, whether the collections are for teaching, research or the public. Many of the newest universities, established out of former polytechnics, have actively sought to establish new collections. For example, the Southampton Institute has established a teaching collection for its Fine Arts Valuation course, and has acquired an Animation Research Archive for film animation (ARNOLD-FORSTER 1999: 23-4). Clearly for some universities, collections are still seen to be assets, not just liabilities.

Just as importantly, many universities have developed a role for their museums as shop windows or gateways for the university, a role for which they are well suited.

It has sometimes been argued, by university museum directors, that they have little remit to serve the wider public because their main aim is to serve staff and students of the university and other tertiary education users. However, this view is gradually changing as universities become more conscious of their need to play a role in the wider community in order to maintain their position (BENNETT *et al.* 1999). In particular in the UK, there is pressure on some universities to ensure that they 'widen participation' in tertiary education by recruiting a balanced proportion of students from state schools. This means getting out into the community and encouraging able school pupils to apply. HEMGCs are increasingly being used in this role by some universities. The Hunterian Museum and Art Gallery in Glasgow have been acclaimed for their successful development of a more high profile role as a showcase for the University of

Glasgow. In Oxford, one museum director quoted in the survey said that 'my mandate from the university is to open up the museum as a window between the university and the community' (ARNOLD-FORSTER 1999: 34).

A recent initiative that some university museums in England have been able to take advantage of is the 'Widening Participation' initiative funded by HEFCE — the Higher Education Funding Council for England. Under this scheme, universities which do not attract able students from a wide social spectrum, can bid for funds to develop strategies for recruiting students from a wider range of social backgrounds. Manchester Museum, the Ashmolean Museum, and the museums of University College London have successfully argued that they can play a role in this process. At UCL, for example, an Education and Access Officer has been appointed, whose role it is to undertake outreach work in local schools with handling collections, which meets their curriculum needs and also introduces them to what a university is. There will be corresponding 'in-reach' when pupils and their parents are invited to visit the university.
UCL is also in the process of designing and raising funds for a new building to house, amongst other things, its Petrie Museum of Egyptian Archaeology. This building, named the Panopticon, will be aimed at opening up the university's campus, its collections, and the research work undertaken inside, to a wide public audience.

A major factor in these sorts of initiatives has been the UK's Heritage Lottery Fund (HLF), which provides funding, principally for capital projects, particularly those which promote access. This has enabled some universities to provide significantly enhanced services for the public and for students. Swansea University, in Wales, for example, received funding from the HLF and the European Regional Development Fund to build a new museum, the Egypt Centre, next to its arts centre at the heart of the campus, and established new posts of curator and assistant curator (COUNCIL FOR MUSEUMS IN WALES 2000: 13). The Museum of Domestic Design and Architecture as the University of Middlesex in London was similarly opened last year with HLF funding, providing greatly enhanced access to its collections.

It is perhaps in the area of access that most progress has generally been made. Some of the major

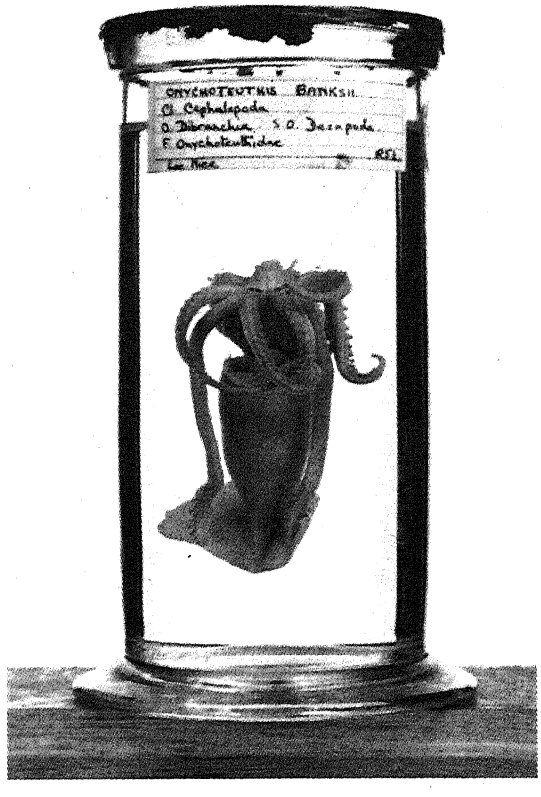

Fig. 2 - Conservation problems in university museums. In the case of this cephalopod specimen, the fluid requires topping up, and the sealant for the jar requires making good (Photo courtesy Grant Museum of Zoology, UCL).

museums, such as the Fitzwilliam in Cambridge, are investing in new education wings, and others are investing in people to provide access. Four Cambridge University Museums have come together to appoint an outreach officer, again with HLF funding, to work with local schools and communities. The Barber Institute at Birmingham University, and the Rural History Centre at Reading University, have both appointed schools liaison or outreach officers, and in the former case, greatly developed market research and marketing activities (ARNOLD-FORSTER & WEEKS 2000: 22).

Smaller collections are developing access, particularly through the use of digitisation. If there is one area where universities have an advantage over other kinds of museums, it is in the area of information and communication technology, and some university museum websites are the best of their kind. The Petrie Museum of Egyptian Archaeology at University College London, for example, is developing a full on-line illustrated catalogue of all 80,000 objects in its collection, and plans to create a virtual museum linking all of the other Egyptian material excavated by Petrie scattered around the world, starting with a specific link-up with the Manchester Museum for the finds from the site of Lahun which are held in both museums (MACDONALD 2000). At the Hunterian Museum in Glasgow, it is possible to see 'object movies' of prehistoric carved stone artefacts — by clicking on the object it can be made to rotate so that all sides and angles can be seen.

Many museums have moved beyond the object to use the Internet to create a virtual information resource. At the Museum of Antiquities of the University of Newcastle, it is possible to see a 'virtual exhibition' about Late Stone Age hunter-gatherers, enter the Hadrian's Wall education website, and explore the museum's recreated temple to Mithras three-dimensionally by moving around the room and clicking on elements of interest, and see the results of a community project with a local school (MUSEUM OF ANTIQUITIES WEBSITE 2001).

Other university museums have focussed on what they do which is distinctive to them as university museums. For some, this means the notion of an academic freedom to experiment, take risks and be challenging. The Courtauld Art Gallery in London, for example, attempts to do this with its temporary exhibition programme, which has included a display on 'Valuing Art' which invited visitors to guess the prices of paintings and other works of art and then explained how the art market worked (ref to catalogue). At the Whitworth Art Gallery in Manchester, a temporary display of works from the modern collection was mounted, which instead of providing traditional art-historical labels, used captions which asked the kinds of questions asked by the general public, such as 'Why Can't I Make Out What's Happening In This Picture?' (SIMPSON 1997).

One area where success seems to be gaining ground is in that of collaboration and resource-sharing, which clearly makes a great deal of sense when resources are scarce. For example, the Oxford Conservation Consortium operates amongst a group of Oxford colleges to provide paper conservation services through sharing the same freelance conservation, which provides common standards and a systematic approach (ARNOLD-FORSTER 1999: 26).

Such collaboration is facilitated by the appointment in a number of universities, following recommendations made in the surveys, of an overall curator of university collections. Sometimes this

person assumes responsibility for all of the museums and collections in the university, as has happened at UCL, and sometimes they assume responsibility for the 'orphan' collections which exist alongside the main museums, as has been the case at Birmingham University (HAMILTON 1995).

Despite a general picture of isolation and lack of funds amongst the majority of small collections, good progress has also been made in some areas of support for university museums and collections. Two years ago, the University Museums Group changed its constitution to admit anyone involved in curating university museums and collections, which has resulted in expanded membership and a proper voice for small collections. Importantly too, the AHRB has announced an annual project fund of £250,000 to help smaller collections not core-funded by itself, to improve their standards, particularly with a view to applying for official registration as museums.

Conclusion and priorities for the future

Overall, the last decade of surveys of HEMGCs in the UK has revealed a fairly common picture of low standards and struggle for survival amongst the bulk of collections, alongside excellent development and initiatives to improve standards and widen access amongst others. It is clear that there is a huge gulf between the *museums*, which are open to the public and have the resources and momentum to move forward, and the *collections*, which struggle simply to survive. This in turn begs the question of whether university museums and collections might be subject to slightly different kinds of analysis. The former can be analysed alongside other kinds of public museums, while the latter may be more akin to the collections of research materials such as archives. It may be impossible to apply common policies to the whole of the HEMGC sector.

The surveys also set out priorities for the future for each of the regions they cover, which can be summarised as follows:

- Establish clear purpose and goals for HEMGCs within each university
- Develop clear constitutional arrangements for them
- Clarify the legal status and title of collections
- Appoint individuals who are responsible, on a full-time basis for all of the collections
- Develop forward plans, and policies on acquisitions, disposals and loans
- Prioritise collections management and access
- Develop the use of the Internet as a tool for access
- Provide dedicated budgets for individual collections
- Formalise links between the main university museum (if one exists) and the departmental collections
- Develop the role of the museum as a 'shop window' for current research within the university, and for widening student participation.
- Encourage greater collaboration and networking – develop regional partnerships
- Encourage more HEMGC to apply for registration as museums
- Undertake structured programmes of staff training and career development
- Encourage UMG (for the UK) and UMAC (internationally) to develop their roles as voices for the sector
- Develop an advocacy document from the existing surveys, to include a strategy for partnerships with government, museum agencies, etc.

It is clear that there is still a huge amount of work to be done in HEMGCs, from simply ensuring that

important collections survive intact into the future, to promoting wider access and use to them. It is evident that the sector is grossly under-resourced, and this under-funding must be tackled at the highest levels, by government departments responsible both for higher education and for heritage in general.

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From independent university collections to a *Wissenstheater*: an ambitious project at the Humboldt University of Berlin

CORNELIA WEBER*

Resumo

A Universidade Humboldt, em Berlim, possui mais de uma centena de colecções independentes, dedicadas a todas as esferas do conhecimento. A grande maioria dos objectos, contudo, é quase inacessível ao público em geral e, consequentemente, encontra-se pouco divulgada. Em 1995, um grupo de investigadores decidiu empenhar-se em tornar públicas estas colecções e tem desde então desenvolvido um intenso trabalho de divulgação, incluindo palestras, a concepção de uma base de dados, a exposição 'Teatro da Natureza e da Arte; Arca do Tesouro do Conhecimento' e seminários para estudantes. Nos últimos três anos, estes tesouros escondidos foram sendo continuamente apresentados ao público com grande sucesso. Actualmente, a Universidade Humboldt tem planos para construir um museu de ciência onde uma parte seleccionada destas colecções possa ser apresentada de forma permanente, sublinhando os pontos de contacto entre as diferentes disciplinas.

Abstract

The Humboldt University owns over one hundred separate collections from all spheres of knowledge. Most of them are scarcely accessible to the general public and thus not well known. Since 1995 a group of scientists is engaged in opening up and presenting these collections (public lectures, construction of database, exhibition 'Theatre of Nature and Art - Treasure-trove of Knowledge', seminars with students). In the last three years the hidden treasures were systematically and successfully presented to the general public. Now the Humboldt University is planning a science museum exhibiting a selection of the whole spectrum of collections and demonstrating the points of contact between the different disciplines.

Introduction

The University of Berlin was founded in 1810 by the Prussian monarch King Friedrich Wilhelm III and instituted by Wilhelm von Humboldt, who had previously led the reorganization of the Prussian school system. Central to Humboldt's concept for the university was the close alliance of research and teaching, as well as scholarship for scholarship's sake and the development of personality. This became a model for several other universities founded throughout the world. Today, the former Berliner

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Universität or Friedrich-Wilhelms-Universität is called Humboldt-Universität in honor of the Humboldt brothers, Wilhelm and Alexander.

Outstanding individuals have shaped the history of this university. An incredible number of famous personages and Nobel Prize laureates have done research in Berlin, for example the physicians Rudolf Virchow and Robert Koch or the physicists Max Planck and Albert Einstein. Some of them have left behind important records relating to their achievements.

After the German unification in 1990, a list of assets circulated at the former East German Humboldt University. Included in these assets were several collections and museums. At the time nobody could have imagined that these collections would some day lead us to envision a *Wissenstheater*, or a science museum addressing the needs of the 21st century. This paper presents a case for the promotion and support of these academic collections. Firstly, there will be a short historical account of the early phase of this remarkable project, when an overview of existing collections needed to be acquired. In the second part, examples of coordinating activities and increasing audiences as a major prerequisite for further development will be examined. Finally, the recent initiative at the Humboldt University for a *Wissenstheater* will be described.

The collections

The founding of the university coincided with its acquisition of collections of the Prussian Academy of Sciences: the Botanical Garden, the Cabinet of Physics, the Scientific Collections, the Chemical Laboratory and the Observatory. This corresponded to Wilhelm von Humboldt's plan to allot everything relevant to higher education to the university. Over the years many collections were added. However, in the midst of 1990's only a few of these collections, namely the Museum of Natural History, the Pathological Museum at the Charité, the Robert-Koch Museum, the Arboretum and the Forge Museum of the old Berlin Veterinary School, were really known beyond a small group of insiders. Only a few academics and their colleagues in their respective departments were cognizant of the existence of other collections at the university. There was no coordination.

This changed with the initiation of the project 'Opening up the collections of the Humboldt University', which was under the direction of Horst Bredekamp, Jochen Brüning and Cornelia Weber of the Hermann von Helmholtz-Zentrum für Kulturtechnik. Firstly, all available information in the archives and libraries and in the various departments within the university was systematically collected. The results were amazing: In a few cases, real treasures were brought to light whose existence was known to only a few. At the present time about hundred individual collections in the different fields of knowledge are known to have existed at the university over the last two centuries. Many have been lost – to war, restructuring or other like disasters. Some exhibits are physically at risk to this day. Furthermore, large parts of the existing collections are barely accessible. Despite these difficulties a large inventory encompassing every conceivable discipline has survived. This inventory still offers a wealth of unique objects and an incomparable insight into the history of science, particularly in the 19th century. These collections also reflect the major role played by Berlin in the development of modern academic disciplines. The total number of objects in the inventory is currently estimated to be more than 30 million. The collections

come from various sources, among them the Royal Art Cabinet founded in the 16th century.

The natural science collections are excellently presented within the walls of the Museum of Natural History, which was founded in 1889. Over 25 million objects in the museum guide one through more than 4.5 billion years of the development of the earth, of the planets and of life on the earth. The Museum of Natural History is thus one of the largest registration centers for the world's animate and inanimate nature. Previous to 1946 the Botanical Garden and the Botanical Museum were part of the university as well, but today exist under the aegis of the Freie Universität Berlin. The Humboldt University also has a number of smaller scientific collections. They include the largest European collection of animal sounds with more than 100,000 recordings, the zoological teaching collection in the department of biology with valuable hand-made glass models from the 19th century of marine invertebrates, an arboretum, a collection of mathematical models and a collection of maps and rocks in the department of geography. The few remnants of the long-vanished Museum of Oceanography are now retained in the German Museum of Technology.

Fig. 1 – Centre of the exhibition 'Theatre of nature and art – Treasure-trove of knowledge' (Photo by Thomas Bruns © Hermann von Helmholtz-Zentrum für Kulturtechnik).

Medical research at the Humboldt University is also excellently represented, for example by the collection of the institute of anatomy and the Museum of Pathology and Anatomy at the Charité, founded in 1899 by Rudolf Virchow. There are also several smaller collections such as an anthropological collection, the Robert-Koch Museum, a collection of forensic medicine, wax models, historical instruments in the department of physiology, skulls and articulators in the area of dentistry, the lost museum of hygiene, and several collections of veterinary medicine, including a forge museum with unique holdings of historical horseshoes.

The collections in the humanities are also highly varied, although they fall far short of the sheer volume of the scientific collections. The University library has some special collections of particular significance. These include the portrait collection, with about 2,200 artistic and photographic portraits of Berlin scholars, the scientific library of Jakob and Wilhelm Grimm and the archive of the Sunday literary society "Tunnel over the Spree", which for a long time had Theodor Fontane as its secretary. Another outstanding feature is the collection of handwritten college notebooks with notes taken by students.

The tradition of the university is presented in the former so-called scholar's gallery, which was in the main hall of the university. Since 1836, it displayed busts of deceased professors who had made special contributions. These busts are today placed throughout the different departments. There are also four various archaeological collections: the collection of antiques, excavations from Mussawarat es Sufra in Sudan, a prehistoric collection, and the lost collection of a Museum of Christianity.

The sound archive contains 7,000 shellac records, including about 4,500 early recordings comprising a substantial number of languages and dialects and voice recordings of famous personalities of German history such as Max Planck and the Emperor Wilhelm II.

These examples show that the collections present almost every field of knowledge and significant development in the history of science and the university in the 19th century. This short listing of collections also indicates both the enormous potential as well as the challenge that the ownership of these treasures has implied for the university.

Activities

An important incentive for the project was at the beginning of 1998 the Volkswagen Foundation Grant of 867,100 German Marks for a first inventory. Intended was not a conventional inventory of single items but rather an inventory of descriptions of the objects with a special view towards the points of contact between the several spheres. With this interdisciplinary goal in mind an image and sound database was developed, which is to be used by the laymen and the specialist, and which brings the heterogeneous collections together in a digital museum and reflects the historical, personal and institutional background of the objects.

Also in 1998 a lecture series was initiated with various speakers introducing individual collections to a broader audience. For the first time the different curators and conservators were invited to a common forum dedicated to the treasure-troves. This was a good chance to publicize the collections both inside and outside the university, to make the collections better known and to develop a network of people interested in supporting the project.

Due to these intensive public relations efforts, the media began to notice the project and several local and national reports followed. The growing interest was beneficiary to the collections: some department heads paid more attention to the respective collections and some scientists in charge of a specific collection were encouraged to ask for the securing and conservation of the objects.

When in 1998 our project group was invited to take part in the national millennium show in Berlin, the idea was conceived to exhibit selected objects from the different spheres. This was not realized. Instead we looked for funding for our own exhibition. In the spring of 2000, the Berlin Lottery Foundation granted 4.5 million German Marks, and, supported by a large number of colleagues from the whole university, we started implementing our concept.

The opening of the exhibition 'Theatre of Nature and Art. Treasure-trove of Knowledge'[1] took place on 9 December 2000 – eight months after the bestowal of the grant. The exhibition concept was based on the legacy of Gottfried Wilhelm Leibniz. This founder of the Prussian Academy of Sciences felt that scientific and fine arts exhibits should be displayed side by side to highlight these corner stones of culture. He wanted to create a *theatrum naturae et artis*, in which the objects weren't simply assigned systematic places, but were rather made to act as an organic associative complex and to address all human senses.

For the first time the Humboldt University presented on over 3,000 square meters the entire spectrum of its collections: more than 1,100 not just historically significant but also visually striking objects culled from all spheres of knowledge. Most of the chosen exhibits bear witness to significant developments, great successes, and monumental errors in the cultural history of knowledge. The joint presentation of these objects from all disciplines revealed the numerous interconnections that link these ostensibly distinct subjects.

Throughout the entire run of the exhibition a coherent program of events with lectures, demonstrations,

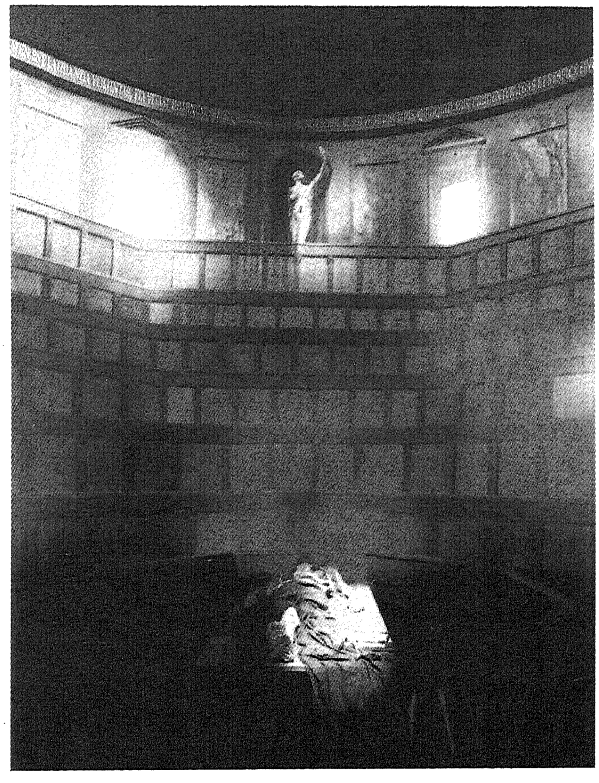

Fig. 2 – 'Theatrum anatomicum berolinense' as anamorphosis, created by Yadegar Asisi (Photo by Thomas Bruns © Hermann von Helmholtz-Zentrum für Kulturtechnik).

[1] Catalogue's reference: H. Bredekamp, J. Brüning & C. Weber (eds) 2000. *Theater der Natur und Kunst. Theatrum naturae et artis. Essays und Katalog*. Humboldt-Universität zu Berlin and Henschel Verlag, Berlin .

theatrical readings, workshops for children, symposia and concerts added liveliness to the exhibition hall.

The exhibition was a great public success, to which 80,000 visitors and almost exclusively positive reactions from laymen, politicians and science managers was counted. The appeal of this *theatrum naturae et artis* originated from the fact that it stimulated an emotional response. Furthermore, several special events – framed as commentaries to the exhibits – provided plenty of opportunity for contact as well as for the exchange of knowledge and experience with the curatorial team, with scholars from within the university and with artists who presented their personal views. Thus, the theatre and all its activities could help people to get over the psychological barriers and atavistic fears so often generated by the mere concept of science.

A *Wissenstheater*

Currently there are many efforts in Germany towards the promotion of scientific research and the improvement of the public understanding of science. (In addition, the small numbers of young men and women choosing a career in the sciences is considered by many as a severe impediment for the health of a prospering economy.) There are, for example, special programs like 'days of research', 'the long night of science', 'summer of science' and so on. These events are certainly important and have positive effects. However, their long-term influence is expected to be rather limited, as they provide neither a permanent platform for a broader audience nor a genuine discourse with the public.

The wish to continue and extend the presented concept of the *Wissenstheater* is a natural reaction towards the need to promote scientific research on the one hand and the success of the exhibition on the other.

At this time there is a realistic chance to establish a permanent science museum in the reconstruction of the old city castle opposite the Altes Museum and in the close vicinity of the Museumsinsel (an island in the city center hosting various art museums), the seat of government, and last but not least, the Humboldt University. The addition of a science museum would lead to an extraordinary ensemble of cultural corner stones in the heart of Berlin as well as to a unique common bond between culture, politics, science, humanities and society.

The prospective museum, developed by the university and supported by the city, will be a fusion of university and museum, a *Wissenstheater*[2]. The university, with its great variety of disciplines, its tremendous academic competence and its vitality, is a perfect director for this 'theatre', the academic collections are great actors and the students will be either diligent supporting actors or will form a grateful audience. A direct connection between Wilhelm von Humboldt's concept of scholarship for scholarship's sake and the development of personality can be seen.

The stage is a key concept for the *Wissenstheater*. Sciences and humanities will create many different stages such as changing exhibitions as a background for present-day research discussions, lectures and

[2] Unfortunately, the translation 'theatre of knowledge' does not carry all of the connotations present in the German term.

Fig. 3 – Specimens of the zoological teaching collection (Photo by Barbara Herrenkind © Hermann von Helmholtz-Zentrum für Kulturtechnik).

debates, live demonstrations, experimental laboratories, modern communications technologies, and in particular the new media and also traditional theatre, theatrical readings and concerts.

Displaying the past is but one aspect of the responsibility of the *Wissenstheater*. Giving an orientation towards living in the present, with a clear orientation towards the future is also of importance. This implies displaying science in its cultural context,

with its protagonists, its motives and aims, its errors and successes. In this way people not only will be informed about science, but they also will find models and perspectives for their own life.

The Berlin *Wissenstheater* will be a venue for all people interested in science and humanities. It addresses politicians, artists, people from the world of industry, scholars and journalists. But the most important audience will be the accidental visitor who shall find himself surprised to be drawn into the excitement of the sciences.

Les publics au coeur du Musée

DOMINIQUE FERRIOT*

Resumo

Durante muito tempo, os museus universitários deram prioridade aos estudantes e aos investigadores, que são por natureza visitantes minimamente informados nos domínios de especialidade das colecções: por exemplo os estudantes de engenharia no Conservatoire des Arts et Métiers ou os estudantes de Medicina no caso das colecções de anatomia das Universidades de Paris. As condições que os museus universitários proporcionavam a estes públicos permitia-lhes desenvolver projectos de investigação e utilizar as colecções históricas como material de inovação. Hoje em dia, os museus universitários são confrontados com uma dupla procura: a dos investigadores, que necessitam de instalações adequadas à consulta e ao estudo das colecções – procura essa que, em conjunto com as oficinas de restauro e o indispensável laboratório fotográfico, suscitou a necessidade de criar novos instrumentos de pesquisa, as 'reservas visitáveis'; e a procura do público em geral, cujos conhecimentos científicos são frequentemente menos aprofundados e que pretendem sobretudo partir à descoberta num local agradável e devidamente apetrechado com os indispensáveis recursos educacionais. Dado que muitos museus universitários se encontram instalados em edifícios históricos, é frequente a necessidade de projectos de renovação em que novas exposições são totalmente recriadas apesar de preservarem o 'espírito do lugar'. No interior das quatro paredes do museu, e em particular nos museus de ciência, a mediação humana continua insubstituível e os 'demonstradores' possibilitam a operacionalidade quer de máquinas quer de instrumentos. Fora das suas paredes, e em particular na Internet, os 'écrans do conhecimento' constituem ferramentas notáveis para proporcionar ao maior número de interessados o acesso à informação sobre os acervos. Nesta comunicação, serão desenvolvidos alguns exemplos neste domínio, não escamoteando as dificuldades operacionais que os museus universitários sentem, dado que em geral não possuem o grau de autonomia indispensável para lidar com as legítimas expectativas do público em geral.

Abstract

For a long time, university-based museums have given priority to a public of students and researchers who have already acquired a minimum of culture in the fields in question: for example, engineers at the Conservatoire des Arts et Métiers in Paris, or medical students for the anatomy collections housed in Universities. The conditions in which these-often numerous-publics have been received has allowed them to develop research projects and consider the historical collections as material for innovation. Nowadays, university museums are faced with a dual demand: that of researchers wishing to have access to premises suited to the consultation and study of the collection, which has led to the creation of new tools, 'visitable reserve stores', which also group together the restoration workshops or the indispensable photo laboratory; and that of the 'public at the large' whose general knowledge is often weaker in the field in question and who wish to discover a pleasant place equipped with the appropriate educational systems. Since many university museums were set up on historical

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sites, there is often a need to devise and complete a general renovation project that recreates a whole new exhibition design while preserving 'the spirit of the place'. Within the institution's walls, however, human mediation remains irreplaceable in science museums where 'demonstrators' can set the instruments and machines in operation. Outside its walls, 'knowledge screens', and in particular the Internet, are remarkable tools in providing a maximum of people with access to information on the collection. A few examples will be developed to illustrate this idea ,while not concealing the operational problems faced by museums which, for the most part, do not have the level of management autonomy required to deal with the legitimate expectations of the broader public.

Le musée est depuis l' origine, le *Mouseion* d'Alexandrie, un lieu d' étude et de recherche autant qu' un lieu de mémoire. Les musées universitaires, par leur double vocation d' enseignement et de conservation, devraient être les mieux dotés pour répondre aux attentes légitimes de tous les publics. La situation est bien différente et il faut souvent une opiniâtreté peu commune pour arriver à mener à bien une politique mettant le souci du public au cœur de l'institution.

Mais d'abord pourquoi vouloir développer le nombre des visiteurs du Musée. Lorsque je suis arrivée au Musée des arts et métiers en août 1988, les salles d' exposition étaient pratiquement désertes et pourtant le Musée avait un charme fou qui en avait fait le refuge de promeneurs émerveillés, tel Umberto Eco qui a fixé ses souvenirs dans son roman *Le Pendule de Foucault*. Fallait-il absolument vouloir la rénovation de ce 'musée de musées', figé dans une immobilité apparente qui laissait place au rêve et à l' étrangeté d' une visite hors du temps présent. En fait, nous n'avions pas le choix: sans publics, la collection se mourait lentement, ce musée de prototypes abandonnait sa vocation première: être un lieu de mémoire mais pour inciter à l'imagination et à l'invention. Dix années auront été nécessaires pour, à partir d' un nouvel inventaire et d'une politique d'acquisition, recréer un outil qui mette en valeur la collection et s' adresse à tous les publics.

Le public, quels publics?

Un public de chercheurs tout d' abord ou de visiteurs curieux. Ceux-ci peuvent avoir accès à la partie cachée de l'iceberg, le nouveau bâtiment créé pour abriter en fait 95% de la collection du Conservatoire des arts et métiers. Implantée à Saint-Denis, à 5 kilomètres au nord de Paris, la 'réserve visitable' est accessible sur rendez-vous; surtout, tous les objets portent un code à barres qui facilite leur repérage et leur identification. Des locaux d' étude, des ateliers de restauration, un laboratoire photographique complètent cet équipement moderne où les objets ont la première place mais où tout est fait également pour faciliter la consultation (largeur des allées, visibilité de pratiquement tous les objets); la réserve est une sorte de 'caverne d'Ali-Baba rangée' qui éveille la curiosité et laisse toute sa place à l' émotion malgré une présentation rigoureusement organisée.

Le public scolaire est également un public privilégié pour les musées qui dépendent d'établissements d'enseignement et de recherche. Là ce sont les enseignants qui doivent devenir médiateurs pour que, selon le niveau des élèves, il soit possible de construire des modes d'accès adaptés aux expositions ou collections présentées. L'usage de techniques multimedia dans le Musée ne remplace pas la médiation humaine et le démonstrateur est d' autant plus nécessaire que l'âge de l'électronique rend les

objets moins lisibles. Ceci n' est pas vrai uniquement pour les musées de sciences et techniques; la présence de jeunes étudiants dans les musées d' art qui guident avec enthousiasme des élèves à peine plus jeunes qu'eux est la plupart du temps perçue comme un temps fort dans la 'mémoire de la visite'.

Le public familial, le grand public, est cependant celui que nous voulions majoritairement convaincre dans la nouvelle exposition permanente du Musée des arts et métiers. Même seul, le visiteur dans un musée est toujours accompagné; souvent la visite se fait par petits groupes et la muséographie doit prendre en compte ce mode de parcours et cette lecture à plusieurs des informations proposées. Là se pose aussi le problème de la langue, surtout dans un musée de sciences où un minimum d' explications est souvent nécessaire. De plus en plus, l'information est donnée en plusieurs langues et adaptée aux différents publics. Là encore, l'objet prime: les collections des musées universitaires sont leur premier atout et l'investissement fait sur la mise en valeur et l' étude de la collection permet d' enrichir et de renouveler les présentations. Aux Arts et Métiers, nous avons choisi de clarifier le parcours de l' exposition: sept grands domaines seulement pour présenter plusieurs milliers d' objets; certains d' entre eux ont un statut 'd' objets-phares' et sont dotés de tableaux électroniques mettant en scène des séquences animées pour montrer l' objet en fonctionnement ou dans son contexte. Cet effort de

Fig. 1 – Les collections rangées dans les réserves du Musée des arts et métiers à Saint-Denis (Photo par Pascal Dolémieux © Agence Métis).

pédagogie est bien reçu par un public qui cherche à comprendre même s' il ne peut pas toujours toucher ou faire fonctionner les instruments et les machines.

Le caractère original des objets et, pour beaucoup de musées universitaires, le fait d'être implantés dans des lieux historiques, classés parfois monuments historiques, sont des contraintes mais surtout un formidable attrait pour tous les publics. C'est pourquoi, avec d'autres, je me suis battue pour rénover le Musée des arts et métiers dans son site historique, l'ancienne église de Saint-Martin-des-Champs à Paris, devenue à la Révolution le temple de l'invention et au XIX siècle le Panthéon des techniques. A Bologne, à Pavie, à Utrecht, Oxford ou Berlin, des initiatives spectaculaires ont redonné vie à des monuments magnifiques et à des collections exceptionnelles. Il faut alors ouvrir l'Université, même et surtout les Dimanches et donner au visiteur le sentiment de redécouvrir des lieux de savoir qu' il peut s'approprier.

Aujourd'hui le musée est aussi 'hors les murs'; les établissements d'enseignement et de recherche ont eu les premiers des sites web qui ont permis au plus large public de connaître leurs collections et de suivre des enseignements à distance. Hors les murs du musée mais dans les murs de l'Université peuvent aussi être organisées des séries de conférences donnant accès à tous les savoirs; c' est précisément le but de la manifestation intitulée "Université de tous les savoirs" qui a connu en 2000 à Paris un extraordinaire succès. Tous les jours de l' année, à 18h30 en semaine et à 11heures les samedis, dimanches et les jours fériés, un chercheur (arts, lettres, sciences) donnait, dans un amphithéâtre du CNAM, une leçon de 40 minutes à un public varié et libre; suivaient 20 minutes de discussion rigoureuse, parfois passionnée. Ces leçons ont fait l'objet d' une publication (papier et électronique) et elles ont révélé l'incroyable curiosité de publics qui recherchent avant tout le contact avec les hommes de science qui sont dans nos universités.

Là est le meilleur atout des musées universitaires, la présence dans l'établissement de chercheurs qui devraient pouvoir contribuer à la politique de diffusion des connaissances. En France, dans les années 1980, le gouvernement a voulu la création d'une 'Cité des sciences et de l' industrie' qui s'est développée au nord de Paris dans les anciens abattoirs de La Villette. A l' origine du projet: des idées, de l'argent mais pas de chercheurs et pas de collections puisque le nouveau musée des sciences était créé à partir de rien, volontairement. Vingt ans plus tard, on constate que les établissements plus anciens, le Conservatoire des arts et métiers, le Palais de la découverte , le Museum d'histoire naturelle, les musées en région ont plus de facilité à rayonner et à se renouveler. Là est la chance des musées universitaires, dans cette rencontre entre une collection et des publics, grâce à la médiation de chercheurs/enseignants qui sont déjà dans l'institution.

Attention cependant aux problèmes d'ordre administratif; être dans un établissement ne veut pas dire être privé d' autonomie et d'identité. Le Musée, s'il est ouvert au public, doit être identifié clairement, de la rue et dans une politique de communication autonome. De même, le directeur du Musée, conservateur et responsable administratif à la fois, doit être ordonnateur de son budget et capable de traiter simplement avec des partenaires variés dans le monde de l'industrie et de la recherche. Si l'administration de l'Université étouffe les initiatives du Musée c'est l'ensemble de l' institution qui peut dépérir. Ces considérations d'ordre statutaire sont variables d'un pays à l'autre ou d'un établissement à

Fig. 2 – Des démonstrateurs pour les jeunes publics (Photo par Pascal Dolémieux © Agence Métis).

l' autre; en France, il faut bien constater que les musées universitaires sont souvent pénalisés parce qu'ils appartiennent à des institutions dont la vocation principale n' est pas le Musée. Or le public n' a que faire de toutes ces considérations; il veut un établissement facilement accessible et vivant. Souhaitons que la nouvelle loi sur les musées favorise cette reconnaissance de la responsabilité des professionnels dans nos musées y compris et surtout dans ceux qui dépendent de l' éducation nationale. Cette demande d' une plus grande autonomie et ce souci des publics n'est aucunement contradictoire avec la volonté première de conserver et d' accroître des collections qui sont et qui restent des collections utiles pour l'enseignement et pour la recherche.

La force du Musée enfin, au sein de l'institution universitaire, c'est son interdisciplinarité; traiter du thème du 'corps', c'est possible au musée en impliquant des chercheurs et des collections différentes; s' inscrire dans des itinéraires de tourisme culturel, c'est possible à partir de situations très variées (par exemple, l'ouverture des Observatoires pour faire connaître et comprendre le patrimoine astronomique). En fait,

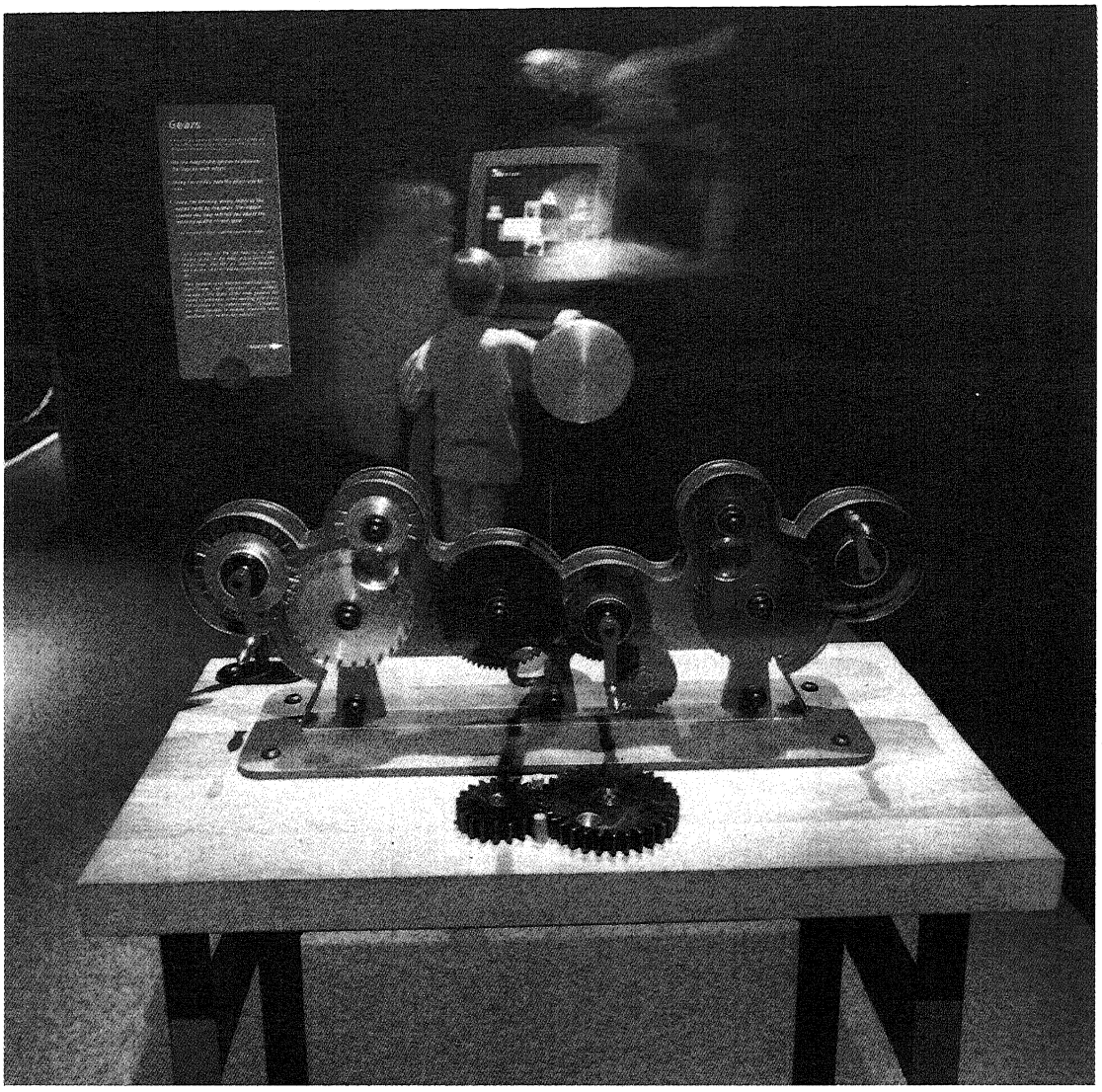

Fig. 3 – De nouveaux modèles pédagogiques pour tous les publics (Photo par Pascal Dolémieux © Agence Métis).

nous ne sommes qu'au début de l'avenir pour des institutions et des collections souvent plusieurs fois centenaires mais qui sont pour tous les publics des lieux de savoir et de débat, plus reconnus souvent que les medias ou la communication institutionnelle des gouvernements. Développer l'ouverture de nos institutions vers des publics plus nombreux est donc un objectif majeur que se sont fixé nombre de musées participant ainsi à la richesse du débat démocratique et à l'enrichissement de tous les savoirs.

Engaging university students

LYNDEL KING*

Resumo

O público mais difícil de conquistar para um museu universitário é, por vezes, aquele que se encontra mais próximo – os estudantes. Com efeito, o tempo dos 50.000 estudantes da Universidade do Minnesota é escasso: para além do estudo e das aulas, muitos ainda trabalham e vivem em grandes áreas urbanas vizinhas. Para além disso, alguns estudos revelam que a maioria não é visitante habitual de museus à entrada na universidade. O Museu de Arte Frederick R. Weisman é visitado anualmente por cerca de 150.000 estudantes e pretende atingir todos os estudantes e não apenas os de arte. Os seus programas educacionais incluem a colaboração com organizações e associações de estudantes, a promoção de visitas e aulas das mais diversas disciplinas nas suas instalações, o convite a estudantes para eventos sociais que passem igualmente por contemplar obras de arte, a colaboração com departamentos a priori distantes (como os de engenharia química e de ciências dos materiais) para a realização de conferências e outras actividades (sobre a elegância na arte e na ciência, por exemplo) e ainda a oferta de prémios a estudos sobre arte desenvolvidos por estudantes. Apesar do êxito inicial do Museu se dever, sem dúvida, ao magnífico edifício concebido por Frank Gehry (1993), um sucesso sustentado passa necessariamente pelos programas e exposições que este concebe e implementa. Este artigo descreve algumas iniciativas que um museu universitário de arte pode desenvolver no sentido de alargar o âmbito dos seu público estudantil, em particular a estudantes que não são de arte.

Abstract

The hardest audience for university museums to engage is often the one closest at hand - university students. There is much competition for the time of our 50,000 students. Most work, at least part time, and they live in a large urban area. Studies show that most have not regularly attended a museum before they enter university. Our attendance is 150,000 annually; our mission is to educate all students, not just those studying art or related disciplines. Ways to engage students include collaborating with student organizations; engaging faculty from diverse disciplines to make assignments and hold classes in the museum; inviting students to social events (such as dances for new students to meet each other) that also involve looking at art; collaborating with unlikely departments (such as chemical engineering and materials sciences) to sponsor lectures (on topics such as elegance in the arts and sciences) and other programs; and offering cash prizes for student essays about art on display. While our initial success might have been the attraction of our new Frank Gehry designed facility (1993) continued success involves programs. My paper will describe ways for university museums to widen student audiences, particularly from non-art students.

I am the director of an art museum in the middle of the United States at a very large state university—nearly 50,000 students and another 12,000 faculty and staff in an urban area of about 3.5 million. We have a collection of about 17,000 objects. On our campus we also have a museum of natural history and a small costume and textile design museum. In our city we have two large art museums, a large

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science museum, and a large historical museum as well as other small-specialized museums. In 1993 our Museum, named the Frederick R. Weisman Art Museum after one of our major donors, moved to a building designed by Frank Gehry – his first art museum – before the Guggenheim at Bilbao, Spain, even! Our Museum was constructed entirely with gifts – though the university owns it, no government funds were used to build it (fig. 1). The University provides about half our annual expenses the other half comes from earned income and fundraising. Our annual attendance last year was about 150,000, about half of those were University students.

Many university art museums in the United States such as ours, evolved out of a populist notion that education must be available to all citizens, and an opportunity to experience art is part of education so it is the responsibility of the university to offer and support that opportunity. Often, as in our case, the art museum came before any significant art collection.

I am a passionate about university museums because I am a convert, and you know that in religious matters converts are the worst! I grew up in a very small, isolated town in the Midwest. I never set foot in a museum of any kind until I went to university. I took an undergraduate degree in microbiology and worked for some years as a chemist and in a virology

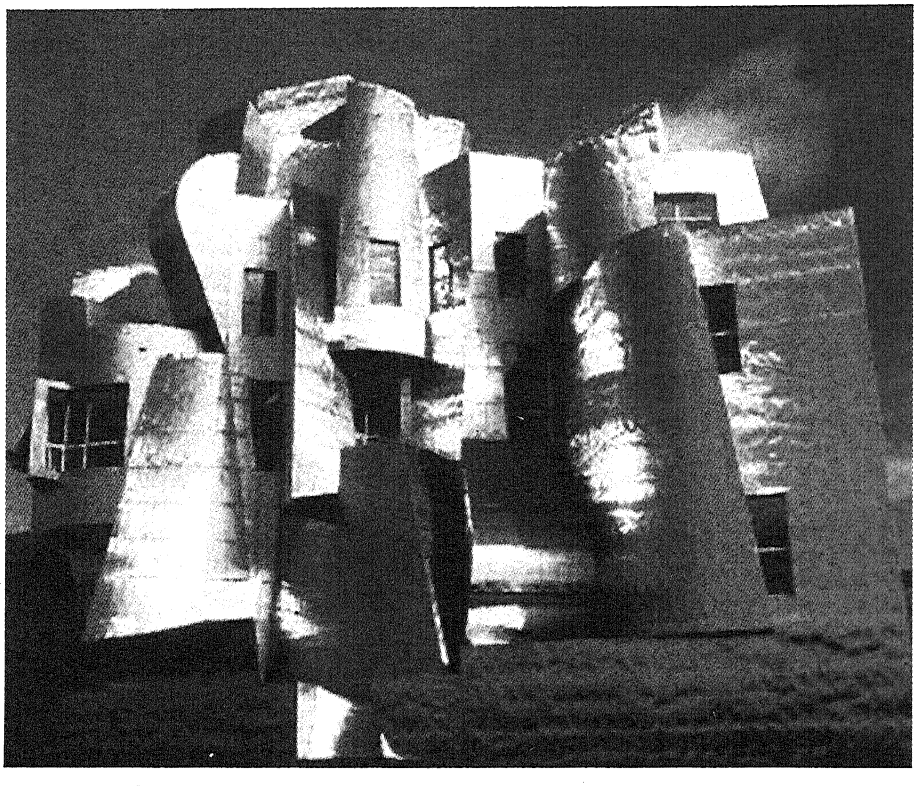

Fig. 1 – The Frederick R. Weisman Art Museum at the University of Minnesota was designed by architect Frank O. Gehry. The University of Minnesota's Art Museum has become a Twin Cities landmark (Photo and copyright by Don F. Wong).

laboratory. But because of my experience in a university art museum, I returned to university for a Ph.D. in art history.

We, at university museums, have an enormous possibility to change the lives of our students, particularly in America where people aren't so cultured as in Europe. I say that on our campus that I just want students to have the same opportunity to learn to love art, as they have to learn to love football. Not everyone will turn out to be an art fan, not everyone will be a football fan, but they should have an equal opportunity to learn about both!

In the United States museums generally are moving away from the curatorial point of view— the idea that museums existed first of all to protect their collections and create knowledge about them. One of our colleagues, Steven Weil, who was deputy director of the Hirschhorn Museum in Washington, D.C. for many years, and who teaches and publishes widely about museums, has described this shift as 'from being about something to being for someone'.

The shift is away from the idea that it is curatorial research that decides what we offer to the idea that we need to try to determine what our audiences want to know and in addition, determine ways to reach people with different learning styles. American museums generally have moved to a marketing approach that is, instead of deciding what is good for our audiences and trying to sell it to them, we first find out what they want to buy – or learn – and then teach it to them in the way they can best learn it. This can lead to an approach like that of our major science museum in town, which put up large outdoor billboards proclaiming "Which is more stimulating at the Science Museum, the exhibits or the espresso bar"? Or it leads to our major art museum presenting an exhibit of memorabilia from the popular movies Star Wars because surveys had told them this is something boys ages 12-18 wanted to see and this was a targeted new audience for them.

If we at the University embrace the popular marketing approach, we should ask our audience – that is our students – what they want. We do. They tell us they want us to be more "with it." They told us last year that much of what we showed was boring (this includes the retrospective and scholarly catalogue we did on American modernist painter Marsden Hartley and the exhibition curated by archaeology and architecture professors on monasteries). Students tell us they want to see only 'new media' art, not those old fashioned paintings and sculptures. They want buttons to push and a quick succession of moving images, the kind they see on music videos.

How far should we take this new marketing approach that is so popular in the United States is a question we discuss often. How do we balance scholarship, collections, and popularity? How do we advance the ideas of our curators who have spent their lives studying our collections? How do we show those boring old paintings and sculptures – in addition to new videos – and still get students to come to the Museum? I'm not yet willing to abdicate our expertise as museum professionals but the question is how do we keep this and still increase our student audiences.

As I am sure you all know, students are sometimes our most critical and hardest audiences to attract. Almost all our students have jobs; some have nearly full-time jobs. They have a very small amount of time left over from classes and jobs so we cannot leave their attendance to chance. Because we are a large state university with relatively low tuition, we have many

students from families with lower incomes. We know from surveys that most of the students at our University do not have going to an art museum as a normal activity in their family.

I will talk about two basic approaches that have worked for us. I know the examples I give may not work for you, but they are just examples intended to stimulate the creativity that you all have. These two basic approaches are: i) viewing the entire faculty of the University as part of the Museum staff; and ii) presenting programs that give students a sense of ownership in the Museum – an emotional connection that this is a place for them.

One of the most successful ways we expand our student audience is to work with professors to make going to the Museum part of a class assignment. This is not something we leave to professors. Our Museum staff takes the initiative in making suggestions to faculty and usually they are receptive.

Of course, we work closely with professors in disciplines such as art, art history, and architecture. Professors in those disciplines assign students to draw in the Museum and to look at exhibitions. We work with seminars in which students present a small research exhibition, usually drawn from our collection. These seminars are not only for art history students. Student curated exhibits have included Chinese calligraphy, prints and drawings of women at the turn of the 20th century, and artist designed dinnerware, among others. This year we worked with artist Mark Dion to present an exhibit celebrating our University's 150th anniversary. Eight students worked with the artist and our staff to organize more than 750 objects from 54 collections at the University in the style of a Renaissance Cabinet of Curiosities. Next year we are working with the director of our Center for Holocaust and Genocide Studies on an exhibition of artist designed bookplates from a collection of a Czech Jewish family.

Using seminars and faculty to involve students is not a new idea, I know, but what I would emphasize is that professors from a wide variety of disciplines have been receptive to working with the Museum. But they do not come to us; we have to go to them.

We have attracted students from engineering by forming a partnership with our University's Institute of Technology. With professors from this area we formed an ad hoc brainstorming group on the concept of elegance in the arts and sciences. First a student intern interviewed faculty across the University about what elegance meant in their disciplines. We summarized the interviews and started a faculty discussion group. After a few meetings we decided to jointly sponsor a lecture series bringing speakers from across the country. The Institute of Technology, being considerably richer than the Museum, paid for the speakers and the Museum provided the publicity and the space. Engineering students were required to attend the lecture series and after every lecture, a selected group of students and faculty members from the arts and sciences were invited to a dinner at the Museum with the guest speaker.

We have a nice small lecture hall and a place for receptions, and we provide this free to University departments for public lectures. These bring students to the Museum who might not otherwise come, and during the break they peruse the galleries and we hope, return.

Several dance performances based on works of art have been choreographed and performed in the Museum galleries by students as a part of class

assignments. Our staff provided close supervision during rehearsals to make sure that the dances would not harm works of art – we had many conversations about why throwing people into the air at sculptures or jumping off walls in front of paintings could not be done. However, after a few experiences, the dance faculty agreed that the positive results of having a real physical object to inspire the choreographers and the performers outweighed the restrictions we placed on their performances. Here is a noontime 'art' exercise program we organized without physical education faculty in conjunction with an exhibition of contemporary art called 'Through the Body', which was about contemporary artists' use of the body as the subject for their art.

One of our most successful and long term programs is a contest in partnership with our University's creative writing program. All students in beginning level creative writing classes are assigned to write about a work of art at the Museum. At the end of the semester, students may submit their writing to a jury. We offer cash prizes, underwritten by the University's Office for Student Affairs. We post the poems and excerpts from the essays beside the work of art for a year and publish them in our newsletter. The results are always interesting and sometimes remarkable. We are now working with our scientists in genomics towards an art exhibition and a symposium that will combine artists, scientists, and ethicists.

We also pay careful attention to our exhibit texts to make them concise and free of art historical jargon. We run them through our word processing program to check the reading level and if it is higher than first year college student level, we edit them again.

To try to make students feel that the Museum is their

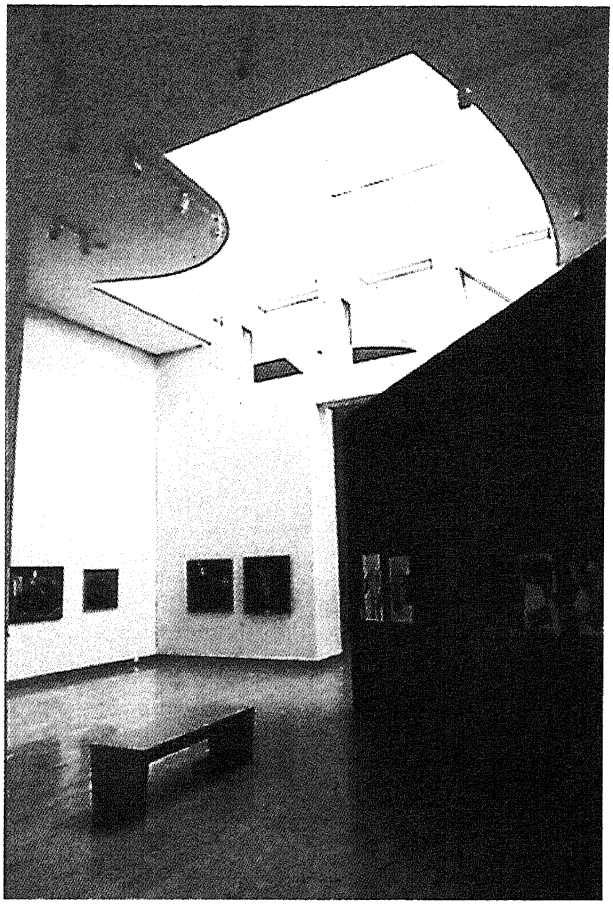

Fig. 2 - The Museum contains 17,000 pieces of art in its permanent collection and holds an internationally significant collection of American art from the first half of the 20th century, including the world's largest collection of work by Marsden Hartley, Alfred H. Maurer and B.J.O. Nordfelt. The Museum also has strong collections of Asian, American, European, and Native American ceramics, as well as Korean furniture (Photo by Robert Fogt © Weisman Art Museum).

place, we use them as mentors and teachers for the programs we offer for elementary and high school students. For example, each summer we give a workshop to introduce secondary school students to architecture. Our University's architecture school contributes money to the program because it helps

them identify good potential students. A faculty member from the architecture school directs the program and University architecture students get academic credit for supervising the younger students.

University theater students present performances based on our exhibitions – two students researched, wrote, and gave a performance based on themes in an exhibition of African American artist Jacob Lawrence. They received credit in the theater department for their work and their performance at the Museum won them internships at our major city theatre the next year.

Students from our music school play for our programs for families with young children. We present noontime concerts during the summer using students from a University music camp. Graduate students in art history offer courses at the Museum for senior citizens. And, students from everywhere helped create a museum art car we drove in a school parade. The car was donated by one of our community volunteers then covered in a design with different colored beans. It had the Museum logo on its hood.

We also try to meet students where they live and play. Yes, we have dances at the Museum. We knew that we wanted to do these kinds of things when we designed the building so we have a large lobby space and our small auditorium has a flat floor rather than fixed seats – we move chairs in and out for lectures. 'Funk at the Fred', our dance during welcome week – a time for new student orientation – usually attracts between 2,000 and 3,000 first year students. We have two other large dances during the year that attract between 1,000 and 2500 students each. We call these 'Dr. Date and the Love Nurses Mixers'. Dr. Date writes an advice column in our student newspaper and the newspaper helps sponsor the dance. The first year we had these dances we were very worried. About 11 PM I came downstairs to see how everything was going and our curator rushed up to me at the elevator door. "Oh my God," she shrieked, "the students are in the galleries!" My mind raced. "What are they doing," I thought, "writing on the paintings with lipstick, slam dancing into the sculptures?" Disasters flashed before my eyes in that moment she paused. "And," she continued, "They're reading the labels!" Of course, we don't think we're going to convert any art history majors at these events, but we do think that we may convince some students that it is Ok to go into an art museum, that it isn't intimidating, and they might want to come back some time later. And, they do.

Sometimes it seems that we are redefining ourselves every moment. How can we encourage real scholarship and contribute to the academic enterprise, protect our collection, raise half our budget every year, link the University to the community – and attract University students in the process. We must be more creative, more energetic, and more enterprising. To increase our student audiences we must view the entire University faculty – not just faculty in our discipline – as possible partners and we must make students think that the museum is their place. Just presenting exhibitions that curators think are wonderful is no longer good enough.

An experiment in access

SALLY MACDONALD*

Resumo

O Museu Petrie do University College, em Londres, tem desenvolvido de forma intensa os estudos de públicos, quer do ponto de vista qualitativo quer quantitativo. O principal objectivo dos estudos realizados prende-se com as novas formas de apresentação das colecções a públicos sucessivamente mais alargados. A exposição itinerante 'Ancient Egypt: Digging for Dreams', aqui descrita, constitui uma dessas experiências. Apresentada em Londres e em Glasgow, esta singular exposição desencadeou reacções interessantes, quer por parte do público em geral quer por parte da academia. Este artigo reflecte sobre essas reacções e suas implicações no contexto de um museu universitário.

Abstract

The Petrie Museum has conducted significant quantitative and qualitative research with academic audiences and with the general public, and is experimenting with new ways of presenting its collections to address a broader audience. 'Ancient Egypt: Digging for Dreams' is one such experiment - a travelling exhibition of objects from the collection showing at public galleries in London and Glasgow. This paper looks at public and academic responses to the exhibition and some of the issues these raise for the university museum.

Introduction

'Ancient Egypt: Digging for Dreams' is a touring exhibition created by a university museum in partnership with two local authority museums. One aim of this collaboration is to bring university collections to a wider audience. Public reaction to this exhibition to date has been overwhelmingly positive: the academic response equivocal. This paper describes the exhibition, summarises the reactions to it, and examines some more general issues for university museums seeking to broaden their audiences.

Collections

The Petrie Museum of Egyptian Archaeology[1] is just over a century old. It is part of University College London (UCL), was founded, along with its Egyptology Department, in 1893, and takes its name from the first professor, Flinders Petrie (1853-1942).

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[1] Cf. www.petrie.ucl.ac.uk/.

The collection grew rapidly over the next seventy years, through Petrie's annual excavations in Egypt, and those of his students and successors. It now numbers around 80,000 objects, and is one of the largest and best-documented collections of Egyptian archaeology in the world, illustrating life in the Nile valley from Palaeolithic times to the 20th century CE. The museum is full of objects of great public interest, including vast quantities of artefacts used in daily life in the ancient world (costume, jewellery, writing materials, tools); funerary material (the world's largest collection of Roman period mummy portraits); and important archaeological groups, such as the artistic productions from Akhenaten's city at Amarna. Despite the collection's popular appeal, it was always intended primarily to support the teaching of Egyptian archaeology, and it includes encyclopaedic type collections to help students learn to date finds (MacDonald 2000).

Audiences

For most of its history, the museum has been known to and used by a select academic audience; around 300 visitors a year are listed in the visitors' books. During the 1980s the audience began to expand to include interested laypeople, a Friends organisation was set up and by the late 1990s numbers had increased to 3,000 a year. At this point the university took the decision to alter the management of the museum. A new structure was created for management of collections throughout UCL, and within the Petrie Museum a managerial post was created, one of the main tasks of which was to broaden the museum's audience. At around the same time, the museum's collections were designated by the UK government as being of national importance. Designation brought both new funding and with it the responsibility to begin to serve a national audience.

For the Petrie Museum, as for many other outstanding university-owned collections[2] now deemed to be nationally significant, designation presents a great challenge. Staffing and revenue budgets have been so low that services even to internal academic audiences are arguably inadequate and many would deride the idea that such museums could operate as national centres of excellence.

On top of this, the Petrie Museum operates, as do many university museums, from a dramatically inaccessible site, its unprepossessing surroundings effectively establishing its low profile and limited audience. It is situated on the first floor of a university library building off a goods yard, on top of a boiler. Signage is almost non-existent and visitors from the real world must negotiate a security gate, delivery vans and a library turnstile, before encountering displays that assume a specialist knowledge of Egyptology. On Saturdays during vacation there is no lift access to the displays, and the museum will shortly be in breach of legislation relating to disability access. Those people who do manage to find the museum are overwhelmed with a sense of achievement and discovery.

Without a substantially increased marketing budget or a new site the potential for increasing audiences to the museum itself is negligible. The challenge of increasing audiences is particularly acute in a subject as polarised as Egyptology. There can be few areas of

[2] There are fifteen at the time of writing; a full list can be found at www.resource.gov.uk/designation/mus_index.html.

ancient or modern history that hold such broad popular appeal, yet within academia, some have suggested that its very popularity gives Egyptology a dubious status as a rigorous intellectual discipline (Roth 1998). Market research carried out by the Petrie Museum with existing and potential users has confirmed the existence of this rather unhelpful divide (MacDonald & Shaw 2000).

In view of its potentially wide audience yet restricted site, the museum has focussed on outreach, both digital and physical, as a means of widening access to its collections (MacDonald *et al.* 2001). Designation funding from the government is enabling the creation of a complete, illustrated online catalogue of the collections by 2002. This digital catalogue, and a sister project to create digital resources for higher education, should significantly increase and enhance use of the collections by students, academic and other researchers, schools and the general public. The exhibition described here is the physical counterpart to these virtual initiatives, although of necessity it is more selective and more evidently constructed.

Late in 2000, just after the exhibition opened, plans began to evolve for the Petrie Museum to move to a new, greatly expanded and more accessible site. This development has in a way rendered the exhibition more significant as a test bed for interaction with a broader audience.

Aims

The exhibition 'Ancient Egypt: Digging for Dreams' is the result of a three-way partnership between the Petrie Museum and two local authority-run museum services, one in Croydon (south of London) and one in Glasgow. The partnership was based on personal discussions, which took place during 1998 thanks to long-standing friendships between the heads of service at the three museums. The other salient element was the availability of external funding; the UK's Heritage Lottery Fund (HLF) had recently launched an Access Fund designed, amongst other things, to promote the touring of designated collections. A trusting partnership and the availability of external financial support were crucial enabling factors.

The partners each had their own access-related reasons for wanting the tour to work, and there was extensive debate about individual objectives. The overall aims of the exhibition were agreed to be:

1) To improve public access to high quality objects from a little known designated collection;
2) To develop new audiences for the museums participating in the tour:
    a) Petrie Museum: targeting both non-specialists and academic audiences, with a view to developing ideas and methodologies for communication on a new site;
    b) Croydon Museum Service: targeting specific audiences, particularly families with children under 8, and local Black people, in line with its long term plans;
    c) Burrell Collection, Glasgow: traditionally a tourist honeypot, but now targeting Glaswegians, particularly those in areas of multiple deprivation close to the museum;
3) To test new approaches in presenting Egyptian archaeology to a wider audience;
4) To encourage public debate on current approaches to presentation of Egyptian material in British museums.

We at the Petrie Museum felt that it was important for the exhibition to have academic credibility as well as popular appeal. We initially had some difficulty finding an academic who was keen to engage with the interests of a broad audience, and with the kinds of issues the partners had already defined, but in Dominic Montserrat we found an enthusiastic curator. He, with help from the exhibition partners, Rachel Hasted (Croydon), Simon Eccles (Glasgow) and myself, chose the themes, selected the content and wrote the text of the exhibition. Axiom Design Partnership shaped its physical form.

Themes

The exhibition includes around 120 ancient objects, and many more modern artefacts and props. The first section deals with Western stereotypes and common assumptions about ancient Egypt, many of which have their roots in popular fiction. Visitors can use torches to examine ancient objects, some of which are fakes, laid out in a fictional tomb setting. Later sections discuss Flinders Petrie and his achievements, but set in the context of 19th and 20th century archaeology as a colonial project. The exhibition goes on to question the uses to which archaeology can be put; mummy portraits such as those excavated by Petrie, and displayed in the exhibition, were used by the Nazis to support arguments about racial types. The main part of the exhibition raises a number of questions about the ancient Egyptians, the most contentious of which centred on race and colour. These issues are normally shunned by academics as racist and irrelevant, but our market research had indicated they were live

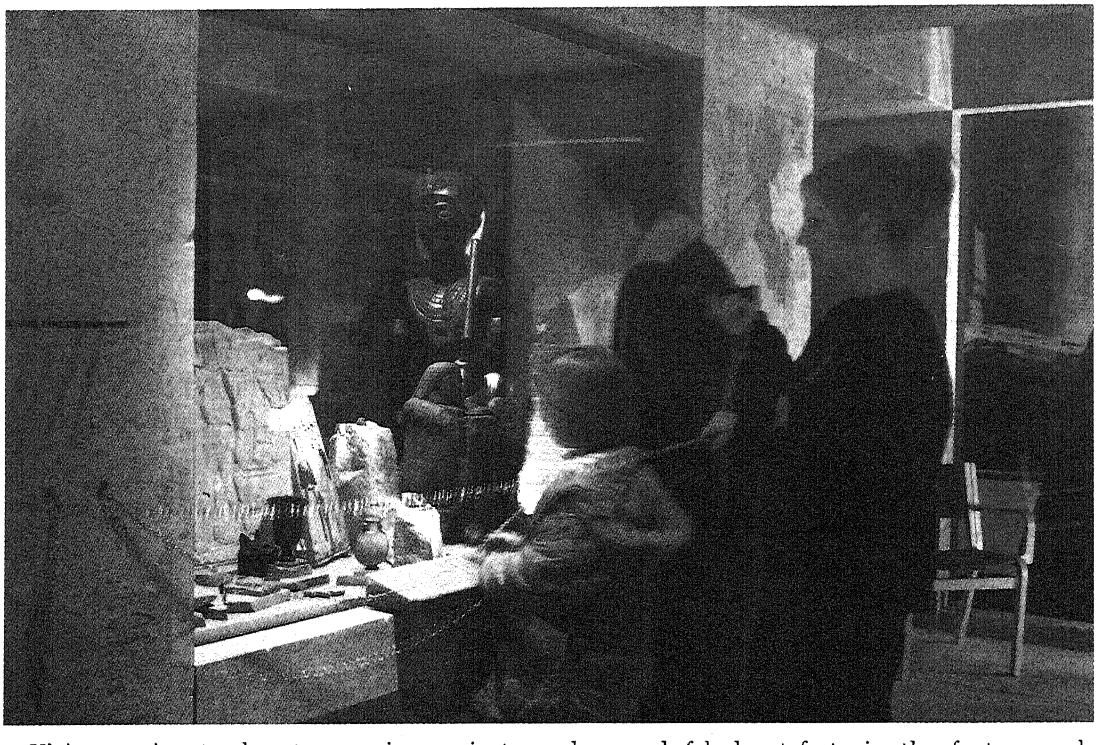

Fig. 1 – Visitors using torches to examine ancient, modern and faked artefacts in the fantasy archaeology display at the start of 'Ancient Egypt: Digging for Dreams' (Photo © Petrie Museum of Egyptian Archaeology).

debates for general audiences. A further section displays human remains, respectfully (we hoped) under a shroud, and invites visitors to comment – on postcards – on whether dead people should be exhibited in public. The final section of the show, 'Consuming Egypt', comments on how ancient Egypt is marketed and commodified in Western society. Throughout the exhibition, interpretation includes many voices, including 'alternative' viewpoints, and ancient artefacts are deliberately juxtaposed with modern ones, to provoke questions about how we use the past. So, by comparison with most Egyptological exhibitions it was self-conscious, reflective, and provocative. This was noted by one reviewer comparing three recent exhibitions (New Heritage 2001).

The exhibition was the main communication vehicle, supported with a range of publications (free handlist, cheap souvenir guide, website, teacher's pack), schools handling collection, and wide-ranging events, outreach and marketing programmes at each venue. In December 2000, coinciding with the exhibition's Croydon showing, UCL's Institute of Archaeology organised a conference, 'Encounters with Ancient Egypt', which examined, amongst other issues, museum presentations of Egyptian collections. This offered an opportunity for an academic audience to consider the themes and treatments used in the exhibition.

Each venue has organised extensive outreach programmes to reach target audiences. Croydon employed a development worker to encourage young people, particularly those from African and African Caribbean cultures, to visit the exhibition. The outreach worker contacted relevant groups – including homework clubs, youth clubs, scouts groups and refugee associations – visited group leaders and then the groups themselves. She describes "generally just making conversations about history, culture etc, to hear their views. This enabled me to mention the exhibition and the African history behind it, and to discuss their views on this" (Harris 2000). She then organised visits to the exhibition, with informal workshops where young people could discuss their responses. She was helped in her work by media coverage of the exhibition in the Black newspaper *New Nation*, which gave the project credibility. For Croydon this outreach work provided an important network to build on in future projects, for the Petrie Museum an opportunity to bring the collection to an audience that may never visit the museum itself.

Glasgow Museum Service has commissioned a community arts organisation, Impact Arts, to organise a varied programme of events – including art and storytelling workshops, street theatre and adult education lectures – and to make links with disadvantaged target groups in social inclusion partnership areas. Groups are visited, offered a free workshop, free transport and crèche facilities where necessary. Both venues have therefore tailored their outreach packages and methods to local audiences.

Responses

Evaluation of this project is ongoing, and the comments here are based on results from the Croydon venue only. Simply in terms of visitor numbers the exhibition has already fulfilled its brief. Over 60,000 people have visited the exhibition in around 7 months, while in the same period the Petrie Museum has attracted only 5,000 visitors. This is despite the fact that both venues made an entrance charge (with concessions and free times) while admission to the Petrie Museum is free. Box office statistics at Croydon suggested a huge increase, as compared to previous exhibitions, in the

numbers of children and young people visiting the exhibition. Ethnicity was not measured in visitor surveys, but staff observed a higher proportion of Black families than the venue usually attracts.

Self-completion visitor surveys at Croydon suggested that 49% of visitors were spending 1-2 hours in the exhibition; a very long time for what is quite a small show, with 6% returning for a further visit. A face-to-face survey (Cameron & Hasted 2000) asked whether they had ever seen other exhibitions on ancient Egypt. 56% had, although only 11% of these had visited the Petrie Museum. Visitors were asked what they expected to find; most wanted a general introduction to the subject, but almost a quarter had no specific expectations. The most popular features of the exhibition appear to have been the opportunity to come into contact with ancient artefacts, closely followed by general interpretation and design. When asked what they didn't like about the exhibition, 49% of visitors were reluctant to criticise, but several features of the interpretation – particularly the display of human remains – were a source of surprise.

This display, and the nearby display of postcards soliciting visitor comments, seems to have stimulated debate and discussion to a degree we had not expected. Hundreds of visitors, most of them children, have contributed their thoughts and feelings. So far they are roughly evenly divided in favour and against the display of dead people. The following comments give an indication of the level of debate:

> "Children are not drawing away from this exhibit. Conversely they are viewing it then talking about it."

> "The young girl in the case will live on in our memories thanks to your decision to show her remains."

> "If it was my mummy I wode not like other people to see her over and over again. I wode like to see her in private" (Nadine, aged 7).

The method of display, behind a shroud, which leaves the decision to look or not to look to the individual visitor, has attracted comment in the museological press (Vaswani 2001). In other respects, however, the exhibition has been less successful in stimulating professional debate. The comments of academic visitors to the exhibition from the 'Encounters' conference were solicited via email, and only 15 responses were received, though over 60 delegates had visited the exhibition. While most of those who responded were positive about the show, several were uncomfortable with the inclusion of heterodox views:

> "Very interesting and amusing, but I do not like so much the admission of alternative Egyptology."

> "Very politically correct."

Anecdotal evidence from discussion with Friends of the Petrie Museum suggests that some were likewise uncomfortable with the exhibition's inclusive approach, more than one feeling that the subject had been "dumbed down" for a popular audience. Many made the decision not to visit, on the basis that they would learn nothing from an exhibition of this kind, despite the fact that – on the most basic level – many of the objects on show are normally kept in store. The exhibition's curator was disappointed by the lack of peer response and coverage in Egyptological journals. Is this (lack of) reaction due to the fact that the exhibition criticises the discipline in a public context? Or is it because the exhibition positions itself too firmly as being for general audiences? Or is it because the exhibition is in fact of no interest to specialists?

Although Petrie Museum leaflets have been displayed at both exhibition venues, our perception is – we have not surveyed our visitors to this effect – that few people have been encouraged by the show to make a first visit to the museum. I recently witnessed one who had made

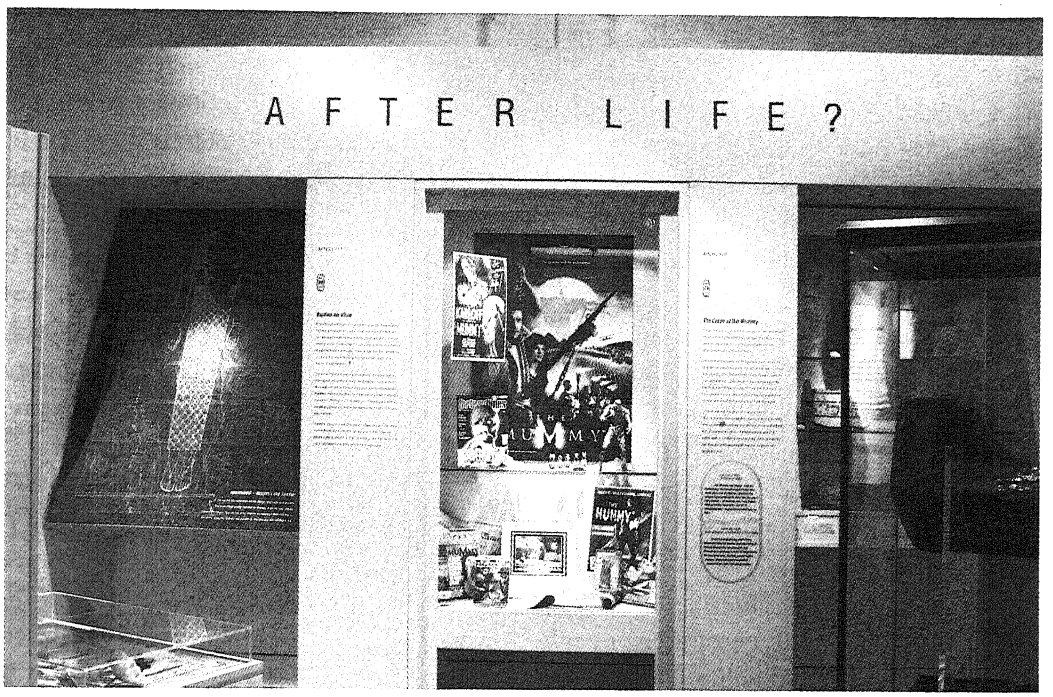

Fig. 2 – The exhibition raised questions about our uses of the past, looking at popular mythologies as well as academic views. Here human remains are displayed under a shroud on the left, with space nearby for visitor comments (Photo © Petrie Museum of Egyptian Archaeology).

the trip stay only 10 minutes. He enthused about the touring exhibition, but clearly found the museum's displays bewildering by comparison.

So although the exhibition is clearly succeeding in some of its aims – reaching new audiences, testing new approaches to presenting the subject matter, stimulating public debate – it has been largely ignored by academic Egyptology, and has clearly failed to engage some of our core supporters. It appears not to be achieving the crossover we had hoped for between academic and new audiences.

Lessons

I should like to end this paper – which is an interim report rather than a summary – by offering some reflections that may be of relevance to other university museums seeking to broaden their audiences.

1) Know your strengths. Many university museums are in a position to share amazing collections, coupled with scholarship, that local museums – and even some national museums – simply cannot access. On the other hand, few university museums have the experience and local knowledge to make their collections meaningful to non-specialists, particularly non-museum goers. Most of us do not have time to forge these links. Rather than attempting to replicate what others can do better, we should consider working together with institutions that

already have the contacts and skills we lack, providing access at arms length.

2) Work in partnership but choose your partners carefully. We chose friends and colleagues we trusted, that we knew were like-minded, and whose motives coincided with our own.

3) Try to involve academic colleagues as much as is practical. We failed in this for several reasons. We were working to a tight deadline and were conscious that our colleagues were busy. But had we involved more of them in the planning and execution we might have managed to create a show that appealed more directly to traditional audiences.

4) Be prepared for criticism. Not all subjects are as polarised as Egyptology but in many disciplines you will encounter people violently opposed to "dumbing down", and who believe that university museums are fundamentally for academic audiences. Some of this criticism may be quite uninformed - academics are often more used to dealing with texts, not objects – but if it is from close colleagues can nevertheless be upsetting and damaging.

5) Be confident in your expertise. We in university museums tend to undersell our skills as communicators. Like good popular books or TV documentaries, university museums select, edit and present new academic research and ideas for a wider audience.

Experiment. Universities are generally receptive – much more so than local councils, or national museums – to controversy, freedom of thought, and experimentation, provided it is evaluated and the results shared. Take advantage of this. Take risks, make mistakes and share them.

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University art museums in Brazil: in search of new and old audiences

ADRIANA MORTARA ALMEIDA*

Resumo

Neste artigo os museus são discutidos enquanto elemento fundamental para estabelecer um elo de colaboração entre a universidade e a sociedade. Comparam-se números de visitantes em museus de arte universitários e não universitários, bem como os programas desenvolvidos pelos primeiros para atrair novos e velhos visitantes, dentro e fora da comunidade universitária. O texto apresenta igualmente uma descrição sumária dos museus de arte universitários no Brasil, suas funções e iniciativas para captação de novos públicos.

Abstract

This article aims at comparing the number of visitors in Brazilian university and non-university museums of art. It will also try to explain the ways in which universities adopt in order to captivate new/old audiences inside and outside the university community. In addition, an overview of the Brazilian university art museum panorama, their functions and their problems in attracting new audiences is presented.

Introduction

Museums are institutions that should offer exhibits and other public programs to attract different audiences. The case of university museums is somewhat different because the university community is expected to be their main audience, with the non-university audience coming in second place. Therefore, what we usually call the 'old audience' in a university museum is the university community itself and the 'new audience' is the non-university community. Nevertheless, in Brazil, this has not been the case for every university museum.

This paper discusses how university museums strive to increase their audiences, inside as well as outside the university community, by attracting school groups, teachers, elderly people etc. This discussion includes the importance that society in general places on university museum programs. University museums could be one of the links between universities and society as museums are

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also places for relaxation and informal learning.

The university is an institution that must be contemporary in outlook in order to respond to new social challenges. If not, it will become more and more isolated and might loose its *raison d'être*. Marcia Lord, the editor of *Museum International*, presented some arguments extracted from the report of the International Commission on Education for the Twenty-first Century, chaired by Jacques Delors, concerning the pressures facing universities and therefore, their museums:

> "Higher education is at one and the same time one of the driving forces of economic development and the focal point of learning in a society. It is both repository and creator of knowledge. Moreover, it is the principal instrument for passing on the accumulated experience, cultural and scientific, of humanity (...)"
> "As autonomous centers for research and the creation of knowledge, universities can address some of the developmental issues facing society. They educate the intellectual and political leaders and company heads of tomorrow, as well as many of the teachers. In their social role, universities can use their autonomy in the service of debate on the great ethical and scientific issues facing the society of the future, and serve as links with the rest of the education system by providing further learning opportunities for adults and acting as a center for the study, enrichment and preservation of culture. There is increasing pressure on higher education to respond to social concerns, while the other precious and indispensable features of universities, their academic freedom and institutional autonomy, have also been the focus of attention. Those features, although no guarantee of excellence, are a prerequisite for it (...)"
> "Thus, everyone should be able to count more or less directly on higher education for access to the common heritage of knowledge and the most recent findings. The university must accept a kind of moral contract with society in exchange for the resources assigned to it by society (...)"
> "In addition to preparing large numbers of young people either for research or for specialized occupations, the university must continue to be the fountainhead at which the growing numbers of people who find in their own sense of curiosity a way of giving meaning to their lives may slake their thirst for knowledge. Culture should here be considered in its widest sense, ranging from the most mathematical of science to poetry, by way of all the fields of the mind and the imagination."
>
> (LORD 2000: 3).

The Commission suggests that universities continue to form specialized professionals and be cultural centers for all society. Universities must participate in and provoke discussions about important social issues, promoting knowledge about these issues among the general public. The same applies to university museums.

University art museums

> To most people, the university art museum seems sheltered indeed, a tranquil garden in the groves of academe...
>
> Brett Waller, 1980

There are many types of university museums – science, history, art etc. – and among all possibilities I have chosen to discuss art museums in this paper since I consider that there is no agreement about their functions and necessity. While science and history museums have a definite link with graduate and undergraduate courses taught at the university, university art museums seem to escape this function. University art museums could attract art students and professors, other university students and professors and also non-university audiences, if their collections, programs and location, are accessible and interesting.

There are different functions generally attributed to university art museums, ranging from 'decorative' places at the campus to higher education centers.

In the USA, many university art museums were created to exhibit original works of art to art students, and therefore collections are usually integrated in a History of Art Department. Their audiences are mainly university undergraduates and graduates. In 1942, Coleman emphasized that art collections were indispensable to higher education:

> "Creditable museums are needed on every campus, in the fields of art and of biological and geological science, which are unneglectable in higher education, museum material is the only ground on which a large part of teaching and research can rest; and collections, together with fitting arrangements for their care and use, are essential. Other fields, especially history, make some use of museums; but art and natural science must have museums or there are bound to be gaps in the educational programs" (COLEMAN 1942: 3)[1].

According to Coleman, the major audience of university museums should be university students[2], and they are the 'old audience' expected in these museums. However, after some years, university museums in the USA seemed to have lost their university audience. In 1956, S. Borhegyi wrote about an "alarming problem faced by university museums":

> "The majority of the visitors are no longer students or campus personnel but are people from neighboring communities, high school and elementary students and out-of state visitors" (BORHEGYI 1956: 309).

Borhegyi suggested some strategies to attract the university community back to museums, then successfully applied in the Oklahoma University Museum (cf. article by Michael Mares in this issue).

Similarly, Brett Waller defended that university art museums must serve art historians (students and faculty), artists (students and faculty), students preparing for museum careers and students and scholars from the university (in this case, the University of Michigan). These people, whom he designated 'active users', constituted the minority of the museum's total audience, while non-specialist visitors represented the majority. Nevertheless, this minority audience should be uppermost in museum's personnel's minds when exhibition arrangements, selection of works of art and activities are planned (WALLER 1980).

In Great Britain, as in the USA, art collections were used to teach Art History, but not exclusively, as shown in these excerpts of texts from 1968 and 1992:

> "But the academic study of fine art can never be the raison d'être of these collections or the measure of their value to the universities" (STANDING COMMITTEE ON MUSEUMS AND GALLERIES 1968: 10).

> "Art collections such as those at Liverpool, Nottingham and Hull may be used for teaching purposes, but principally supply a cultural and aesthetic quality to university life" (WARHURST 1992: 97).

Most authors value university art collections and indicate that they should have a wider role in the university campus life. Although the university community is the expected audience to these museums, they may also be open to other people. School children and teachers, elderly people, minorities, and handicapped people are some examples of other audiences possibly interested in university art museums.

Brazilian university art museums

In Brazil, university art museums were created due to private donations and without any particular link to the art courses. Indeed, in some cases this

[1] More than 30 years after, the same idea continues to give support to university art collections: "Unless we bring in the work of art as an original, we are bound to get into trouble and to stimulate generalizations, abstractions, and theoretical views that are unsound (...) Therefore the involvement of the students in the works of art is essential (...)" (Egbert Haverkamp-Begemann, quoted in ORTNER [1978: 519]).

[2] Coleman wrote: "Community service is not the business of a college or university museum, but circumstances often dictate some overstepping of this logic. (...) public service at expense of effective work with students would be wrong." (COLEMAN, 1939: 174-5).

link was never developed until many years later. From the 92 art museums existing in Brazil[3], 17 are integrated in universities. These are located in four out of the five Brazilian geopolitical areas (known as 'regions') mainly in the Northeast and Southeast. The latter, in which the cities of São Paulo and Rio de Janeiro are located, is the most populated and industrialized region. During my survey, I identified and described 110 university museums. In table 1 some features of 17 university art museums are listed.

The collections

The majority of Brazilian university art collections were based on private donations. A regional trend in forming collections of local artists and local popular

Museum	State / Region	Field	Number of objects	Opening year	Location	Undergraduate courses	Number of visitors
Museum of Sacred Art of Bahia (UFBA)	Bahia / NE	Sacred Art	2,000	1959	Downtown	Fine arts Museology*	.....
Regional Museum of Art (UEFS)	Bahia / NE	Modern Art	100	1985	Campus	History	1999: 1,693 2000: 2,808
Museum of Art of UFC – MAUC (UFC)	Ceará / NE	Contemporary Art	4,000	1961	Campus	Fashion	2000: 6,000
Assis Chateaubriand Art Museum – MAAC (UEPB)	Paraíba / NE	Art	462	1967	City Park	History	1995: 14,130
Museum of Popular Art (UFPB)	Paraíba / NE	Local Art	1,500	1978	Campus	Plastic Arts	.....
Pinacotheca (UFPB)	Paraíba / NE	Local Art	178	1987	Campus	Plastic Arts	Mean: 726
Museum of Seridó (UFRN)	R.Grande Norte / NE	Sacred Art / History	1,000	1968	Downtown	History	1999: 1,583 2000: 444
Museum of Art and Popular Culture (UFMT)	Mato Grosso / CO	Contemporary Art	260	1974	Campus	Art Education	2000: 9,000
Leopoldo Gotuzzo Art Museum (UFPel)	R.Grande Sul / S	Local Art	600	1996	Downtown	Fine Arts	.....
Museum of Brazilian Engraving (URCAMP)	R.Grande Sul / S	Brazilian Engraving	800	1977	Downtown	Plastic Arts	1998: 4,800
Gallery of Art University Space (UFES)	Espírito Santo / SE	Contemporary Art	617	1978	Campus	Fine Arts Plastic Arts	Mean: 6,000
Brasiliana Gallery (UFMG)	Minas Gerais / SE	Art	100	1966 and 2000	Downtown	Conservation Fine Arts *	New
D. João VI Museum (UFRJ)	Rio de Janeiro / SE	Art Teaching History	10,000 and 9,000 docum.	1979	Campus	Fine Arts *	Mean: 1,000
Museum of Contemporary Art – MAC (USP)	São Paulo / SE	Contemporary Art	8,000	1963	Campus and City Park	Plastic Arts *	1999: 162,850 2000: 64,904
Collection of Visual Arts – IEB (USP)	São Paulo / SE	Brazilian Art	2,500	1968	Campus	Plastic Arts * History	1997: 1,055 1998: 449
Museum of Brazilian Art – MAB (FAAP)	São Paulo / SE	Brazilian Art	2,300	1961	Campus	Plastic Arts	1999: 82,500 2000: 35,353
UNICAMP Gallery of Art (UNICAMP)	São Paulo / SE	Contemporary Art	210	1984	Campus	Fine Arts *	1998: 5,200

Table 1 – Brazilian University Art Museums ordered by regions.
Notes: Big differences between the number of visitors from one year to the other was probably caused by the museum closing due to strikes or to the renovation of museum's buildings and exhibitions.
(*) These universities have also post-graduation courses in Arts or Visual Arts.
Legend: U= University; F=Federal; E=State; USP=University of São Paulo; UNICAMP=University of Campinas.

[3] There are about 826 museums in Brazil. Data collected by the Commission of Cultural Heritage of the University of São Paulo (CPC/USP).

art objects was observed, something that seems more feasible considering the typical lack of funds.

The collections favor Brazilian artists, with the exception of: a) museums with works dating back to the colonial period of the 16th and 17th centuries, e.g. the D. João VI Museum and the Museum of Sacred Art; b) museums created by Assis Chateaubriand's regional museums project, e.g. the Assis Chateaubriand Art Museum of UEPB, the Brasiliana Gallery, and the Regional Museum of Art; and c) the Museum of Contemporary Art of USP, which received a national and international collection of modern and contemporary art.

Recently created museums, especially Art Galleries, have collections formed by works donated by local artists and frequently present temporary exhibitions. The exception is the Brasiliana Gallery, the original collection of which is eclectic and includes works created by foreign artists. Its contemporary art, however, consists of works from Minas Gerais' artists donated by the local community. The Museum of Sacred Art, the Museum of Contemporary Art and the Collection of Visual Arts own the only collections considered of both national and international importance. The Assis Chateaubriand Art Museum collection is unique in the region where it is located, i.e. the countryside of Northeast Brazil.

The audiences

As far as audiences are concerned, a comparative study was done between the number of visitors of university and non-university museums from the city of São Paulo (cf. table 2). There are three university art museums in São Paulo: the Museum of Brazilian Art (MAB/FAAP), the Museum of Contemporary Art (MAC/USP) and the Collection of Visual Arts (IEB/USP). Only the latter receives fewer visitors than the other city art museums– the Pinacotheca of São Paulo State, the Museum of Modern Art of São Paulo (MAM/SP) and the Lasar Segall Museum (MLS).

The Armando Álvares Penteado Foundation (FAAP) is a private institution that provides higher education courses in humanities and engineering. Besides the Museum of Brazilian Art, they also have a theatre opened for the general public. The differences among

Year	MAB/FAAP	MAC/USP	IEB/USP	Pinacotheca	MAM/SP	MLS
1997	13,055	103,939	1,055	51,599	97,240	9,144
1998	27,379	111,000	449	135,535	142,491	9,610
1999	82,549	125,859	--	162,850	172,109	12,076
2000	35,358	64,904	--	94,414	301,958	8,085

Table 2 –Visitor numbers of art museums of São Paulo city (1997-2000).
Notes:

The Museum of Contemporary Art (MAC/USP) is scattered through three different buildings. The MAC was founded in 1963 but only in 1992 a specific building was built in the campus. This building suffered adaptation works in 2000. Its collection has been maintained in borrowed places and part of it continues in the third floor of the Bienal building in Ibirapuera Park. Every time there is a big show in Bienal building, MAC-Ibirapuera has to close the doors for long periods, as it has happened during the last 4 years. From 1999 to 2001, MAC has a contract with FIESP Cultural Center to present its collection at their site, at Avenida Paulista, located downtown.

The Brazilian Studies Institute (IEB) exhibition rooms were closed for works in 1999 and 2000.

In the case of Lasar Segall Museum (MLS), the visitor numbers represent only permanent exhibition visitors and do not include other activities and programs in the museum.

the number of visitors in the four-year period considered can be explained by the powerful attraction of temporary exhibitions not based on their own collections. Exhibitions built around their own collections were always the less visited ones. We may also conclude that the MAB audience consists mainly of external visitors[4], in spite of the fact that the University offers a Fine Arts course. Officially a formal program involving the students and the museum does not exist and art professors do not often take the initiative of visiting the collection with their students.

If the numbers of visitors were to be estimated according to the excellence of collections, we would expect that MAC and IEB (USP) should have more visitors. However, IEB has fewer visitors because it is a research institute rather than a museum and the staff is more concerned with collection-based research than exhibiting the collection. The Visual Arts Collection is important for the study of the Brazilian Modernism Movement and part of it is in the permanent exhibit. However, the most visited section of IEB continues to be its library, which is uniquely equiped for the study of several fields of Brazilian culture. Opening hours also do not help much, as it is only opened during afternoons from Tuesday to Friday.

MAC has the best national and international modern and contemporary art collection in Brazil. The University of São Paulo has an Art course since 1970 and graduate Art courses since 1973 but there isn't any formal link between the museum and the Art Department of the School of Communication and Arts. University students are a minority of MAC's audience which is formed by a majority of elementary and secondary school groups. In the last two years the number of school groups visits has increased due to the policy of guided tours at FIESP Cultural Center exhibitions (cf. table 3).

Year	General public	Groups	Total
1997	100,307	3,632 (3.4%)	103,939
1998	107,083	3,917 (3.5%)	111,000
1999	103,970	21,889 (17.4%)	125,859
2000	51,607	13,297 (20.5%)	64,904

Table 3 – Audience to MAC (1997-2000).

When accepting what is known today as the MAC collection, the University of São Paulo did not take into account neither specialized staff to take care of it nor any specific building to host it. Nevertheless, USP apparently felt that they could handle the collection. In USP, like in other Brazilian universities, collections have been accepted without much consideration for the consequences as far as conservation and care are concerned. Clearly, universities do not value the collections as they should and usually invest little money in conservation. If USP and other Brazilian universities would give more importance and financial and human resources to their museums, they would create a privileged *locus* to communicate with society, which demands a quick answer to its needs of educational and cultural programs. USP and other Brazilian universities should give more attention and spend more money to improve their museums, which could be a privileged locus to make links with society.

[4] For example, an Ancient Egypt Collection from the Louvre was presented in 2001, attracting thousands of visitors daily.

Public programs

All 17 Brazilian university art museums offer activities to the general public. Some museums, however, are so inaccessible – hard to find in the campus, with limited opening hours and limited transportation facilities – that they in practice can be considered to be closed. This is the case of the Visual Arts Collection of IEB/USP and the D. João VI Museum of UFRJ[5], resulting in a small number of visitors. These are usually regular visitors with specific interests, already familiar with both the collections and the museums' locations.

Exhibitions

Exhibitions constitute the main public service offered by these museums. Exhibitions may display the museums' own collections or objects on loan, the latter usually through temporary exhibitions. As seen above, some of the Brazilian university art museums have a small number of objects in their collections, usually displayed in temporary exhibitions. The Brazilian Art Museum (MAB/FAAP) is known for producing exhibitions devoted to famous and/or controversial artists, attracting a large number of visitors. Other museums prefer to promote local art, presenting local artists, such as the UNICAMP Gallery and the Museum of Art and Popular Culture. In both cases the institutions target non-university audiences, similar to any other art museum.

Courses

University art museums and galleries offer courses to the general public. The content of these courses is specialized and of technical nature, including engraving, painting or embroidery arts. Frequently, the courses are given by external artists and specialists, instead of museum staff. Courses for elementary and secondary teachers are also offered, mainly given by museum staff. The exception is the Museum of Contemporary Art that has a group of teachers and professors in its staff, offering undergraduate and graduate courses.

I found that education promoted by Brazilian university art museums is mainly for the broad community and not for higher education students. In other countries there are many university art museums that promote higher education courses, like in Manchester, UK:

> "At Manchester University the Whitworth Art Gallery is used annually for students of the post-graduate Art Gallery and Museum Studies diploma course for learning the process of mounting a major art exhibition in co-operation with staff of the gallery and a professional designer. There are many instances where university museum staff who are fully engaged in a curatorial role lecture to students as part of the curriculum of academic courses" (WARHURST 1992: 98).

Museum courses could be one way to attract new audiences to the exhibitions and other public programs if they were systematically offered within the specific profile of the museum collection and research. In Brazil, university students are the 'new' audience and non-university community the 'old' audience for almost all university museums.

Other public programs

Music concerts, conferences, and even libraries that are opened to the general public may bring visitors to

[5] The D. João VI Museum is on the second floor of the Chancery Building of UFRJ and nowadays we need an authorization to visit it. The Visual Arts Collection of IEB is open from Tuesday to Friday from 2 to 5 PM.

the museum. University museums normally organise conferences and seminars for specialised audiences. All these events may bring more people to the museum. The challenge is to convert them into frequent visitors. This strategy works well if there is continuous offer of good and apprehensible exhibitions and activities.

The production of interesting exhibitions targeting both the academic audience and the general public has always been described as a challenge by museum professionals. According to Alma Wittlin:

> "A compromise between a students' gallery and an exhibition for the general public is bound to end in failure. The student approaches the exhibits with a body of information and with a definite aim in mind; what the exhibition presents to him is but a supplement to an already more or less defined pattern of meaning. To the general public, however, the pattern, both of contents and form, is to be supplied by the exhibition, a complete experience which presupposes on the part of the spectator nothing but common sense. Any attempt at combining the two contradictory kinds of display, must leave part of either of the implied functions unfulfilled."[6]

Museums succeeded to surpass this difficulty by developing different kind of programs, and having a special design project to respond to the needs of different audiences. The great challenge is to attract new audiences and convert them into frequent visitors without losing old audiences. For example, the policy of presenting huge temporary exhibitions, as implemented by the Brazilian Art Museum of FAAP, results in a temporary increase of audience without the development of frequent visitors. Depending on the exhibit theme and importance of the displayed objects, people will come to the museum, but they will not necessarily come back again.

Among university art museums, few have good permanent exhibits that may attract frequent visitors. In the Northeast, the Assis Chateaubriand Art Museum is an exception because even with a small collection, the museum is unique in the Northeast Region. In São Paulo, the Museum of Contemporary Art, after almost 40 years of existence, has just remodelled the permanent exhibition, displaying part of its modern and contemporary art collections, and offering the possibility for the visitors to repeat the visit.

There are many ways to attract new audiences to a museum: good permanent exhibitions, temporary exhibits, music concerts, conferences, guided visits. It is likely to be the continuous and systematic work, however, which will guarantee the return of public.

Systematic activities for new audiences

During my research I found some examples of this systematic work aimed at increasing audiences.

The Museum of Art of the Federal University of Ceará (MAUC/UFC) is promoting an art workshop both for university students and employees. The workshop intends to produce, after periodical meetings, a collective work of art. Simultaneously, several workshop participants are working as trainees or volunteers in the museum, providing schools guided visits and taking care of the Museum's Internet site.

The Museum of Contemporary Art (MAC/USP) maintains a permanent programme that includes an exhibition and workshop especially designed for handicapped people and another for 4 to 10 year old children and their teachers. The museum also offers a year-long programme for senior citizens. As part of the

[6] A. Wittlin, quoted in SEYD (1971: 180).

intellectual accessibility programme, the museum provides several courses on modern and contemporary art history, on art appreciation and interpretation, semester courses on drawing and workshops for the community and the general public, and aspecial elementary teacher's training programme. MAC/USP also attempts to attract new audiences among students, professors and employees who spend the whole day in the campus. The Museum's Education and Cultural Action Division has therefore prepared, in 1999, 2000 and 2001, several activities for freshmen who were invited to interpret, look up information at the museum's Internet site, draw and discuss previously chosen works of art. MAC also intends to invite each school for a visit and provide specially designed activities for teachers, staff and students. The museum is also preparing 30 minutes gallery talks given by staff on Fridays at lunch hour, in an effort to attract visitors of the museum's restaurant (Almeida & Martins 2000).

The Leopoldo Gotuzzo Art Museum (MALG/UFPel) began providing courses to the university community[7] and offering its facilities to host the art courses of the Art Department. The Museum also develops undergraduate training programmes in order to foster a better relationship with the Humanities departments and therefore attract new audiences from these fields. However, Brazilian university art museums still lack a clear policy for attracting audiences – stating the target audience before developing programmes to attract them. First of all, museums should know who are their old and new audiences. Nowadays society is pressing universities to respond to community needs. Museums are institutions that could be the link between university and society, offering motivating and apprehensible educational and cultural public programmes.

The constitution of UMAC will surely bring new ideas and exchange of important experiences that will help Brazilian university museums find new ways to satisfy the demands of society.

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[7] For example: Art History, Image Interpretation, History-art-architecture of Pelotas city, among others.

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The university museum as a social enterprise

PETER B. TIRRELL*

Resumo

Coleccionar e guardar objectos são actividades humanas básicas e importantes para a manutenção da nossa qualidade de vida. Consequentemente, os museus devem ser considerados empresas com fins lucrativos em que o lucro é de natureza social. Este lucro social, objectivo último dos museus, deve ser perseguido de forma consitente. São três as chaves para a obtenção de lucros sociais: 1) a utilização de objectos reais e de novas tecnologias; 2) a criação de uma visão poderosa; e 3) melhoria do capital social. Os museus universitários são, pela sua natureza, ideais para a melhoria do capital social através do aprofundamento das suas diferentes dimensões, do desenvolvimento de bons projectos académicos e públicos, da melhoria da sua imagem pública e do estabelecimento de laços com a comunidade próxima. Com as suas colecções, investigação, ensino e programas públicos, os museus universitários encontram-se numa posição única para se tornarem as melhores empresas sociais das nossas comunidades.

Abstract

Collecting and keeping objects is a basic human characteristic that is important for improving the quality of our lives. As a result, museums are 'social enterprises' that have as an ultimate operational objective – a bottom line – a positive social outcome. Museums must demonstrate that these outcomes are being achieved on a consistent basis. There are three important keys for museums to achieve positive social outcomes: 1) using real objects and new technology, 2) creating a powerful vision, and 3) improving social capital. University museums are ideally suited to improve their social capital by increasing their dimensions, developing strong academic and public programs, improving their images, and connecting with their communities. With their collections, research, teaching, exhibits and public programs, university museums are uniquely positioned and qualified to be among the best of all social enterprises in our communities.

Introduction

Museums are one of the oldest and most public institutions of our society. The reason for this is that for many thousands of years, people have had a habit of making collections. Not only do we create and use material objects on a scale never seen before, we also study them intensively and collect them passionately (THOMPSON 1998). This appears to be a basic human need for improving the quality of our

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lives. People are acquiring, keeping, and handing on objects to subsequent generations because it also gives them a pleasurable and worthwhile experience. Our museums are the ultimate totems of this trait. We might as well have called ourselves Keeper man (or woman)-*Homo collector* – instead of Wise man – *H. sapiens* (TIRRELL 1994). Hundreds of millions of objects such as geological and biological specimens, anthropological and historical artifacts, artworks, and archives have been collected and are housed or displayed in museums. In America's museums, for example, you can find everything from the guns with which Abraham Lincoln and John Kennedy were shot to last year's computers, from Mongolian dinosaurs to butterflies from Fiji. We have museums dedicated to things such as pretzels, mushrooms, barbed wire and medical leeches. Everything is being saved and collected (THOMPSON 1998).

University museums and collections also are among the oldest and most significant in the world. They can be traced back to the 17th century or even earlier (BOYLAN 1999). They have documented the diversity and history of life on earth and provided the basis for ongoing research and teaching activities to the world's scientific and cultural communities. University museums, such as the Sam Noble Oklahoma Museum of Natural History (SNOMNH), The University of Oklahoma, are actively collecting thousands of artifacts and specimens each year. The university museum collections are a shared legacy of inestimable value and the foundation for interpreting our world and they are more than repositories of inspiration and memory-they are a constantly working and growing database.

Museums, including university museums, also may provide people with a wide variety of additional benefits or 'social capital' that flows from the museum mission and mindset. Typically, you find the phrase "something for everybody" in materials or media that advertise museums. For example, visiting museums and their exhibits is a highly popular way to spend time with relatives and friends, a form of family bonding and networking. According to the American Association of Museums, more people attend museums every year than attend all professional sporting events in the United States (US). Moreover, visitors from all backgrounds, races, education and economic status can have a meaningful experience in a museum. In addition, some museum buildings are among our most beautiful and permanent structures. They can provide a sense of connection, safety, and stability.

Shared Challenges and Concerns

University museums share common threats and challenges regarding the importance of their collections and their ability to provide social capital. MCLEOD (2000) poses a series of highly sobering questions about university museums and their future. One of the most provocative is, "Are we seeing the last gasps of an obsolete institution which is no longer delivering the goods...?" The "goods" in his view, are the contributions that museums should make to improve the basic quality of life (TIRRELL 2001a). This is the essential role of museums.

University museums may be losing out in an arena of fierce competition with a conglomerate of other providers of quality life, or 'social enterprises' such as theme parks and sports clubs. A good example may be the Museu del Futbol Club Barcelona President Nunez, one of the most famous and successful sports clubs in the world. On a daily basis, there may be

thousands of visitors to the Club's stadium, sports museum, sales shop, restaurant, and daily fanfare of activities. All the social enterprises are facing a new set of public expectations (Weil 2000). There are two overarching concerns by which museums (and the others) are being judged. First, that the museums are competent to achieve their intended outcomes and positively affect the quality of individual and communal lives and, second, that the museums employ their competence so that the outcomes are achieved on a consistent basis. Outcomes are benefits or changes for individuals or populations during or after participating in museum activities. Outcomes may relate to knowledge, attitudes, values, skills, behavior, condition, or other attributes (Weil 2000). These are qualitative goals that the museum can realistically expect to achieve. Social enterprises such as museums need to be efficient, and effective in achieving their desired outcomes. However, the museums can only be judged in relationship to what it is trying to accomplish. The amount of attendance and income only tell part of the story. At the SNOMNH, for example, since opening a new facility on May 1, 2000, over 465,303 people have visited the museum. The museum's curators also have generated $2,070,369 of research grants in the past three years. The attendance figures and grant dollars provide the museum and the university with a measure of quantitative production. However, they provide little in the way of knowing how effective the museum has been in adding to the quality of people's lives.

Technological advances associated with virtual reality also may be a major threat to museums. In the future, will virtual reality provide a sensory experience with objects that will be superior to anything the museum can provide (McLeod 2000)? Museums can only give a limited experience with the object (e.g., it is almost always removed form its original context and function). As a result, there is a possibility that children may spend even more time indoors, clicking away on their plastic mice, viewing virtual images of the plants, animals, people, treasures and solar systems (Wilcove & Eisner 2000).

A universal complaint is that university museums are under-funded and under-staffed. Museum science has contributed greatly to the tasks of preservation, conservation and restoration of all material objects. However, it has not succeeded in driving down the price of these functions, and the opposite is probably true (Thompson 1998). Faced with uncertainties of funding and the need to rely more and more on increasing support from outside the academic community, university museums are at risk of compromising their traditional mission of investigations, inquiry and challenge. Today's museums now find themselves forced to reconcile the competing functions of marketing and mission (Schwarzer 1999). However, the need for the museums to reassert their intellectual vigor and remain in the forefront of interdisciplinary dialogue has never been greater (Willumson 2000).

University museums of natural history appear to have some of the greatest challenges due to failing facilities and changes in research, teaching and public interest (Tirrell 2000a, 2001a). Nearly all university museums need quality space to house and protect their collections and to meet their need for research, teaching and public services. The major issue facing virtually all established natural history museums is the repair and renewal of their physical plants (Goldstein 1997). For example, as funding shifted from taxon-based subjects, such as systematics, to functional themes, such as behavior or ecology, the museums were disenfranchised and delegated to the

fringe of the university's academic interests. The de-institutionalization of university natural history museums looms as one of the biggest scientific mistakes of our time. In addition to collections, teaching, research, exhibits and interpretation, what's at stake is the continued vibrancy of biodiversity, ecology, of animal behavior and botany, of much of molecular biology, and even medicine and biotechnology (WILCOVE & EISNER 2000). The public's interests and support moved away from static displays such as habitat dioramas to more interactive and hands-on interpretation such as discovery rooms (TIRRELL 2000b).

University Museums also face a fundamental challenge of leadership and management. Most museum directors, trained as scientists, are unprepared to deal with the corporate challenges of redefining and reinventing the whole museum (TIRRELL 2000a). The directors and their staffs struggle to manage the problems, benefit from the successes, create strategies for solutions, and articulate a plan that shows the value of their museums to their superiors and supporters (BOYD 1995, GENOWAYS 1999, TIRRELL 2001b). Bureaucrats at the university also posed threats to their museums (MARES 1999).

When university museums have been under siege and stress for a long time, they may lack vision. In my experience, the museums often become fragmented activity traps with areas of excellence, but with no singular direction or purpose. Different groups of staff such as curators carve out niches of opportunity and perform well within comfort zones of limited dimensions. These comfort zones and the groups that operate in them develop a highly limited view of their museum world, and they resist accepting that change is urgently and immediately required. One of the greatest challenges facing the museum is a need to create a new multidimensional vision for the museum's future.

Seeking Solutions

I think that museums should make a quality contribution to society. Why should we take the trouble and spend the funds to preserve and showcase something that has is of little value to our lives? If our museums are not being operated with the ultimate goal of improving the quality of peoples' lives, on what other basis might we possibly ask for public support (WEIL 2000)? The essence of the arguments in favor of public funding for museums rests on the assumption that their collections exist for the public benefit. With funding, public access becomes an inalienable right (STOTT 2000).

When businesses fail, they usually cease to exist. Nonprofits such as museums, on the other hand, can become moribund institutions living for decades on endowment proceeds, government support, or in the case of university museums, anemic rations and airy promises, while producing little of real value. The lesson is not about sustainability or survival, but what it takes to succeed again and again, over an extended period of time (DUREL 1999). Ultimately, however, there are no safety nets for worn-out and out-dated institutions. Major university museums in the US and other countries are in danger of closing and their collections being moth-balled.

What will it take to succeed as a social enterprise? How can museums develop techniques and creative strategies to be efficient and effective in meeting new economic and social challenges? What are the keys to improving their social capital? In order to be successful, I suggest that university museums must

do three things: 1) they must reestablish the powerful qualities of objects in their collections and construct a vision with greater dimension; 2) they also need to deal with interactive technology in a positive way; 3) in addition, they must increase their social capital or net worth to society. The museums also may need to sharpen their distinctions to achieve their greatest efficiency, effectiveness, and value.

Reaffirming Objects as the Central Focus

In recent decades, museums have tried to become more responsive to the public by shifting from the presentation of real things to the production of experiences, switching from object centered to people centered exhibits. Design and spectacle have become central elements of display (Hein 2000). Boundaries between museums and the "real" world are becoming eroded. However, the world's social, economic and educational climates are ripe for distance education. Do university museums, as global social enterprises, really need to debate the value of 'high touch' *vs.* 'high tech' interpretation? A more pertinent question is how will the university museums respond to the explosion of distance, digital learning, and how will that fundamentally affect the way the museum positions itself in the educational marketplace? I view the future technology as an opportunity, not a threat. Interactive technology (IT) is a wondrous tool that museums can use to improve the quality of interpretation and research. Museums need to apply technology wisely (Tirrell 2001a). In planning the exhibits for the new SNOMNH, we decided to eliminate a general orientation theatre in favor of putting more objects such as dinosaur specimens on exhibit, a switch of $2.5 million. However, we kept a smaller theatre that focused on one specific exhibit of archeology and Native American pre-history that required special effects of IT to be successful. We also made a conscious decision to display articulated fossil skeletons and not to display fleshed out roaring, moving, dinosaur robots. We believed that to do so would deflect the museum's educational, ethical and aesthetic role.

What museums do best is deal with objects. Audiovisuals, for example, are better done by the museums' competitors such as movies in theatres. Movies and theaters are great, but they are not museums. Using wide-screen cinema, robotic dinosaurs, and virtual reality you can establish a very convincing transition from representation to reality (Asma 2001). Can university museums compete with movies such as *Jurassic Park*? The answer is yes, and they can do it better than any other museums. Their mission makes them uniquely qualified. There are good reasons for this. As I indicated, the trait that distinguishes us a species is our habit of acquiring, keeping, and handing objects on to subsequent generations. This habit appears to stem from a curiosity about our environment that leads us on an ongoing evolutionary path of investigation, documentation, organization, and interpretation – research and teaching – of our natural world (Tirrell 1994). Curiosity may be at the root of our collecting habit and perhaps we should be called *Homo curious* instead of *H. sapiens* or *H. collector*. Curiosity is the basis for much scientific wonder and inquiry. When real objects from museum collections are placed in the hands of university students, complex concepts such as biodiversity and extinction can become clear. Fossils, feathers, shells and insects can fire the imagination as they are touched, sorted, and discussed. Working with collections also helps us develop critical thinking

skills and problem-solving abilities as we move from concrete to abstract. For example, Stephen Asma expressed this in his book *Stuffed Animals and Pickled Heads*. "To have a concept [...] is to have its negations already in tow[...] There is a class of things called 'dog' and there is a class of things [...] that are 'not-dog' [...] Language and thought cannot really function without this most basic tool for carving up reality" (ASMA 2001: 84). Universities and their museums are uniquely prepared to advance the role of curiosity in our society. By their mission, they are vital centers of scientific learning and are collaboratively involved in research, collecting, teaching, dissemination of information, and public service. They are places where science is done and innovation is taking place.

I think objects will be the source of inspiration and creative thought as long as we collect them (TIRRELL 2001a). "Is it real?" is the question I hear most often from children in the museum. No child wants to be disappointed by a fake, no matter how good the virtual tour. Science has been particularly useful in making the inventories of museum more accessible through electronic means, and we are just on the edge of broad access to images and information of museum objects. However, nothing electronic will substitute for the real thing. An electronic image of a bee wing can be transmitted across the world and provide an identification. But no reproduction of the Louvre's Winged Victory of Samathrace can substitute for the real object (THOMPSON 1998). In addition, let's leave something to imagination! Dinosaurs, for example, are more popular that ever thanks to new discoveries, new theories and new technologies. A museum display may only show a few bones and teeth of Dinosaurs. Are dinosaurs less or more intriguing because we *don't* show the whole animal? A university museum such as the SNOMNH offers many exciting opportunities for answers. For example, you may enter the Museum's Global Millenium Dinosaur Art Contest and Exhibit or you may become a student at OU and work side-by-side with internationally recognized paleontologists (TIRRELL 2001a). If art is the only way to run away without leaving home, then science is the only way to explore the universe without traveling in space.

Adding Dimensions to the Vision

Visionary museums will need a compulsive drive for progress and a mix of self-confidence and self-criticism or assessment. They will need to make bold moves combined with an inner drive to change before the outside world demands it. Successes may come through experimentation, opportunism, and accident. This resembles how natural species evolve and adapt to their environments. Through a process of variation and selection, organizations, much like species, can be well positioned to prosper in an ever-changing environment (DUREL 1999). In order to jump start this motive for change a clear sense of why it is urgent to change still needs to be generated as a first step in refining the process. Most university museums of natural history face a series of sobering questions. Each museum should ask itself questions such as what will happen if the drop-in visitor and other service levels continue to decline? What will happen if the university no longer sees the museum as an asset to the university? What unusual or unique opportunities are there for the museum to create partnerships? It is out of a sense of urgency, even horizon threat, that staff, administration, the university and public community may be shocked into exploring new options and creating a more promising vision.

The Genius of AND

University museums need to be highly progressive in their academic and their public mission. They need to adopt The Genius of AND and avoid the Tyranny of the OR (Collins & Porras 1997). This is the tendency to see choice as either A or B, for example, seizing new opportunities or staying true to mission. In the case of university museums of natural history in the US, they may see the choices as becoming either a museum with collection and a research and teaching function or a public education museum with a vastly reduced collections and research and teaching function. In fact, museums in the US have made or may soon be making this choice. However, by embracing the Genius of AND, visionary museums have found ways to have both A and B by creating a third choice where the preservation of the core mission and the drive for progress enable, complement and reinforce each other (Durel 1999). Use of basic research is an integral and necessary part of the university museum's exhibit program because accurate interpretation requires scholarly research. The academic research drives the exhibits and public programs. This is one of the most distinguishing and peerless features of university museums. For example, the SNOMNH has developed a two-pronged, long range, strategic plan to carry out its dual role as both a university and a state museum (Tirrell 2001b). The plan is to achieve equally high level of academic excellence and public service to keep the museum in an advantageous position with the University of Oklahoma and the State of Oklahoma. Both support the high priority for the stewardship of collections. The plan has worked and has been a key to the success of the SNOMNH in obtaining a new state-of-the-art facility at a cost of $45 million dollars. The SNOMNH has 14 Ph.D. faculty curators that are among the most productive researchers and teachers on the University's campus. The museum also has professional staff that have created and developed permanent, temporary and traveling exhibits, classes and workshops, outreach material and kits, and special events. The curators and staff worked together to design and produce nearly 45,000 square feet of exhibits for the new museum building.

Fig. 1 – A young visitor compares his teeth to those of *Saurophaganax maximus* on display at the SNOMNH (Photo by Ann Sherman, courtesy of SNOMNH).

Shape and Create Values with a Synthesis of Ideas

In addition to serving as vital centers of scientific research in areas such as biodiversity and ecology,

university natural history museums may need to be understood as institutions that can explore themes in social, cultural, and political arenas. As suggested by MACDONALD (1998), the museums can tell important stories about nationhood, progress, modernity, and even race. In planning for the future, universities and their museums may need to pose questions such as: What is the point of convergence of the museum's subject matter and social needs and agendas regarding stewardship of the environment? and What is the responsibility of the graduates of the museum's university to be the first generation of global citizens and the urgency that causes in the environmental education fields? Museums also can provide synthesis and order to the world. Every object in a collection has its story. Once a collection is made, almost by definition, the whole becomes more than the sum of its parts, and the value of each part has appreciated (THOMPSON 1998). The poet T. S. Elliot described Hell as a place "where nothing connects with nothing" (in reference to Dante's *Inferno*). The condition of disorientation, anxiety, and isolation, has long been noted as a distinctive liability of modern intellectual life. Nonetheless this threat seems to have reached its epitome in the explosion and fragmentation of information caused by our new technology (GREGORIAN 1992). There is a need to create sound synthesis and systematization of knowledge. This will require a kind of scientific genius which hitherto has existed only as an aberration – the genius for integration (GASSET 1944). University museums, which operate over great spans of time and have the widest audience of any other type of museum or social enterprise, are ideally suited to provide a comprehensive interpretation of our world. The university museums have unique advantages such as scholars, libraries, researchers, students, and global connections to make it happen. University-based research, for example, is highly responsive to societal needs as a perusal of Nobel Prize recipients makes clear. Most research in biodiversity, for example, has been carried out in universities, often at their museums of natural history. Freestanding museums are only bit players in the large questions concerning biodiversity and its ecology, distribution, and preservation (MARES & TIRRELL 1998).

Improving the University Museum's Social Capital

University museums have the opportunity to provide the highest level of social capital. The central premise of social capital is that social networks have value. The term social capital emphasizes a wide variety of benefits that flow from the trust, reciprocity, information and cooperation associated with social networks. Social capital works through channels that include, but are not limited to, information flows, bonding and bridging networks, collective action and developing broader identities and solidarity. These are ideal channels for university museums to improve their social capital. Most university museums have a dual mission to serve their academic community and the general public. However, they often serve the public by popular demand, whether they want to or not (WILLIAMS 1969, NICHOLSON 1971). For example, the university's priorities focus on students, teaching, research, extramural grants, athletics and dissemination of information. The public's interests include exhibits, programs, outreach, and entertainment. Additional audiences such as special interest groups may want an attraction that boosts the local economy (TIRRELL 1991). Museums can become a pathway of communication and learning. The Museum can also be a bridge builder for the cultural, medical and physical sciences. In addition, the museum can have specific roles as a nexus and showpiece for the

Fig. 2 - Billie Ruth Hoff, a member of the Caddo Tribe, is one of many Native Americans who helped plan exhibits for the SNOMNH (Photo by Bob Taylor, courtesy University of Oklahoma).

University. In a global arena, university museums can take advantage of networks such as the International Committee for University Museums and Collections (UMAC). UMAC can help its members exchange and reformat their success stories for the benefit of all.

Improving the Image

Museums do share many characteristics with monuments to the dead. They are often places housing ancient remains where visitors fall silent, and curators may be compared to priests, controlling access to arcane knowledge (CURTIS 2000). In my experience, for example, some university museums of natural history are no longer interesting or inviting. Typical comments by visitors such as "It's very dark, old, and tired." and "It's good when you're really bored" describe them as unexciting and depressing places (HERMAN 1997: 4). Their habitat dioramas, for example, were innovative, instructive and highly popular exhibits in their heyday. However, viewing dead animals behind glass is a lot less appealing and acceptable now than it was a century ago when the displays had a magnetic and exotic quality. Many museums have yet to decide the role, if any, of their dioramas in the future. In an attempt to deal with this question, some museums have tried to upgrade the diorama experience by adding enhancements such as new graphics, labels and audiovisuals (e.g.

animal sounds) and replacing the glass fronts with rail barriers. They have tried to bring dead animals back to life. At the SMOMNH, we have created new state-of-the-art exhibits that are attractive, interpretive and interactive. At the SNOMNH, new 'immersion' or walk-through dioramas were designed with hands-on specimens. Even when museums have developed new visions and mission, they must work hard at improving their visual image. Many features of a college campus and of a university museum may have no explicit role in the educational mission of the university. However, *nearly* (ital. mine) every college president knows that a beautiful campus is as important as a first rate facility (GUMPRECHT 2001) in recruiting students staff and faculty, pleasing alumni, and attracting donations.

In planning a new facility for the SNOMNH, we spent a great deal of time in creating a building that would improve the image of the museum. Our previous museum complex was an ancient group of rickety old buildings, some of which had served as horse barns and had a burn-down time of 8 minutes or less. The design of the new facility for the SNOMNH was strongly influenced by our desire to make it appealing so that the people who supported it would feel welcome to visit their museum. Many people have a personal stake in its success through their gifts or volunteerism. It was important to us that every member of our potential audience be attracted to the building and feels welcome before and after entering it. We held focus groups, we canvassed alumni, we met with politicians and civic leaders, and we had an advisory group that represented the university and another that represented the people of the state. We also invited participation from special interest groups such as the Native American nations and tribes. They formed a Native American Advisory Committee that worked with us in planning and designing our exhibits. This not only improved the accuracy and interpretation of the exhibits but also provided a high level of networking and bonding with the nations and tribes.

Connect with the Needs of the Communities

University museums are ideally situated to connect with their communities. In many ways, the campus is the center of life in the community, much as the central business district was in the pre-automobile city or the shopping mall is in present-day suburbia. University communities may have many things that are attractive and important to the quality of people's lives such as galleries and exhibits, restaurants, bookstores, recreational facilities, concert halls, sports stadiums, park-like green spaces and events. Campuses often function like self-contained cities. They are a hub of activities that serve not only students and staff, but also the larger population of a town and region. Thus, the campus serves as both an environment for learning and as a public space (GUMPRECHT 2001). University museums also provide leading scholars and experts who are role models in many fields of research, from biodiversity to art history. The museums train the scholars, leaders, and professionals of the future. However, the university museums can do a better job of learning what the community needs or wants, and fitting the museum to those needs (DANA 1999). For example, society is clamoring for an interface between the scientists and the people. What institution other than the university natural history museum is more ideally suited to meet this demand? University museums can take a primary role in meeting the need for public understanding of science, a top agenda item for many universities across the world.

Sporting events are another way to connect with communities in a highly popular way. Sporting activities draw more than a million people to the OU campus each year. In response, the SNOMNH is planning an exhibition of OU football highlighting the Sooners National Championship wins. "OU football has been a source of tremendous pride to Oklahomans," commented a well known sportscaster. "The Sam Noble Oklahoma Museum of Natural History is a perfect venue for this exhibit." OU President David Boren lent his enthusiastic support to the exhibition: "This exhibit lets us combine two winners on the OU Campus, OU Football and the Sam Noble Oklahoma Museum of Natural History, to entertain and inform the public about the rich history of football at this University, while affording them a chance to visit and appreciate our wonderful Museum of Natural and Cultural History. This will be a highlight exhibit this fall and I hope everyone will take the opportunity to see it."

Why should the SNOMNH create an exhibit about American football? The Museum will make an important connection with its community and the exhibit will attract an audience that other wise may never visit the Museum. A previous exhibit in 1986 was crowded on a daily basis and was extended for three months with the encouragement of the local and University communities. The exhibit will be popular with OU alumni, donors, supporters and

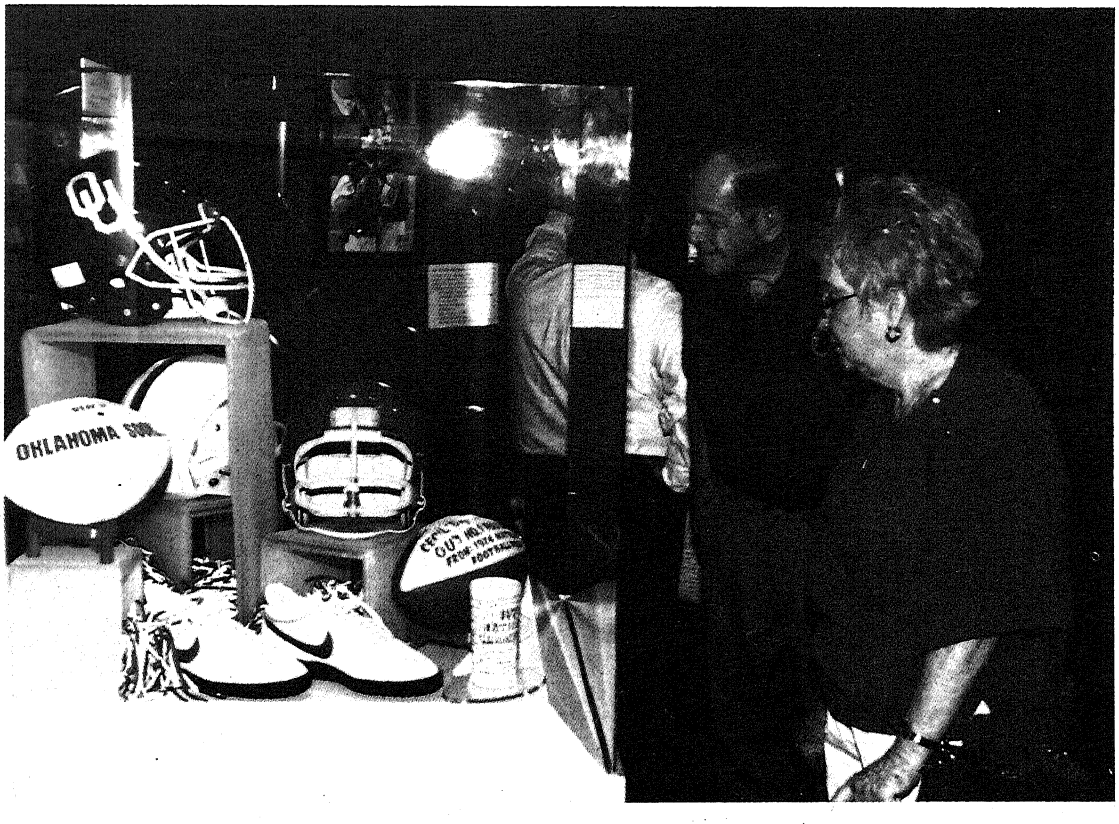

Fig. 3 - An exhibit of sports memorabilia from the University of Oklahoma's football team attracts many new visitors to the museum (Photo by Mike Callaghan, courtesy Sam Noble Oklahoma Museum of Natural History).

students. The exhibit does have important social, cultural, and political themes that can be explored. Visitors can learn more about the relationship between sports, society and culture. Ads and the media, for example, can tell a great deal about patriotic feelings. During World War II, promotional posters for the football team and the wartime effort featured a caricature of Uncle Sam wearing an OU football helmet.

The SNOMNH also has a long, highly successful, history of reaching the needs of special interest groups such as Native Americans who are a significant portion of Oklahoma's population (8%). Native American languages are disappearing at an alarming rate. The loss ripples far beyond the affected communities. When a language dies, linguists, anthropologists and others lose a rich source of material for their work in documenting a people's history. The world becomes less diverse and creative. In response the SNOMNH has proposed a Native American Language Center. The SNOMNH has received $100,000 from the state to hire a Curator of Native American Languages. The museum will use interactive technology to assist Oklahoma's Native Americans to regain their languages and cultures by linking their cultural centers with our collections of Native American materials. Our goal is to use the Museum's facilities to preserve, research, teach and interpret Native American languages for the benefit of all. The Museum's collection of Native American objects will be a key in teaching languages. The Museum also will establish an audio archive of languages by recording native speakers and preserving relevant audio materials. Our program will serve as a center for the study of Native American languages and a model for university museums in other regions where the intellectual achievements represented by native languages are being lost.

Conclusion

Objects are keys to the university museum's success based on the human characteristics of curiosity and collecting, keeping and handing on objects. University museums must continue to be sensory and emotional places. The museum can be more successful as a social enterprise by combining objects with interactive technology. Every museum needs to create a multidimensional vision and have a two, three, four or more pronged mission. University museums are best suited for providing the synthesis and order for our natural world through research, teaching and public interpretation. University museums also can be more successful if they improve their social capital by providing an increase in networking and other benefits that flow from the museums to their communities.

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Structuralizing multimedia data in museums: The use of Internet, video and scanned 3D objects for natural history and science museums

EDUARDO RAMIREZ*

Resumo

Este texto descreve uma proposta de partilha de recursos informáticos e multimédia, em geral caros e pouco acessíveis à grande maioria dos museus de ciência e de história natural. Sugere ainda a criação, no seio do ICOM, de uma estrutura que coordene a utilização desses recursos.

The rapid advance of new technologies in multimedia have offered heritage new hope against the processes of pollution, looting, conflict, and even tourism, which have become increasingly important in the conservation, preservation, and interpretation of natural history.

Scientific videos and 3D exhibits allow us to discover and explore in great detail natural history assets in a non-destructive way. Nonetheless, video and 3D scanners are at their infancy and only few organizations have access to these technologies. I would like to propose the sharing of large and expensive resources such as video server and 3D scanner.

In this presentation, I would like to share with you some of our experiences in relation with the production of video recordings for the Zoology Department at Bergen Museum (museum.uib.no).

We made video recordings of *Myriapoda* (millipedes) through the microscope, both preserved in alcohol and as living species for interpretation by the scientific community of Myriapodist. Video recordings were made through a CCD video camera attached to a Leica stereo microscope equipment and recorded digitally. Digital video has been edited and converted [why has digital to be converted to digital?] to digital format suitable for video streaming formats for video exhibits 'on-demand'.

Our primary goal was to develop methods and tools

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'on-demand' of natural history museum assets - in our case Millipedes, but applicable to any other species of interest. Our museum has 40,000 specimens of Millepedes preserved in alcohol and access to these is difficult. Our Museum is currently using the videos for implementing an IT based catalogue of museum objects, trying to structuralize these scientific videos and designing a data base for scanned 3D objects.

In collaboration with the Computer Science Department, University of Malaga, Spain, a model or structuralizing scientific videos was proposed based on the Extensible Markup Language XML. This brings us to the basics by asking document creators to introduce enough clues, or structure, in the document so that an automatic process can read what the document or a section is about. This metadata approach allows more advanced systems to know more about the document than today's automatic techniques.

Video data is stored using organizational principles, like any other data. In our project we would like to organize data in a more careful way because of its time-serial nature and enormous size. Another difficulty is that current metadata for video images and other similar sources are more about the data than about their semantic content. In our project we would like to develop techniques for introducing the semantic partitioning of video, audio, and images. In the past years, considerable effort has been spent on developing automatic techniques for video and audio segmentation and for indexing images based on some basic characteristics such as colour and texture. These techniques are very useful and will surely change the way we will organize multimedia data in the future. However, we still need to organize multimedia data today and the current automatic techniques for semantic partitioning are even more basic than those for text. The only solution – and one goal of our project – is to attempt to develop more powerful approaches for structuralizing multimedia data.

Some of the basic questions that we would like to answer are as follows:

1) How can we introduce semantic metadata while creating scientific videos?
2) What dictionary will we use for this VXML or Visual Extensible Marking Language?
3) How far will the emerging standards like MPEG-7 go in this direction?

Because we do not have the answers yet, I think this could be a very interesting research direction, to the benefit of both our Museum collections and virtual exhibits 'on-demand'.

Appendix – Proposal

This proposal is primarily addressed to: ICOM Reform Task Force, Barcelona, Spain, 1-6 July, 2001.
From: Dr. Eduardo A. Ramirez, Chief engineer, Bergen Museum, Documentation and IT Department, University of Bergen, Norway.
Email: eduardo.ramirez@bm.uib.no

1. Title: Sharing resources that otherwise museums could not afford

Proposal for the creation of an ICOM Common Joint Resource Centres (CJRC), housing advanced Visualisation and Broadcasting equipment, and Scientific Instruments for the benefit of Museums World-wide.

2. Intention

To propose a new model for the funding and administration of large scale resources (e.g.

Multimedia visualisation, etc.) that might be necessary for taking our Museums into the new millennium. Included are those museum activities that require large funding due to the high-tech production cost, professional skill needed, and with a high risk of technical implementation failure. Adding to these factors, a possibly limited public to justify the investments.

3. Background

The progress of multimedia, computer visualisation, and scientific equipment enable museums to perform specific tasks never before possible, e.g. computer animation and VRML in restoration and reconstruction work. For the majority of museums world-wide, a simple 3D scanning of an object, might have prohibiting costs. Moreover, professionals who operate these services and installations are also in great demand and their expertise requires continuing upgrading.

4. Proposal

The objective of this proposal is to put forward to ICOM RTF the creation of a Common Joint Resource Centres (CJRC) that could be co-ordinated under the International Committee of Museums ICOM. The intention is to share large scale specialised resources that are of central importance for preserving, exhibit, and broadcast our cultural and natural heritage locally and world-wide, and in view of the global reality of increasing restricted governmental funding for preserving and exhibit these cultural and natural heritages.

Another spin-off effect of this proposed model of organisation (ICOM-CJRC), could be in the negotiations of special services required at our museums, such as: equipment-leasing, software licensing, service contracts agreements, upgrading, purchase discounts, in advance technology and software for Museums commencing the millennium.

4.1 Test pilot offer

This year, the Bergen Museum has acquired a multimedia server (Silicon Graphics SGI Onyx 3800). We have allocated hard disk space to ICOM-RTF for the purpose of testing Digital Video Broadcasting directly from this video server in Bergen. This service could be expanded to connect other digital resources and servers world-wide to form a cluster of digital power, with the intention to best serve ICOM goals, and therefore, museums internationally.

Please see URL: http://mediabase.uib.no/mbase/ and press 'List'.

RESUMOS / ABSTRACTS*

Intensifying Support for Australian University Museums

Di Yerbury

This paper will address a number of processes through which the Australian university sector attempted to transform a position characterised by relative ignorance and generally benign neglect into one of recognition, strategic positioning and funding security. It will seek to identify the relative success (or otherwise) of different approaches and to contextualise their outcomes.

Academic Heritage & Young Universities

Fausto Pugnaloni

The project of a Regional network of University Museums in the Marche, central Italy, promoted by the University of Ancona, is aimed to create an integrated cooperation structure based on the different experiences in the history of the single Universities. To enhance the scientific research and the academic and cultural heritage in the young Universities (as in the Marche), the project focuses on the cooperation with the local authorities and with the Regional Museums System. The University collections and the history of the research meet the territory with its complexity and richness, through selected research items:

- the evolution of the health system from the medieval hospitals onwards;
- work and techniques in the pre-industrial age;
- the evolution of the rural landscape;
- archives, architecture and city;
- naturalist collections and control of the territory.

The above project is seen also as a model to extend the cooperation to the Adriatic region (Croatia, Slovenia, Albania, Greece, ...) to enhance the scientific and artistic heritage of that culture.

Reorganising University of Pennsylvania Museums

Marilyn Norcini

Of interest to our discussion of university museums, is the recent and on-going reorganization of the University of Pennsylvania Museum. Our institutional change is directly pertinent to the ICOM conference theme. The change is from the management of collections by professional museum staff to a faculty administrator. The Director wants me to continue my studies of university museums and indigenous forms of community museums. My intellectual interests in both fields focus on defining the core community (stakeholders), relations of collections to the stakeholders, and structural issues of governance.

Museums & Immigrant Absorption

Ofra Keinan

This research study is part of a wider research project which is directed to understanding the role and

* Outras contribuições efectuadas na 1ª reunião do ICOM/UMAC, Barcelona. Other contribuitions to the 1st meeting ICOM/UMAC, Barcelona.

contribution of the museum for immigrant absorption/emigration in the modern society. The wide-reaching goal of this research is to examine this question through a comparative study of different societies, which include museums with a definite cultural direction. This article examines the theoretical aspect as well as offers an analysis of the role and contribution of the museum in three museums in the State of Israel, during the last decade of the 20th century. The museum, as an institution, exists within modern culture. As such it creates a process in which society "faces unremitting questions about whom they [the museums] are for, what and for whom their roles should be" (Sharon Macdonald, 1996). Over the last decade, during the evolution of the "World Village", many changes have occurred in the traditional museum, which brought about the development of new museum interests. Museums began to deal with controversial issues, according museum expression to new population groups that had not previously been able to achieve museum attention. These processes have special implications in the State of Israel, in which groups of immigrants from many diverse countries have gathered; each with a specific life style which reflects their source of origin. The principle goal of this research study is to examine the manner in which the museum functions or can function as a tool for immigrant absorption.

Seduction & Abandonment Collaboration with Communities

Carol Mayer

For many communities collaboration with museums has been little more than a process of repeated seduction and abandonment. Once I have explained what I mean by this I will discuss an ongoing collaboration between the Museum of Anthropology University of British Columbia) and some Pacific Islands communities whose material culture is represented in the museum's collection. I will illustrate how ideas about collaboration have changed over the years, and how these have initiated a rethinking of the curatorial prerogative.

International Committee for University Museums and Collections (UMAC)
- 2002 Conference -

Exposing and Exploiting the Distinct Character of University Museums and Collections

Sydney & Canberra, Australia
29 September - 3 October

Program (subject to minor changes):
Day 1: registration, visit campus museums & formal opening functions at Macquarie University
Day 2: Paper and poster sessions at Macquarie University & evening at Australian Museum
Day 3: Forum and papers at the University of Sydney & evening at Museum of Contemporary Art
Day 4: Museum visits; Aboriginal History on Harbour Cruise; afternoon bus to Canberra
Day 5: Round table and papers at Australian National University & evening at The National Museum of Australia
Day 6: Depart

Both short papers and posters may be presented at the conference.

Conference Fee: 495 Australian dollars (includes whole program, main meals and bus transport as indicated but not accomodation or breakfast)
Early bird registration (before 15 July, 2002): 445 Australian dollars

For more information, please contact:
Dr. Sue Anne Wallace
sa.wallace@qut.edu.au
Or UMAC's web site for updated information and registration form:
http://www.icom.org/umac

European Collaborative for Science, Industry & Technology Exhibitions
ECSITE
- 2002 Annual Conference -

London, 14-16 November

Hosted by the Natural History Museum & the Science Museum

Strategy sessions on:
1. Sustainable Development & Biodiversity
2. Life Sciences & the Cloning Issue
3. To be confirmed: Cosmology or Technology theme oriented

Panel discussions on:
Benchmarking
Reaching the visitors - new audiences: gender issues, teenagers, ethnic minorities, disabled persons.
Reaching the visitors - the use of cutting edge technologies
Science & Culture: an evidence or a debate?
Commercial development: new strategies & evaluation
Towards the future of science centers: new trends & attitudes
Cultural diversity in the science centre field

Roundtables & workshops:
1. Exhibitions
2. Environment
3. Education
4. New Media - Websites
5. Explainers
6. Human resources - staff exchange
7. International Co-operation
8. Evaluation
9. Fundraising

All themes are preliminary.
Further information:
Michaël Renvillard: mrenvillard@ecsite.net
www.ecsite.net

American Association of Museums (AAM) Annual Meeting and MuseumExpo™ 2002

The Community of Museums: Seeking the Common Good

Dallas, Texas (US)
12-16 May

Further information: www.aam-us.org

Visitor Studies Association Conference 2002

Cody, Wyoming (US)
13-17 August

Further information:
museum.msu.edu/vsa/conferen.htm

Do collections matter to instrument studies?

Joint meeting between the British Society for the History of Science and the Scientific Instrument Commission of the IUHPS/DHS

Oxford, 29-30 June 2002

Registration information available from BSHS Executive Secretary:
bshs@hidex.demon.co.uk

Universidad de Salamanca

Congresso

La Ciencia Ante el Público: Cultura Humanista y Desarollo Científico-Tecnológico

Salamanca, 28-31 Octubre 2002

Estrutura:
A. *Sesiones Plenarias* con un ponente invitado de reconocido prestigio internacional en las áreas de filosofía, humanidades, ciencia y ciencias sociales.
B. *Sesiones Invitadas* con dos o tres ponentes
C. *Mesas Redondas* sobre temas de actualidad
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A partir de esa fecha: 175 euros para todos.

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Congreso "La Ciencia Ante el Público"
Facultad de Filosofía - Universidad de Salamanca
Edificio F.E.S. - Campus Unamuno
37007 Salamanca (España)
Tel./Fax: + 34 923 29 46 38
Correo electrónico: CienPubl@usal.es
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El Congreso La ciencia ante el público está organizado por la Universidad de Salamanca como parte del programa de actividades de la Capitalidad Europea de la Cultura durante el año 2002. Está dirigido a especialistas en cultura científica y tecnológica, humanidades, divulgación de la ciencia y periodismo científico.

Instructions for Contributors

Submission
Three paper copies of the contribution, including figures and abstract, should be sent to: Prof. Fernando Bragança Gil, Editor of *Museologia*, Museu de Ciência da Universidade de Lisboa, Rua da Escola Politécnica 56, 1250-102 Lisboa, Portugal.

Contributions, which are always acknowledged, should be concise and clearly written as for publication (see Editorial and Style Standards below). For further clarification and additional information on editorial policy, please contact the Editor.

Editorial and style standards
Style should conform to the last issue of *Museologia*. Please try to remember a few basic points:

1. Concise and clear title.
2. Avoid unnecessary divisions and sub-divisions of text.
3. Articles and short communications in Portuguese or French, should be sent together with an English translation of the abstract. Texts in English should be sent together with a Portuguese translation of the abstract (foreign authors may request assistance from the editor).
4. References in the text should be presented as follows:

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   (Jones 1887, Smith & Brown 1901) (in order of publication)

   References with more than two authors should be presented as, for example, (Sousa *et al.*, 1977).
5. References should be included at the end of the text, in alphabetical order, by authors' names, as follows:

   Jones, J. & M. Smith 1999. On the history of science centers. In: R. Brown (ed.) *Manual of Museology*, pp. 56-67. Fake Publishers, London.
   Silva, J. 1952. Museus marítimos e a interacção com as comunidades. *Revista Fictícia* **10**: 134-135.
   Sousa, J., M. Rodrigues & R. Magalhães 1977. *Oceanografia*. Editora Obscura, Lisboa.

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1. O título deve ser conciso e claro.
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   Sousa, J., M. Rodrigues & R. Magalhães 1977. *Oceanografia*. Editora Obscura, Lisboa.
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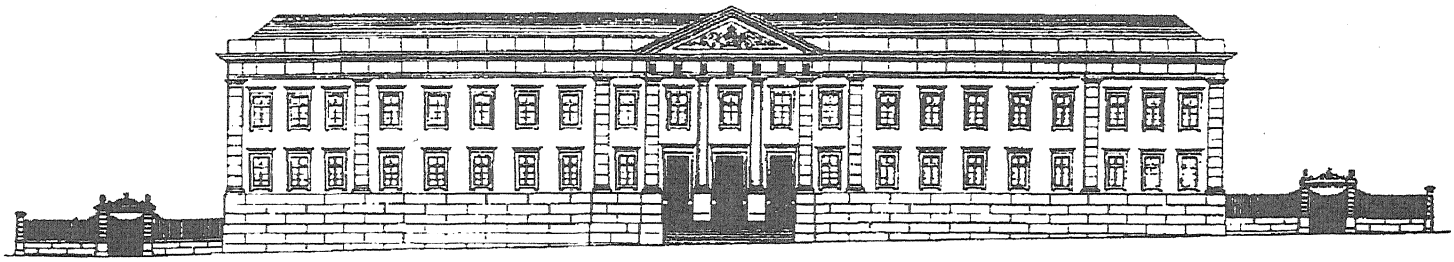

Museu de Ciência da Universidade de Lisboa

O Museu de Ciência da Universidade de Lisboa fica localizado no edifício da antiga Escola Politécnica, conjuntamente com o Museu Nacional de História Natural. Foi criado em 1985 com o propósito de contribuir para o desenvolvimento de uma sociedade cientificamente letrada, através sobretudo da promoção de exposições que integrem social e historicamente os principais conceitos científicos. O Museu de Ciência tem como principais áreas de investigação científica a Museologia das Ciências e a História das Ciências e das Técnicas.

O Museu apresentou a sua primeira exposição temporária em 1987 e abriu a exposição permanente em Março de 1993. Possui um espólio de equipamento científico e tecnológico sobretudo dos séculos XIX e XX, bem como um acervo documental e bibliográfico cujas documentos mais antigos remontam ao século XV.

The Museum of Science of the University of Lisbon

The Museum of Science is located with the National Museum of Natural History in the building of the old Polytechnic School, in Lisbon. It was created in 1985 with the aim of contributing to the development of a science literate society. The Museum is especially interested in holding exhibitions and developing educational programmes where scientific concepts are presented within well integrated social-historical perspectives. Museology and History of Science are the Museums's main research areas.

The first temporary exhibition was held in 1987 and the permanent exhibition opened in March 1993. The Museum's collections include scientific and technological equipment,mostly from the 19th and 20th centuries as well as documental and bibliographic archives dating from the 15th century.

http://www.museu-de-ciencia.ul.pt
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Museologia, Vol. 2 No.1- 2 (2002)

Contents

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