

**Understanding Museums:
Australian museums and museology**

Des Griffin and Leon Paroissien (eds)



Issues in museology

Museums were established across many parts of the Australian continent during the nineteenth century and the early part of the twentieth century. However it was in the latter part of the twentieth century that the greatest burgeoning of museums occurred. These decades also witnessed the consolidation of a sophisticated museum profession, the creation of a single national professional association – Museums Australia – and an active participation of Australian museum professionals in the international museum context.

The essays in this section jointly seek to present a scholarly study of museums and museum practice, including the very recent challenges of new technologies.

Contents

- Introduction, Des Griffin and Leon Paroissien
- Museums in Australia: from a new era to a new century, Des Griffin and Leon Paroissien
- 'The orphans of government': The Committee of Inquiry on Museums and National Collections (The Pigott Report), 1974–75, Anne-Marie Condé
- Conservation in Australian museums, Ian Cook et al.
- Digitisation to social media, Des Griffin
- Australian museums and the technology revolution, Tim Hart and Martin Hallett

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Understanding Museums - Issues in museology

Introduction

by Des Griffin and Leon Paroissien

Museums were established across many parts of the Australian continent during the nineteenth century and the early part of the twentieth century. However it was in the latter part of the twentieth century that the greatest burgeoning of museums occurred. During these decades new institutions were established and new buildings constructed; there were numerous extensions to established museums, especially to art museums where steadily rising interest in the work of living artists had been stimulated by the Australia Council; collections were greatly expanded; and exhibitions played a major role in shaping the public profile of museums and the increasingly diverse character of their expanded audiences.

These decades also witnessed the consolidation of a sophisticated museum profession, the creation of a single national professional association – Museums Australia – and an active participation of Australian museum professionals in the international museum context. In October 1998 the General Conference and General Assembly of the International Council of Museums (ICOM) was held in Melbourne, reflecting the international museum profession's growing knowledge of and interest in Australia's museums and the work they accomplished. 'Museums and Cultural Diversity', the theme of the ICOM '98 Conference, reflected a distinctive preoccupation of Australian museums in world terms, and fostered international focus on the crucial presence of Indigenous voices and emphases in Australia's museums. This left an enduring impression on conference delegates.

However, much of the vision outlined in the 1975 Pigott Report on Australian museums commissioned by the Whitlam Labor Government still remains to be realised. This series of essays addresses many problems faced by museums in the twenty-first century, such as governance and funding issues, public debate about displays and temporary exhibitions, and learning in the museum context. These essays jointly seek to present a scholarly study of museums and museum practice that is also accessible to people outside the museum profession, who daily demonstrate their active interest in museums and their programs.

Anne-Marie Condé provides a detailed overview of the Pigott Report (The Committee of Inquiry on Museums and National Collections, 1974–75) that has been fundamental to the development of museums and museum practice in Australia.

Access to conservation expertise and facilities is of concern to all museums, regardless of their specialisations. The field of conservation in Australian museums has undergone a most significant transformation since the 1970s, when it was then identified as being in crisis and needing urgent attention. Indeed our training and specialised skills in conservation have undergone revolutionary transformation since that time. The essay by Ian Cook, Jan Lyall, Colin Pearson and Robyn Sloggett, describe these developments in such a fundamentally important museum discipline.

From the first use of computers by museum people in the 1960s – astonishingly slow machines accessible by punched tape – computers and electronic devices of all kinds have come to dominate life in museums, as everywhere else, and not simply in size and computing power.

Des Griffin explores the challenge to museum in extending knowledge and understanding. Museums now don't just have websites, they use a variety of social media including Facebook, Twitter, Flickr, You Tube and various microblogging platforms designed to engage audiences, ultimately directing them back to the web page where they can respond to news about programs and events. Visitors real and virtual are urged to join with the museum in creating programs. The notion of the museum as authority is truly turned on its head.

Tim Hart from Museum Victoria and Martin Hallett from Arts Victoria review the participation by museums in Australia, significantly through the Heritage Collections Council established and funded by Museums Australia and the Cultural Ministers Council, in this revolution. Importantly, it is museums that have driven the changes: policies such as those launched by the Keating government as part of the broader arts agenda have mostly been marginal to Australian museums' progress.

Understanding Museums - Issues in museology

Museums in Australia: from a new era to a new century

by Des Griffin and Leon Paroissien

The border between the themes of an art museum and a general museum is often blurred. Moreover the spirit and atmosphere of an art museum is no longer so inimical to the spirit and atmosphere of a museum of natural history or technology ... Today, in influential quarters, art is the new religion and so an art museum is more likely to be housed in a new Parthenon. Nonetheless, the art museums have nearly all the troubles and the unanswered challenges facing other kinds of museums. [1]

The election of EG (Gough) Whitlam in December 1972 as the first Labor prime minister for 23 years generated significant changes across a spectrum of areas in Australian life, including education, the arts, the environment and urban planning [2], foreign affairs and Indigenous affairs. The three years of the Whitlam government also triggered initiatives that were to have a profound effect on Australia's museums for the rest of the century and beyond.

Australia in the early 1970s had gone through a period of great change. A 1967 referendum had recognised Indigenous Australians as citizens in their own country. The Vietnam War and subsequent immigration of refugees focused attention on Asia and began to change the country's ethnic mix. The Australian National University had become a significant centre for Asia and the Pacific, and was a leader in educating Australians to become fluent in Asian languages. The Whitlam government's early recognition of China generated one of the most generous cultural exchanges that China was to negotiate with any western country, ultimately contributing to a trade partnership that is vital to Australia's economy today.

Museums of art, science, technology and natural history had existed in state capital cities since the nineteenth century, and a number of smaller museums and galleries contributed to the life of some larger regional cities and towns. While state galleries had hosted major international art exhibitions episodically in the past, most museums had seen their own exhibitions as almost permanent public displays. Staff concentrated on collections and their documentation. Most of the state museums had research programs of various kinds, mainly in the areas of natural history and anthropology, but seldom of social history.

The Australian War Memorial in Canberra commemorated the nation's loss of life in foreign wars and portrayed the heroism of Australian soldiers. Australian history and nation building had meanwhile begun to emerge as a special subject in schools and universities. Previously social history – the comings and goings of ordinary Australians – was seldom addressed in Australian schools, universities or museums, although many small collections of machinery, equipment, fashion items and domestic paraphernalia were assembled in towns throughout Australia, and daily life in the country and the city was being photographed and painted. Australian inventions and creations were not considered as significant as those produced elsewhere. Children learned of generals, politicians and explorers, but not of the achievements of immigrants, of Aboriginal peoples, or of conflicts on Australian soil.

A national collection, consisting primarily of portraits and landscapes by Australian artists, had been assembled incrementally for a long-discussed National Gallery, and a site had been chosen in 1970. However, the nation's capital still had no national museum of any discipline other than the Australian Institute of Anatomy.

The relationship of museums in Australia with Aboriginal peoples and Torres Strait Islanders for more than 150 years failed to recognise the validity of different peoples with distinctive cultures. This unfortunately positioned museums as an instrumental agent of the dominant white population derived from Europe that had settled the land without any regard for prior ownership and occupation. Museum collectors obtained artefacts and cultural material, including secret and sacred items such as stone tjuringas. Worse still, human remains were obtained, often from graves, and skulls and other skeletal material and soft body tissue were sent to museums in Europe and America. Such practices regarded Indigenous peoples as 'primitive'; a number of museums publicly

displayed human remains, and disparate artefacts were densely arrayed in glass cases as late as the 1960s.

Computers and information technology had not yet begun to impact every facet of the life of museums. Documentation of collections often depended upon bound registers collating handwritten information, utilising small cards on which information might be typewritten. Curators were expected to mount exhibitions, care for the collections and conduct research; when resources permitted, they published catalogues for exhibitions. Boards governing museums had substantial control over collections and programs. Funding was almost entirely from government sources, and bureaucratic control was exercised through the department of the relevant minister. Politically, state governments exercised much of the power concerning domestic matters; the Commonwealth had only recently undertaken developmental initiatives on behalf of the arts, as it had previously done in tertiary education.

The Pigott Report (1975)

A Committee of Inquiry on Museums and National Collections, chaired by businessman Peter Pigott, was commissioned in 1974 to review museums of all kinds. The Committee's far-sighted and significant vision for museums in its 1975 report was an overarching one, addressing the need for new museums, new emphases, new initiatives and new training courses.

The Pigott Report was delivered in 1975, only days before Governor-General Sir John Kerr dismissed the Whitlam government. The Report nevertheless survives as one of the most important documents on the state of any country's museums. *Museums in Australia 1975* took a broad view, confronting the entire range of issues facing museums, from collections in cramped and appalling conditions to opportunities to excite visitors and encourage inquiry and understanding. 'As places of education, museums have unusual but rarely defined advantages', it argued, as they are able to instruct and entertain a great diversity of people and provide an immediacy to the real thing through dispensing with the 'layers of interpretation which, in most media, separate an object or evidence from the audience'. [3]

Amongst the aims of museums highlighted in the Report, several advocated for the museum experience as a dynamic engagement with the public:

- Museums should classify and arrange their exhibits with boldness and caution, conscious that a way of arranging knowledge can be illuminating in one era and stultifying in another era.
- Museums should satisfy curiosity and arouse curiosity.
- Museums should educate formally and informally.
- Museums should extend the frontlines of knowledge ... and enable curious spectators to visit those frontlines and understand how some of the battles to extend knowledge are fought. [4]

This approach to the educational aims of museums recognised the learning experience in ways that – even today – are sometimes challenged or ignored by critics who are unaware of the advances made in understanding the nature of learning, the nature of the museum visit, or the role of informal learning institutions such as museums, zoos and libraries in social development.

'In Australia', the Report observed, 'governments too often accept museums as institutions where the second-best will succeed'. [5] Museums needed to work together; they would not survive and reach their potential without a shared approach to basic ground rules and policies endorsed at a national level. Thus the most important recommendation of the Committee was that an Australian Museums Commission – comparable bodies existed in the United States, Canada and the United Kingdom – be established to foster the development of museums in Australia.

The Pigott Committee recommended a number of new national museums, especially a 'Museum of Australia' to be constructed in Canberra, focusing on three themes or galleries: 'Aboriginal man in Australia'; 'European man in Australia'; and 'the Australian environment and its interaction with the two named themes'. An early Planning Committee for a Gallery of Aboriginal Australia had recommended that a separate institute be established. The Pigott Committee, while strongly supporting the concept, questioned the practicability of separate administrative arrangements. [6]

The Committee also recommended establishment of a National Maritime Museum in Sydney, an aviation museum in a growth centre such as Albury-Wodonga, and a Gallery or Museum of

Australian Biography within Canberra's Parliamentary Triangle.

The Committee meanwhile found that the deterioration of existing collections in Australian museums had reached crisis point, and recommended that a Cultural Materials Conservation Institute be created to study and communicate ways of preventing the deterioration of fragile and perishable objects in the Australian climate. [7]

Addressing the international context, the Pigott Report further expressed concern about the unregulated export of particular items of Australia's cultural heritage.

The Pigott Committee covered a number of other important issues, including the growth of small local and regional museums and regional galleries of art, the nature of research in museums, and the role of curators in research as opposed to exhibition activities. The Report also referred to the lack of attention given to Australian history, and the future of biological collections held by various Commonwealth government departments.

In subsequent decades Australia's cultural life was transformed through a variety of different events and initiatives, and the Report must today be viewed in its historical context. The Committee could not have envisaged many of the factors that have subsequently shaped Australia's museums. However, fulfilling the vision of the Report, the Australian National Maritime Museum was eventually built in Sydney, opening in 1988; the National Museum of Australia finally opened in Canberra in 2001 to coincide with the Centenary of Federation; and a provisional National Portrait Gallery [8] was established in Old Parliament House after the completion of the new Parliament building in 1988. A handsome new purpose-designed building for the National Portrait Gallery opened alongside the National Gallery on the shores of Lake Burley Griffin late in 2009.

The introduction in 1978 of the Commonwealth Government's Tax Incentives for the Arts scheme provided tax deductions for the full value of gifts to museums and libraries, bringing valuable additions to collections throughout Australia. The export of significant cultural heritage was addressed by the Australian government's ratification of the 1970 UNESCO Convention on the Means of Prohibiting the Illegal Transfer of Ownership of Cultural Property. [9]

Art museums and the Australia Council

The Whitlam government's substantial expansion of the role and funding of the Australian Council for the Arts – focused on the performing arts under previous governments – had an immediate and enduring effect on art museums that was unparalleled elsewhere in the museums sector. Boards for Aboriginal Arts, Visual Arts and Crafts all initiated policies and programs that impacted on museums. For decades the state art museums had been represented on one of the few Australian government bodies concerned with aspects of museums – the Commonwealth Art Advisory Board. This body's transformation into a board of the Australian Council for the Arts (later the Australia Council) in 1972 prepared the way for unprecedented Commonwealth support for Australia's art museums.

The Council's Visual Arts Board (VAB) [10] inherited some of the functions of the former Commonwealth Art Advisory Board, aside from the building of a national collection for the ultimate establishment of a National Gallery.

The Visual Arts Board's priority in the 1970s was designing diverse programs of support for the work of Australian artists. The VAB also took over the role of 'the mounting of Australian exhibitions to tour internationally and co-operation with State galleries in bringing outstanding overseas exhibitions to Australia'. [11] The development of art museums across Australia – especially of regional art museums – expanded the collection of work by living Australian artists, while publication grants generated catalogues that museums could previously ill afford. Meanwhile initiatives of the new Australia Council's Aboriginal Arts Board located arts and crafts advisers in Indigenous communities across the country, initiating a process that ultimately took Indigenous artists on national and international trajectories.

The Visual Arts Board's recommendations to the Australian government led to regional art museums eventually being established in Burnie, Devonport, Townsville, Wollongong, and to an expanded Newcastle Region Gallery, although by the time a number of these projects came to fruition the incoming Fraser government had passed the responsibility for capital funding to the states.

Grants through VAB support programs to assist purchase of works for public collections, together with grants for exhibitions, provided additional encouragement to art museums and non-collecting art galleries across the country.

In at least one field, a Visual Arts Board funding initiative went far beyond benefiting art museums. The Board recognised 'the dearth of people qualified to do conservation work', and in 'the absence of any other national body with a similar concern', and acknowledging a position considered 'to be in the nature of a national emergency', [12] the Board funded the attendance of 20 interstate delegates to attend the First National Seminar on the Conservation of Cultural Material, held in Perth in August 1973. Other grants funded overseas travel by conservators. However, support for conservation was still minimal in the face of the critical national situation regarding collections subsequently described in the Pigott Report two years later.

With funding from the VAB, the Australian Gallery Director's Council (AGDC) transformed its exhibition co-ordinating role and became a not-for-profit entity. The AGDC drew in regional art museums across the country, expanding the long-standing cooperative domain of state gallery directors. By 1979 the AGDC was touring more than 60 national and international exhibitions to both metropolitan and regional venues, visited by approximately 1.5 million people. [13] This was the first of a succession of exhibition touring agencies established with Australian government funding.

Exhibitions development for Australian audiences was a key platform of the Visual Arts Board. With new skills in exhibition coordination still needing development, the Board became the 'organising museum' for a number of exhibitions in the 1970s. Building on the Australian government's policy of not insuring its property, the Australia Council was instrumental in initiating the government's revolutionary indemnity scheme – in lieu of prohibitive insurance premiums – for a US\$70 million exhibition, *Modern Masters: Manet to Matisse*, assembled specifically for Australia by New York's Museum of Modern Art.

This indemnity agreement paved the way for an extensive application of government indemnity that would, by the end of the century, reach the level of indemnifying one billion dollars' worth of touring exhibitions in the country at any one time. In subsequent years the demand for exhibition indemnity stimulated the development of state schemes. In 2010 the Australian government replaced what had become the Art Indemnity Australia program with the Australian Government International Exhibitions Insurance Program, in which a budget of eight million dollars extended over four years was available for purchasing commercial insurance for exhibitions with a minimum value of AUD\$50 million.

This Australian government impetus in the 1970s to support the expanding momentum of exhibitions, together with the highly publicised development of the National Gallery in the 1980s, inspired state governments to fund new museum buildings and major extensions, and support expanded programs and operations, together with new public amenities such as restaurants, cafés and larger museum stores. By the beginning of the twenty-first century, funding of art museums by the states had grown well beyond anything originally envisaged by the Australia Council.

Despite its primary emphasis on art-forms development and support for artists, the Australia Council continues to support the research, mounting and touring of exhibitions, and provides core support for a number of key Australian art institutions that focus on exhibiting and supporting contemporary Australian art.

A national policy for museums

Successive governments have failed to adopt the recommendation of the Pigott Report that a Museums Commission be established, or put any alternative support system in place. [14] The absence of a national policy for museums, as recommended by the Pigott Committee, was illustrated by the 1989 report published by the Commonwealth Department of Finance, *What Price Heritage?* The review focused on the increased expenditure on Commonwealth-run museums – an increase attributed in part to the part played by the Pigott Report in raising expectations [15] – and sought to establish performance indicators through comparisons with major museums in the states. Through an elaborate analysis of the ratio between total floor area, exhibition area, total staff, recurrent expenditure, and cost per visitor, the Australian War Memorial, the National Gallery, the nascent National Museum and the National Maritime Museum (under construction at the time) were compared with a number of vastly different museums. It was nearly two years before the Department of Arts, Sport, the Environment, Tourism and Territories (DASET) – a minor voice in

the preparation of the *What Price Heritage?* report – demolished the underlying methodology used by the Department of Finance in a 1990 Report entitled *What Value Heritage?* However, the earlier report had already concluded that museums should be more entrepreneurial; that the National Maritime Museum should be primarily an exhibiting institution; that the National Museum building should be deferred for five years; that a management review of the National Gallery would precede any consideration of the Gallery's resources; and that there would be no new Commonwealth museums, nor assistance for national museums proposed by the states. [16]

Most museums, meanwhile, were well established as primarily the responsibility of state and local governments. Agreement on creating a truly representative body lay with the periodic meetings of the state arts and culture ministers. This body established the Australian Libraries and Information Council in September 1981. However, a succession of approaches to the Commonwealth and to state governments by professional museums associations during the 1980s was unsuccessful in gaining support for an equivalent national body for museums.

In the early 1990s the Cultural Ministers Council (CMC), after meeting with representatives of the Council of Australian Museum Associations (CAMA, representing all major types of museums and professional groups) agreed to establish a Heritage Collections Working Group (HCWG); libraries and archives were included on the Committee. The focus was to be on collections; other functions of museums, such as exhibitions, education, audience development and research, were not included in the brief.

By 1996 the HCWG had evolved into the Heritage Collections Council (HCC), which developed specific programs to build a national database for heritage items and a national collection conservation program. Programs to enhance exhibitions development were subsumed within the Australian government's establishment of the Visions of Australia program in 1998, to tour heritage collection material in mostly small exhibitions around the regions and metropolitan areas. Major museums contributed financially to the HCC's work and meetings through Museums Australia, the professional association that had evolved from the amalgamation of a number of museums associations nationally. All governments also contributed funds in support of HCC objectives.

By the time of the 1998 International Council of Museums (ICOM) Triennial Assembly and Conference in Melbourne, the HCC's work on the Australian Museums on Line (AMOL) project included information on more than 350,000 objects of all kinds, encompassing 1006 Australian museums and galleries. *The National Conservation and Preservation Strategy for Australia's Heritage Collections* and *re-Collections* publication were both well advanced, and a set of practical guidebooks for use principally by people other than conservators working with Australia's cultural heritage had been achieved. The latter publication was available for professional development workshops and constituted a ready reference tool to assist museum conservators.

In 2000 the Cultural Ministers Council (CMC) commissioned Deakin University to undertake a 'Key Needs Study' that identified the next steps in coordinating Australian museum collections at a national level. The outcome was the 2004 establishment of the Collections Council of Australia (CCA) – amongst other things – to 'develop long term strategies to address issues facing our collections'. The CCA was promoted as the 'peak body' for the 'collections sector', encompassing four domains: archives, galleries, libraries and museums. Two separate councils of museum directors, one of art museums and one of other museums (CAAMD and CAMD), were represented on the governing council, as were libraries and archives. Its board, however, did not include a representative of Museums Australia. The small staff of the Collections Council commenced work in 2005; various submissions were made to government agencies and sector-wide meetings organised. A first national CCA-organised 'summit' was held in Adelaide in August 2008, on museums and digitisations of collections. [17]

The decision by the Cultural Ministers Council in October 2009 to cease funding of the Collections Council put back 20 years the development of a national policy for the distributed national collection comprising the collections of the museums of Australia. Australia, along with Canada, remains one of the few developed nations with no national body concerned with a national policy on museums. (Interestingly, Canada has no national education policy either.) Thus, in spite of all these initiatives specifically focused on collections – not least through financial contributions by museums themselves to the Heritage Collections Council's work – a broad national policy for Australia's museums has meanwhile continued to be an elusive goal.

Responding to a rapidly changing society

Over the last 35 years museums have strengthened their collection management, their programs and their scholarship. They have initiated a hugely escalated range of temporary and special exhibitions. There has been increased emphasis on engaging with communities, including Indigenous peoples, and in the 1990s museums began to return some of the most precious Indigenous cultural material to the communities from whence the material came as well as repatriate ancestral remains to source communities. Some museums have taken public stands on environmental issues, especially those relating to biodiversity, and on arguments about evolutionary theory.

Museums Australia, the amalgamated professional body representing museums and museum professionals established in 1994, has continued to serve the sector nationally – especially drawing together regionally dispersed and small museums across state borders. However its primary source of Australian government funding – through the Australia Council – ceased in 1999–2000.

A most dramatic change in Australian museums over recent decades has been in the areas of the visitor experience and learning, and in public participation and access – especially as facilitated by the growth of information technology. There have also been important developments in the portrayal of Australian society in its increasing diversity, and in the fundamental place of Indigenous Australians within this picture. However, the contribution that museums can make to teaching and learning in fields such as history, science and technology is yet to be fully realised.

A number of universities introduced museum studies courses during the 1980s. As is the case in many countries, tension remains between the museums community and universities as to the most appropriate courses and content for museum training.

Collection management issues have received substantial attention, although gains in widespread common access to linked collection information have not progressed to the extent they should have for a variety of reasons.

Museums have changed and greatly diversified the ways they develop exhibitions. Specialists from many disciplines and backgrounds – from fabrication and building through design, education, marketing, finance and sponsorship – now form project-style teams to realise finely honed exhibitions and associated publications. This has meant that, at least in the field of exhibitions, curators no longer have the sole driving position that they once exercised. While there have been fluctuations and differences in the attention given to scholarship, those museums that have developed active public programs have generally also continued – in many cases even augmented – their support for scholarship.

Museum professionals have increasingly found themselves faced with significant shifts in the structure and funding of their institutions; some have not been in a position to provide the appropriate leadership for change, or even been equipped to do so. As museums have raised more and more of their capital and recurrent funding from sources other than their sponsoring government, often commercial business organisations or granting agencies, they have effectively become public-private partnership institutions, although governance arrangements seldom reflect this important shift in structural orientation.

Since the 1990s many senior museum professionals have taken specialised short courses in leadership, such as the Museum Leadership Program, sponsored by the Gordon Darling Foundation, and closely associated with the Museum Management Institute (MMI) in Los Angeles (later the Getty Leadership Institute (GLI)), where a number of Australians have also studied in longer residential courses. Others have taken part in tailored courses at the Melbourne Business School at Mt Eliza, while some have undertaken a variety of university graduate courses in management. Nevertheless, governance, leadership and management have often remained alien fields at a crucial time of change when museum professionals should be steering institutional and public debates and projecting policies, ethics, codes of conduct and frameworks of governance designed specifically for museums (and for particular institutional needs), rather than passively accepting policies inappropriately borrowed from business or other not-for-profit fields.

Art museums have for the most part been entrepreneurial since the 1970s, especially in relation to exhibition sponsorship and philanthropic gifts, financial and in-kind. Exhibitions in art museums have been one of the main inspirations for extensive public learning programs, the unprecedented growth in membership bodies, and in volunteers working across diverse departments and programming of museums. These changes have assisted art museums immeasurably in public positioning, in achieving expanded facilities and generally warding off savage budget cuts.

Education and learning

As mentioned earlier, where there has been any national attention paid to museums as a 'sector' in Australia, it has tended to focus on collections and exhibitions rather than other crucial aspects of museums' policies and programs such as education, community engagement and public programs. This perhaps reflects the long-established role the states have played in school education generally, and also the fact that museum education programs had traditionally been oriented to supporting school curricula, while 'education' in museums has expanded to develop new and mature audiences, and take on more experimental roles.

Australian museums, along with museums elsewhere, have participated in research projects that have clarified the potential of museums to contribute to lifelong learning. The notion that museums can determine directly what is learned during a museum visit is being challenged. [18] Prior knowledge and experiences elsewhere are seen to relate directly to motivation for and expectations of a museum visit. Even though what is sought and what is learned may be very personal, this is still a very vital kind of learning. The fact that visitors can exercise considerable choice and control over what they see significantly increases the likelihood that they will find exhibitions and programs that are intellectually and emotionally appropriate for them.

Museums have deepened and broadened their understandings of the museum visitor, moving from simply collecting demographics which revealed little more than such observations that better educated and socio-economically advantaged people are more likely to visit museums, to catering for a diversity of interests and working to provide involving experiences based on substantial and regularly updated knowledge of the nature and reason for a visit.

Australian history

Major museums in Australia have only recently come to terms with social history, the stories of ordinary people as opposed to politicians, explorers and war heroes. Stories of contact between successive waves of immigrants and Australia's original inhabitants have been increasingly researched and portrayed, as have stories of immigrants other than those from Britain and Ireland. Museums dedicated to migrants and their experiences have been established in Adelaide and Melbourne, while a 'virtual' Migration Heritage Centre for capturing immigrant experiences has been established in Sydney.

Many state museums now have extensive programs on a diversity of historical themes and people, and have learned to address (and include) contestation of their representations of the past. The National Museum's opening exhibition of frontier conflict, incorporating oral history, drew criticism from some members of the Museum's Council, although subsequent reviews found no evidence of systematic bias.

There is also contestation at a regional museum level. Peter Hiscock, a past director of Sovereign Hill open air museum in Ballarat, wrote about depicting the Eureka Stockade, when gold miners engaged in violent armed struggle with soldiers on the goldfields, '... an attempt to write anything about the Eureka Rebellion is akin to scratching an ant's nest. Once disturbed, a horde of local historians emerge to bite one another's bottoms. There are many experts.' [19]

Museums and Indigenous peoples

In 1978 UNESCO (United Nations Education, Scientific and Cultural Organisation) sponsored a pivotal seminar, entitled 'Preserving Indigenous Cultures', in Adelaide, an event that brought together anthropologists and archaeologists, museum curators and Indigenous peoples from Australia and the Pacific. Organised by Robert Edwards (then Director of the Aboriginal Arts Board of the Australia Council), this gathering resulted in a number of important recommendations addressing principles and ethics concerning Indigenous people's cultural heritage management that were addressed to the Australian National Commission of UNESCO. [20] 'The seminar recognised the rights of Indigenous peoples to pursue their own traditional lifestyle by retaining and developing their own cultural traditions.' [21] Knowledgeable custodians who held the respect of their people and continued to live their traditions were recognised as the determining, dynamic force in the preservation of cultures, and it was established that museums should give priority to those custodians in exercising their role and customary practices without restriction or interference.

The Museums Association of Australia (MAA) conveyed the UNESCO seminar's recommendations to directors of major state museums concerned with anthropology. State directors generally responded favourably to the recommendations, although some made the observation that these

had already been museum policy for some time. The Australian Museum reported its adoption of a policy of return of human remains specifically, while another museum emphasised scientific values and proposed to return collection items only where a proof of 'undeniable claim of ownership' existed. [22]

The Australian Museum already had a well-established policy of return of significant cultural material to peoples of the Pacific and North America. This had led by 1988 to returns of material agreed through discussion with cultural representatives internationally. A number of museums were meanwhile moving well beyond previous practices, and meeting with Aboriginal peoples and discussing with them their cultural material and its place in the museum's programs. A leader in this development was the South Australian Museum in its dealings with Pititjantjara people.

Through substantial and wide-ranging consultative discussions, the Council of Australian Museum Associations (CAMA) meanwhile developed a policy to guide all museums in their dealings with Indigenous peoples. *Previous Possessions, New Obligations* (PPNO), released in two stages in 1993, addressed all aspects of museum practice from collections management through to exhibition development, employment and governance. This policy also acknowledged that Indigenous peoples had primary rights in respect of control and interpretation of their culture, although there were multiple interests engaged in ownership of cultural property. PPNO supported 'the right of Aboriginal and Torres Strait Islander people to self-determination in respect of cultural heritage matters' and the essentiality of 'Aboriginal and Torres Strait Islander involvement in management of collections and information, and their use in the public programs and communication of museums, including exhibitions, education and publications'. A complementary resolution was passed by the CAMA meeting of December 1993, on the eve of Museums Australia's emergence the following year in January 1994. PPNO was subsequently revised and republished as *Continuing Cultures, Ongoing Responsibilities*. [23]

By the late 1990s, every major museum in Australia had redeveloped its collection display on Aboriginal and Torres Strait Island peoples, often through extensive consultation with Indigenous peoples themselves. Many of these collection-based exhibitions also addressed controversial issues such as frontier conflict, Indigenous imprisonment and removal of children from their parents. All heightened recognition of the richness of Indigenous cultures and the rights of people to their beliefs and traditional practices, as well as appropriate recognition of their contributions within the larger Australian mainstream of social development.

Following the adoption and publication of PPNO, the Australian government provided financial support to have a Museums Australia Standing Committee review requests for grants to Indigenous groups, to develop plans for requests and receipt of cultural material returned from museum collections. The Australian government itself meanwhile pursued the return of significant Indigenous material held internationally, especially skeletal remains and associated material in collections in overseas museums. Museums in Australia embarked on a continuing process and a series of returns, in some cases through extensive collaboration, both across the museums sector and through building increasing networks of ongoing collaboration with Indigenous communities.

Museums, including art museums, continued to acquire significant Indigenous artworks, and increasing attention was given to diverse short-term and special exhibitions. Vigorous programs of such exhibitions were in place by the late 1980s. Meanwhile Aboriginal and Torres Strait Islander people began to be employed in museums in responsible positions concerned with collections and exhibitions development.

Science and technology

Recent decades have seen unprecedented developments in science and technology, from space exploration, medical research and genetics to biodiversity studies. Research has generated greater focus on such issues within education generally. Reviews of science education, including through museums and science centres, identified the need for natural history museums to be supported to document biodiversity.

The rising concern for knowledge of science and technology, and well-documented claims that improvements in education in these disciplines were needed, helped drive a demand for science centres. The success of the Exploratorium established in 1979 by Frank Oppenheimer in the Palace of Fine Arts, San Francisco, resulted in science centres springing up in other countries, including Australia's National Science Centre, Questacon, sponsored in part by the Japanese government as part of the 1988 Bicentennial celebrations.

Similar science centres were developed in a number of cities around Australia. They proclaimed that they were 'minds on' as well as 'hands on' by comparison with the 'static and unchanging' regular museum displays with which almost everyone was familiar. Science centres were new and they did not hold collections. The Powerhouse Museum in Sydney opened a number of science exhibition displays based on the science centre model, while the Museum of Victoria developed a new branch facility, 'Scienceworks', located in an industrial suburb of Melbourne. Other museums also developed exhibitions based on this interpretative model of engaging with scientific phenomena, involving the employment of 'explainers' within exhibitions and helping visitors to gain insights from their experience. Smaller science centres gradually opened in a number of regional centres, but twenty years later most of these had closed.

Museums and the natural environment

Most state museums in Australia, even if also collecting history, technology, art and craft, were long-standing centres for the collection of natural history specimens and for research on the natural environment (excluding plants, dealt with by botanic gardens).

Larger natural history museums, meanwhile, assisted in management of their collections by the rapid expansion of computer technologies, cooperated with each other and with Australian government agencies in making advances in mapping previous and present distributions of the nation's fauna. Through the funding of the Australian Biological Resources Study, established originally in 1974, complete catalogues of Australian fauna (and flora) were commenced.

Some museums also staged exhibitions addressing environmental issues, and advocated a greater concern with government measures to protect biological diversity and Australian landscapes and habitats on a national basis.

As more attention was given to collection management, natural history museums abandoned their reliance on research-trained curators who also had direct responsibility for collection management. Museums now appointed collection managers, many of whom gradually acquired advanced postgraduate degrees to enhance their standing in a highly tuned institutional research environment.

Information technology and social media

The proliferation of information technology has been amongst the most significant developments in museums in recent decades. At first gains were made in electronic recording of information about collections, although arguments about which categories of information should be included or excluded seemed interminable. Such advances paralleled those already being accomplished in digitisation of library and archive collections.

In almost every museum, the capacity of computers to manipulate large data sets and provide random access, and to store and manipulate images, revolutionised collection management. Efforts were made, promoted by the HCC and later by other bodies, to integrate the independent data formats of different museums to allow federated access to information about collections in all museums through a single portal. Visions of children in classrooms being able to access the images of objects in museum collections and information about them were promoted. Art museums, history museums and natural history museums faced similar challenges.

Greater progress in digitisation of collections has been made with some types of collections than others, and arguments about proprietary rights to certain information in state natural history museums have led to little information on animals being universally available. Meanwhile the National Library, through electronic feeds from cooperating art museums, as well as archives, libraries and some museums and history and heritage organisations, provides a huge collection of images for public access. Digitisation of images, adoption of standards for content management, digital asset management and query protocols have become essential management tools for all advanced museums today.

Every substantial museum now has its own website, some providing information not only about purposes, scope, history, collections, programs and of course its shop facilities, but also access to the collections themselves, sometimes including virtual tours of exhibitions. In recent years information technology has allowed more flexible access to the diverse ways that users access information about individual collection items. This has led to virtual visitors contributing new or revised information about items in collections.

The increasing availability of technology allowing transformation of digital information over radio and cable to hand-held devices – personal digital assistants (PDAs) – soon led to exhibition tours being available on museum websites and in museum exhibitions. ‘The watchword in planning the museum tour would be “Design for Experience, Not for Hardware”’. [24] Software today assists visitors to capture images and record their own impressions about objects in museums and thereby construct their own tour – even their own virtual exhibitions. All of this has led to decreasing control by the museums community of how visitors utilise or access museums, their collections and their information. Although some museum professionals have expressed concern about this loss of control, the reality is that, in learning terms, the museum and its staff never did have the control they presumed that they had.

Museums that have taken advantage of these new technologies now encourage actual and virtual visitors to collaborate with each other, seeking contributions – through ‘crowd sourcing’ – of commentary and imagery to develop new interpretations and even promotions. Sites such as Facebook and Twitter encourage social networking and exchanges of views, and sometimes advance independent initiatives and discussion amongst interested people and specialised cohorts within the broader community.

Governance, funding and management

Museums in Australia, by and large, are still substantially government-funded. Originally established by colonial and state governments, they were governed by boards of trustees from their conception. Staff members were meanwhile subject to Public Service conditions of employment. In the 1960s it was common for board members to be appointed for their knowledge of one of the museum’s disciplines. Since the 1970s, however, board members have increasingly been appointed for their presumed knowledge – through business and other backgrounds – of how organisations should be run; or they are considered to be potentially useful in raising funds from the private sector.

It is now clear, however, through studies both of museums internationally and in Australia, that better performing museums are those where the executive has strong domain knowledge, and where there is at least a reasonable degree of separation from government through substantial delegation of responsibilities to shape resource allocation and performance. [25]

Changes in museum governance and management in recent decades have tended to reflect the adoption of perceived business practices by governments themselves. This certainly has resulted in greater accountability and transparency. However, it also carried the expectation that museums would readily make the transition to earning more of their own funds annually, even yielding ‘efficiency dividends’. Successive reductions in government allocations, however, have periodically increased pressures on museums to cut core operational budgets and develop alternative funding resources privately. Some governments determined that general admission charges should be imposed, leading to a decline in visitor numbers. Gradually, however, decisions regarding admission charges became the responsibility of museums themselves and the response has tended towards free admission, limiting entry charges to major exhibitions while also generating revenue-earning services.

Museum professionals have steadily become more highly trained over four decades, not only in the various museum disciplines and education, but also in new fields of specialisation such as management, conservation, collection management, communications, public programming, marketing and merchandising. There has been a greater employment of project teams to address new objectives. Organisational structures have tended to evolve steadily in response to management practice changes in the corporate sector, in government, and in universities – for example, incorporating additional levels of managers who may or may not have specialised ‘domain knowledge’. These changes often provide critical new sources of administrative support where needed. However there are accompanying dangers in distancing museum directors and senior managers from the core roles of museums in their mission and in their responsibilities for upholding public trust, on which the enduring community service and civic values of museums depend critically.

Footnotes

¹ *Report of the Committee of Inquiry on Museums and National Collections including the Report of the Planning Committee on the Gallery of Aboriginal Australia* (the Piggott Report), AGPS, Canberra, 1975, p.5.

- ² The 1974 *Report on the National Estate* (the Hope Report) made recommendations on immovable heritage.
- ³ Pigott Report, p. 12.
- ⁴ Pigott Report, p. 6.
- ⁵ Pigott Report, p. 6.
- ⁶ Pigott Report, p. 4.
- ⁷ Pigott Report, p. 3.
- ⁸ The Pigott Report recommended a Museum of Australian Biography
- ⁹ Australia announced in 1983 that it would become a party to the UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property of 14 November 1970 (generally referred to as the 1970 UNESCO Convention) and the Protection of Movable Cultural Heritage Act of 1986 gave effect to the Convention. Australia notified UNESCO of its 'agreement' to be a party to the Convention in October 1989: it was the 64th nation to do so.
- ¹⁰ Three of the 11 founding members of the Council's Visual Arts Board were museum directors; another was a member of the International Council of the Museum of Modern Art in New York; and a further member (a consultant member appointed by the Board) and the founding Board director were subsequently directors of major art museums.
- ¹¹ *Australian Council for the Arts First Annual Report 1973*, Australian Council for the Arts, Sydney, 1974.
- ¹² *Australian Council for the Arts Report 1973*, pp. 85–86.
- ¹³ *Australian Gallery Directors Council Report and Review 1979*, p. 7. This body went into liquidation in 1980.
- ¹⁴ A personal account of the development of policies for museums in Australia is available at 'Museums in Australia from Pigott to Carroll' (<http://desgriffin.com/essays-2/pigott-intro/>).
- ¹⁵ *What Price Heritage?*, Department of Finance, Canberra, 1989, p. 3.
- ¹⁶ *What Price Heritage?*, p. 12.
- ¹⁷ The CMC notified the withdrawal of support for the Collections Council in late 2009.
- ¹⁸ See *Learning from Museums: Visitor Experiences and the Making of Meaning*, John H Falk and Lynn D Dierking, Altamira, Walnut Creek CA, 2000.
- ¹⁹ Peter Hiscock, 'Look into my eyes – read my lips: people facing people', paper presented at the Museums Australia Conference: Fringe Benefits: community, culture and communication, Albury, May 1999, quoted by Andrew Simpson, 'What mattered then, what matters now', *Museums Australia Magazine* 18 (1), September 2009, p. 21.
- ²⁰ Robert Edwards and Jenny Stewart (eds), *Preserving Indigenous Cultures: a new role for museums*, AGPS, Canberra, 1980.
- ²¹ Seminar Recommendations, in Edwards and Stewart, *Preserving Indigenous Cultures*, p. 9.
- ²² Correspondence with Museums Association President Professor Barry Reynolds and CAMD members, November 1980 through February 1981, CAMD Archives, Powerhouse Museum, Sydney, consulted February 2010.
- ²³ Museums Australia, Canberra.
- ²⁴ Peter Samis, 'Visual Velcro: hooking the visitor', *Museum News*, November/December 2007, pp. 57–62, 68–73).
- ²⁵ Des Griffin, 'Advancing museums', *Museum Management and Curatorship*, 23(1), pp. 43–61, 2008; Edmund Capon, Director of the Art Gallery of New South Wales, said, 'I don't care what anybody says about all these layers of accountability, administration, financial and legal expertise it is said we need to run an art museum, I say rubbish. The only thing you really need is your curatorial credibilities, commonsense and the

will. The amount of jargon and rubbish that's talked about museum management is enough to, well ignore it. You don't study being the director of a museum, you do it.', Lyndall Crisp, 'Director's Pluck – Capon masterminded rebirth of Gallery', *Australian Financial Review*, 27 November 2003.

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Understanding Museums - Issues in museology

'The orphans of government': The Committee of Inquiry on Museums and National Collections (The Pigott Report), 1974–75

by Anne-Marie Condé

In May 1965 the *Australian* published a feature article on historic preservation in Australia by journalist and poet Max Harris. He noted that 'a vast national folk museum, preferably in Canberra' had been suggested, 'to enshrine Australia's past'. Harris declared himself not in favour of the idea. Public finance, he said, should be kept in the hands of people in the states and in regional centres, many of them volunteers, who had already done so much to develop a sense of national historical consciousness. 'Keep Canberra's dead hand off the relics of Australia's past', he begged. [1]

And yet less than 10 years later, in April 1974, the Australian government established a Committee of Inquiry on Museums and National Collections. The museum sector, including the Museums Association of Australia, had been lobbying for it for years. Clearly there was a belief that Canberra did have a role to play in the museum field. In announcing the committee, Special Minister of State Lionel Bowen noted that, despite great public interest and dedicated service, the development of museums and collections had been piecemeal, and valuable collections were at great risk. Moreover, there was no institution committed to telling 'the story of Australia to Australians'. The new committee would give particular attention to the establishment of a national museum, 'not as a storehouse of things dead and past', but a 'living, dynamic institution'. [2]

This government was, of course, the Whitlam Labor government; one deeply committed to nation-building projects based on heritage. There was already in train a Committee of Inquiry into the National Estate, headed by Justice RM Hope. Bowen suggested to his Cabinet colleagues in relation to the museums inquiry that, beyond the cause of advancing knowledge and the spread of education in the longer term, the Inquiry would 'provide a positive focus now for our growing national feeling.' It would be, he added, a 'move symbolic of the "new nationalism"'. [3]

A committee with broad experience was appointed. Its chairman, Peter Pigott, was a Sydney businessman who also held positions with the National Parks and Wildlife Foundation and similar organisations. His fellow committee members were Frank Talbot, Director of the Australian Museum; Geoffrey Blainey, Professor of Economic History at the University of Melbourne; RW Boswell, Chairman of the Atomic Energy Commission; Mrs Andrew Clayton, Member of the Executive Board of the National Parks and Wildlife Foundation; John Mulvaney, Professor of Pre-History at The Australian National University; DF Waterhouse, Chief of the Division of Entomology at CSIRO, FJ Waters, ex-General President of the Amalgamated Postal Workers' Union of Australia; and EE Payne, who was seconded from the Department of the Special Minister of State to act as Executive Member. [4]

John Mulvaney headed a separate planning committee to investigate a 'Gallery of Aboriginal Australia'. The reports of the two committees were tabled and published together.

The Committee of Inquiry's Terms of Reference were:

- . to advise on the scope, objectives and functions of an Australia Institute to develop, co-ordinate and foster collections, research and displays of historical, cultural and scientific material of national significance, giving particular attention to its relationship with Government and other institutions;
- . to recommend steps to establish such an institute;
- . in relation to the Australian Government's direct field of responsibility and interest, to recommend measures which should be taken in the immediate future to:
 - a. improve collection and conservation facilities for national material, with particular attention to research needs and training;
 - b. ensure effective co-ordination of the Australian Government's activities in this field;

- c. institute new developments and institutions, with particular attention to the establishment of a national museum of history in Canberra;
- d. to recommend longer term measures in the field of museums and collections, with particular attention to the Australian Government's role in relation to state, local government and institutional authorities. [5]

The committee met formally 17 times, and visited 69 Australian collecting and exhibiting organisations. Members travelling overseas visited many other centres in the United States and Mexico, and the United Kingdom and Europe. Its members read over 400 public submissions and commissioned seven consultants to report on selected Australian museums outside metropolitan areas. The committee was supported by a Canberra-based secretariat which operated firstly at East Block in Parkes, and later at Mining Industry House on Northbourne Avenue. The committee's Report was based in part on background papers written by its members and by the secretariat. Peter Pigott credited Geoffrey Blainey as the Report's editor. [6]

The committee's investigations extended from Australian government and state museums, collections and galleries to university museums, and local, private and open-air museums. If suspicions were aroused within the museum profession by the fact that only one member of the committee was a full-time museum practitioner, there were benefits. [7] In common with the general public, most committee members would rarely have been behind the scenes in a major museum, and the shock of what they found had a powerful effect on the published Report. Deterioration of collections housed in basements and other storage areas could be acute. Collections spilled out into cellars and corridors, were stacked against external walls and hot water-pipes, and crammed into galvanised iron sheds. Only 10 per cent of museum storage space was temperature controlled. Few museums had the space for conservation laboratories and there were fewer than 10 professionally trained conservators in Australia. The Report is liberally illustrated with photographs contrasting spacious and inviting museum displays – at the Australian War Memorial, for instance – with ghastly storage conditions behind and beneath. The committee recommended the establishment of a Cultural Materials Conservation Institute, and postgraduate training for conservators. [8]

Perhaps the next most striking aspect of the Australian museum sector for the committee was the hundreds of small museums that had been founded in the previous 15 years. This was a 'popular and vigorous grass-roots movement', it thought, arising from a curiosity about everyday life in the past that was not being satisfied by the major state museums. [9] Dozens of these museums made submissions to the inquiry, and dozens more were visited by the committee or surveyed by its consultants, some of whom became weary and footsore in their work. 'The sun never sets on the homespun proliferation of museums throughout the land', one of them reported. [10]

Problems of definition troubled the committee. What could be counted as a museum? Where did the new outdoor 'living history' museums fit into its investigations? [11] The committee did include a discussion of outdoor museums in its Report, drawing largely on the findings of Ann Bickford, a Sydney-based museologist who visited Old Sydney Town and Lachlan Vintage Village for the committee. On the basis of Bickford's scathing views of these places in particular, the committee recommended against government support for outdoor museums such as these unless qualified professionals were engaged as advisors. Likewise, it recommended that regional associations or networks of small museums could provide an effective channel for Australian government support, but only if they were supported by professional curators.

Still, the committee admired the work of the volunteers who 'humbly and generously gave their best' in small museums. These were the people whose work Max Harris had been keen to protect from the 'dead hand of Canberra' in 1965. The committee did indeed urge against imposing any bureaucratic plan to centralise local museums into a 'grand regional museum'. [12]

Many submissions to the committee came from people and organisations advocating the establishment of specialist 'national' museums, especially on aspects of technology and natural history. It recommended just three: a national maritime museum in Sydney, a national aviation museum in a place such as Albury-Wodonga, and a museum of Australian biography in Canberra. [13] Among other major recommendations was legislation protecting shipwrecks along the Australian coast; encouraging the donation of items of national significance to museums and like authorities; and preventing the export of certain kinds of cultural property. The committee's proposal for an 'Australian Museums Commission' as a statutory authority to advise government

and co-ordinate federal expenditure on museums and art galleries was especially ambitious. It had been foreshadowed that such an organisation could be modelled along the lines of the Smithsonian Institution in the United States, but the committee recommended instead that the Commission be independent of the administration of a national museum complex. [14]

Most famously, the committee recommended the establishment of a national museum in Canberra. Its linked themes ought to be the Australian environment, Aboriginal history, and the history of Europeans in Australia. The argument for a major display of Aboriginal history, the committee said, was 'overwhelming', for the era of the white man in Australia had occupied mere moments of time compared to Aboriginal history. However, it believed that a major treatment of the history of Europeans in Australia was also needed. No museum in Australia had attempted it. And rather than duplicate the state museums' natural history collections and exhibitions, the new museum could interpret the natural environment in a different way, to show that 'the history of man in Australia' – Aboriginal and European – 'is tied to natural history' in a 'web of interaction'. [15]

The committee suggested a site for the museum west of Black Mountain, where there would be plenty of space for outdoor exhibition areas and activities, on-site storage, and space for conservation, research, education and parking. '[W]e have taken a long-term view of the museum's development', the committee declared. 'A living museum will never be completed.' [16] However, it took a long time for this museum even to get underway. Its legislation was enacted in 1980, and the building finally opened – not on the site proposed by the committee, but on Acton Peninsula – in 2001.

The Whitlam government fell just days after the Pigott Report was tabled. The ensuing political chaos and financial stringencies had a harsh effect on many of the committee's recommendations. In particular, the 'Australian Museums Commission', that according to Pigott himself was the most immediate and pressing priority, [17] was never established. Moreover, even as the Report was published there was criticism about the expense incurred by the Inquiry's processes. The Pigott Inquiry was said to have cost the taxpayer \$202,476, according to a report in the *Australian*. Peter Pigott snapped back in a letter to the Editor that, in purchasing a copy of the Report, readers would find it 'the best \$3.00 they are likely to spend.' His committee had disbanded, he said, and it was what happened next that mattered. 'Museums in Australia have been the orphans of Government in Australia for 148 years [and] it is time they were adopted and cared for.' [18]

Footnotes

¹ Max Harris, 'History on the Hoof', *Australian*, 1 May 1965, p. 9. This piece is quoted by Stefan Petrow in 'Sanitising or celebrating the past? The Van Diemen's Land Memorial Folk Museum, 1957–2007', *reCollections: journal of the National Museum of Australia*, Vol. 4, No. 2, available at http://reCollections.nma.gov.au/issues/vol_4_no_2/papers/sanitising_or_celebrating_the_past/ (accessed 17 May 2010).

² 'Statement by the Honourable Lionel Bowen MP, Special Minister of State', 10 April 1974, A7461, 74/135, pp. 2–3. All archival material referred to in this chapter is held by the National Archives of Australia.

³ 'National Collections', Cabinet Submission No. 846, 12 December 1973, A5915, 846, p. 1.

⁴ 'Statement by the Honourable Lionel Bowen MP ...', pp. 1–2.; and Commonwealth of Australia, *Museums in Australia 1975: Report of the Committee of Inquiry on Museums and National Collections including the Report of the Planning Committee on the Gallery of Aboriginal Australia*, Australian Government Publishing Service, Canberra, 1975, [p. iii].

⁵ *Museums in Australia 1975*, p. 1.

⁶ Peter H Pigott, letter to the Editor of the *Australian*, 8 December 1975 (published 11 December 1975), A7461, 74/135.

⁷ [Peter Pigott], 'Notes on the background of the Committee of Inquiry for use in speech at opening of Museums Association Conference' [November 1974], A7461, 74/135, p. 5.

⁸ *Museums in Australia*, p. 41, and recommendations 2.9 and 2.10, p. 3.

⁹ *Museums in Australia*, p. 21 and p. 71.

¹⁰ Frank Strahan, 'Consultant's summary report of a survey of museums in the Albury-Wodonga region, and

of two museum projects in Gippsland', 26 June 1975, A7461, 75/77, p. 5. Frank Strahan was University Archivist at the University of Melbourne.

¹¹ Peter Ryan, 'Folk Museums', paper No. 8, A7461, 75/15 part 1; *Museums in Australia*, p. 7.

¹² *Museums in Australia*, pp. 19–29. See also Anne Bickford's consultant's report, A7461, 75/77. On the Pigott committee's analysis of country museums in Australia, see Anne-Marie Condé, 'A "vigorous cultural movement": the Pigott Inquiry and country museums in Australia, 1975', *reCollections: journal of the National Museum of Australia*, Vol. 6, No. 2, available at http://recollections.nma.gov.au/issues/vol_6_no_2/papers/vigorous_cultural_movement/ (accessed 14 September 2011).

¹³ *Museums in Australia*, p. 4.

¹⁴ 'National Collections', Cabinet Submission no. 846, 12 December 1973, A5915, 846, p. 3; *Museums in Australia*, p. 57.

¹⁵ *Museums in Australia*, pp. 71–2.

¹⁶ *Museums in Australia*, p. 79.

¹⁷ Telex, Peter H Pigott to Prime Minister, 16 December 1975, A1209, 75/1024, ff.13-14.

¹⁸ Letter to the Editor of the *Australian*, 8 December 1975 (published 11 December 1975), A7461, 74/135. The published letter was edited, and did not include the \$3.00 or the 148 years remarks.

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Understanding Museums - Australian Museums and Museology

Conservation in Australian museums

by Ian Cook, Jan Lyall, Colin Pearson and Robyn Sloggett

Introduction

In Australia the concept of conservation can be traced back to 1827 when the Australian Museum in Sydney – the oldest in the country – was established to collect and preserve ‘many rare and curious specimens of Natural History’. [1] However it was not until the 1960s that conservation began to be regarded as a discipline in its own right. It is now a truly interdisciplinary profession strongly informed by cultural context, and with a major scientific element. [2]

Today the role of the conservator is integral to museum management and conservators are engaged with movable, immovable and virtual heritage collections. Many events have led to the incorporation of conservators into mainstream collections management positions. Contributing factors include research, disasters, application of the concept of significance, adoption of risk management strategy, economic factors, enhanced emphasis on access, an increase in the number of loans of important material, travelling exhibitions, and the opportunities and challenges presented by modern technology. Over 600 conservators are now employed in Australia.

Contemporary conservation is perhaps best understood in terms of the following definition:

Conservation: all actions aimed at the safeguarding of cultural material for the future. Its purpose is to study, record, retain and restore the culturally significant qualities of an object with the least possible intervention. [3]

Creating a genuine profession

Appointment of conservators

In 1953 the Art Gallery of New South Wales sent William (Bill) Boustead, then the in-house-trained assistant conservator, overseas to broaden his knowledge and experience. On his return he was appointed as conservator [4] and seven years later commenced his pioneering conservation training program.

Many of Australia’s early conservators including Alan Lloyd, [5] Ian Cook, [6] Allan Byrne, [7] and Chris Payne [8] owe their initial training to Bill Boustead. They have recounted in oral history interviews their tales of Bill’s sometimes radical approach to treatments and his unique teaching methods. Boustead put conservation on a sound footing in Australia. His opinion was respected in government circles in the national capital; when the Arno River flooded in Florence in 1966 he was sent by the Australian government to assist in the recovery process, so placing Australia firmly on the international conservation scene.

In the late 1960s and the early 1970s Boustead’s cadets moved into the workforce: four to Canberra to establish conservation programs at the National Library of Australia, the Australian War Memorial and the National Gallery of Australia. Other influential figures of the time included George Baker at the Art Gallery of South Australia, Harley Griffith, Maxwell Hall and David Lawrence at the National Gallery of Victoria, and Wallace Ambrose [9] in the Prehistory Department at The Australian National University in Canberra.

In 1970 Colin Pearson, a corrosion scientist, [10] was invited to set up the conservation laboratory of the Western Australian Museum. The initial focus of the new laboratory was the treatment of artefacts from early Dutch and colonial shipwrecks off the WA coast. Pearson had developed specialist knowledge during his time at the Materials Research Laboratories in Melbourne, where he conserved the six cannon and ballast jettisoned by James Cook during the *Endeavour’s* first voyage of discovery in 1770.

The first tertiary trained conservation graduate to be appointed to an Australian museum was Susan Walston, [11] a graduate from the Institute of Archaeology at the University of London, who

was appointed head of conservation at the Australian Museum by director Frank Talbot.

The increasing number of conservators was confronted with enormous problems, including lack of laboratory facilities, lack of conservation materials, and inadequate financial and human resources. Collections were poorly housed; collection managers and other staff were generally unaware of conservation procedures and did not accord appropriate recognition of conservation's importance. All of these problems were enumerated in the Pigott Committee Report. [12]

Creation of a professional organisation

The first National Seminar on Conservation of Cultural Material was held in Perth in 1973. [13] Whereas today the majority of papers at such conferences are from practising conservators, only 17 of the 52 papers presented at Perth were delivered by conservators. Moreover, there are now specialised conferences for specific types of conservation.

A major outcome of the Perth seminar was the establishment of the Institute for the Conservation of Cultural Material (ICCM) which gave conservators a voice and a sense of profession; most early council members were conservators in museums and similar organisations. An early development was the establishment of the *ICCM Bulletin*, a refereed journal, edited by Wal Ambrose and funded by the Australian National University, which established a notable national and international reputation. The Institute was incorporated in 1978 and the name changed to the Australian Institute for the Conservation of Cultural Material (AICCM).

When negotiations took place in 1990 between representatives of various museum professional associations concerning the establishment of a single industry body to represent museums, AICCM remained independent, taking the position that it represented a wider interest base covering libraries, archives, the private sector, historic places and archaeological sites as well as museums. Museums Australia was subsequently established, with some conservators joining as a special interest group. Today the AICCM has around 500 members including individuals and organisations; it has developed professional codes and charters, and is now an effective and cohesive organisation with 13 Special Interest Groups covering such topics as Antarctic heritage, books and paper, paintings, preventive conservation and conservation science.

Establishing a formal training program

Dr AEA Werner, Keeper of Conservation at the British Museum, was appointed by UNESCO in 1970 to conduct a survey of the state of conservation and the conservation needs of Australia and Papua New Guinea. [14] Werner's recommendations influenced the Pigott Committee in its Report. [15] In particular, one important recommendation, regarding the establishment of a postgraduate course to train professional conservators at a degree-granting institution, [16] developed momentum. [17]

Conservation training in Australia

The Pigott Committee's recommendation on conservation training was actively pursued by Sam Richardson, founding Principal of the Canberra College of Advanced Education, now the University of Canberra (UC). The course commenced in 1978 under the directorship of Dr Colin Pearson as the first tertiary-level program in materials conservation in the Southern Hemisphere.

In its 27-year life the course underwent many changes: a total of 367 people, including Indigenous Australians and practitioners from Southeast Asia and the Pacific, in particular New Zealand, graduated and gained employment across the broad spectrum of cultural heritage institutions in Australia and abroad. Other programs were developed and several continue.

For example, the University of New South Wales (in collaboration with the National Film and Sound Archive) offered a course focusing on film and sound archive preservation. This was established in 1996 and was transferred to the Charles Sturt University when the University of NSW wound up teaching programs in library and archival studies in 2000–2001. A Masters by coursework program at the University of Western Sydney began in 1997 and closed in 2003. The Canberra Institute of Technology program, still operating, provides training for conservation technicians mainly for the national collecting agencies in Canberra.

The closure of the University of Canberra course in 2002 resulted in a number of other universities expressing interest in developing conservation programs based generally on their experience with museum studies programs, or the fact that they taught both art history and chemistry.

In the meantime the University of Melbourne Conservation Service, directed by Associate Professor Robyn Sloggett, was approached by the University of Canberra to provide support for students who were completing the UC program. In 2004 the Centre for Cultural Materials Conservation (CCMC) established a new program at Masters level, incorporating a strong element of professional practice though teaching staff in the University's Conservation Service. [18] The first graduates of this course are now in the workforce.

In 2009 the University of Canberra re-established the degree of Bachelor of Cultural Heritage Conservation as part of the new Donald Horne Institute for Cultural Heritage launched on 30 July 2008. The conservation program works closely with the national collecting institutions in Canberra to provide the practical training component of the program.

Continued growth of the profession

Institutional conservation facilities

Throughout the 1980s Australia saw substantial growth in the number, scope and scale of both new and refurbished conservation facilities. There were major new laboratories established at the Australian War Memorial, the National Archives of Australia, the State Conservation Centre of South Australia and the National Gallery of Australia. Expansion of existing laboratories took place at the Art Gallery of NSW and the National Library of Australia. New museum facilities in Sydney, such as the Australian National Maritime Museum and the rebadged Museum of Applied Arts and Sciences as the Powerhouse Museum, created extensive conservation laboratories and workshops.

Staffing these laboratories was a challenge. Graduates from the Canberra conservation program quickly found employment and overseas conservators were recruited, such as Nathan Stollow (National Gallery of Australia), Julian Bickersteth [19] (Powerhouse Museum), and Alan Howell [20] (State Library of NSW). All major collecting institutions now have conservation units staffed by trained conservators.

Private conservation practices and central conservation facilities

There is a long history of conservation work being outsourced by institutions to private practitioners, including artists, framers and other craftsmen. Many of these people did not always have the training or experience required, and this sometimes led to material being treated in ways that was at odds with conservation professional practice. With the increase in emerging graduates the ratio of trained conservators working privately increased with a commensurate alignment of private and institutional standards.

The majority of private restorers and conservators practising up to the mid-1980s were sole practitioners, but a major shift in the way conservation services were delivered was heralded with the opening in Adelaide in 1985 of the State Conservation Centre of South Australia (later renamed Artlab Australia, directed by Ian Cook), a government business enterprise operating in the public and private sectors. Similarly, Campbell Conservation – established in 1987 as a private company in Sydney, and officially launched as International Conservation Services (ICS) under Julian Bickersteth in 1992 – began a similar push to develop the market for a broad range of conservation services. [21] Artlab and ICS between them now employ some 50 staff, perhaps 10 per cent of conservators in Australia.

Regional programs

Owing to the widespread distribution of museums in Australia, the diversity of their size and varying levels of funding, many capital-city-based museums have offered outreach services to smaller museums. The Western Australian Museum initiated regional conservation services in the 1970s, and Karen Coote [22] and Phil Gordon at the Australian Museum in Sydney pioneered services to Indigenous communities during the 1990s.

Ideas for mobile conservation services, like those at the Canadian Conservation Institute in Ottawa, were embraced by Les Byron, one of Boustead's cadets who resigned from the Australian War Memorial to establish a mobile conservation service in the early 1970s. In 1980 the Regional Galleries Association of New South Wales, with support from the Art Gallery of NSW, employed Cathy Lillico-Thompson to provide regional conservation services. She travelled regularly, conducting basic work and transporting items requiring more extensive treatments back to the Art Gallery. [23] During the Australian Bicentennial in 1988 a fully equipped mobile conservation laboratory was constructed for the Regional Galleries Association of NSW, with funding [24] from

the NSW Bicentennial Council and the National Australia Bank. The laboratory toured much of NSW and during its operation provided a great service to rural and regional NSW.

In Victoria, a regional conservation centre was established in Ballarat in the early 1980s. This was superseded by the Victorian Centre for the Conservation of Cultural Material which folded in 2002. [25] The National Library of Australia's Community Heritage Grants Scheme, initiated by Jan Lyall in 1994, continues to provide assistance to the small and regional museum sector. [26]

The Heritage Collections Committee

Conservators played a valuable role in supporting the establishment and development of the National Collections Working Group, later the Heritage Collections Committee (HCC), and its successor, the Heritage Collections Council (also HCC).

The HCC established the Conservation Working Party, later to become the Collections Management and Conservation Working Group, in 1993. Major achievements of these groups were the development of the *National Conservation and Preservation Policy for Movable Cultural Heritage* in 1995 [27] and the *National Conservation and Preservation Policy and Strategy for Australia's Heritage Collections* in 1998. [28]

The 10 policy statements articulated in both the 1995 and 1998 publications provide a powerful set of overarching principles that establish foundations for developing strategies to manage national heritage collections. The principles were grounded on broad cultural issues, including community well-being, diversity and access, as well as cornerstone activities to improve and sustain the conservation of collections through intergovernmental coordination, the application of significance methodology, community awareness raising, education, and research and development. When the *Policy and Strategy* document was launched in 1998 copies were distributed widely throughout the country. It remains today as a benchmark document that offers professional frameworks for those working in and with museum collections.

The Conservation and Collection Management Working Party went on to develop a series of consultancies that resulted in important publications including *Significance*, [29] a ground-breaking publication that has been used by organisations worldwide; and the training package *re-Collections*, [30] *Be Prepared* [31] and *Guidelines for Environmental Control in Cultural Institutions*. [32]

Developments in professional practice

In the 1970s most conservation departments were little more than service components of museums with limited input to their general management. They are now integral to much of the work of museums.

Research

The reputation of conservation practice depends on the scientific research which informs it. Both Werner's 1970 UNESCO report [33] and the 1975 Pigott Report [34] recommended the establishment of a central conservation research facility. None has ever been established and opinion remains divided as to the merits of the proposal, both in respect of the conduct and the promotion of research.

Many Australian museums and other collecting institutions have active research programs and some Australian conservators have distinguished themselves internationally. Examples in traditional conservation fields include: the Western Australian Museum, in maritime archaeological conservation and marine corrosion science; the National Museum of Australia, the Australian War Memorial and the Powerhouse Museum in research on large items of technology; and the Australian Museum in its treatment of bark paintings and other Indigenous cultural items. The National Library of Australia, the National Archives of Australia and the National Film and Sound Archive are active in the newer field of digital preservation.

Cultural materials conservation is recognised by the Australian Research Council (ARC) as a high impact, interdisciplinary research area; conservators have received numerous research grants. In particular the University of Melbourne Centre for Cultural Materials Conservation (CCMC) has been successful in applying for these grants. The CCMC has also graduated conservators who have undertaken conservation study at doctoral level. In addition it is educating an increasing cohort of professionals enrolled in research higher degrees.

Minimal intervention is one of the important contemporary paradigms in the conservation profession. In the past, many items have been damaged by invasive treatments. Classic examples of procedures no longer in use because of adverse long-term effects include the use of chloramine-T for bleaching works of art on paper, soluble nylon as a consolidant for stone, and certain acrylic polymers for consolidating pigments on bark paintings.

Research into the life cycles of museum pests, issues related to the toxicity of pesticides and staff and visitor health, and examination of damage to collections by pesticides has resulted in the widespread adoption of integrated pest management (IPM) in many museums. IPM places an emphasis on controlling and monitoring pest activity in museum environments such as storage and display spaces, and using least harmful chemicals to control pest activity. Safe alternatives to treat infested material include freezing, oxygen deprivation, and high temperatures. [35]

Research has also led to alternative means of controlling light, temperature and humidity in museums. The building of new museums and the refurbishing of existing ones saw an increased reliance on air-conditioning to provide safe, stable environments for the preservation of collections. However the expense and unreliability of many such systems has led conservators to explore the building envelope as the mechanism to buffer against adverse external conditions. Passive climate control is the term used to describe procedures relying on analysis of local climates and appropriate building strategies to minimise the reliance on full or partial air-conditioning. [36]

Disaster preparedness

Disasters placed conservation centre stage in the 1980s. The serious fire in the roof of the National Library in 1985 alerted the Australian government to the need to provide greater protection to its heritage collections. All federally funded institutions were required to develop counter-disaster plans, to implement them and to report annually on their status. Disaster preparedness has been a valuable means of integrating conservation with collections management. Developing counter-disaster plans around the country created an awareness of the need to identify the significance of collection items. [37]

Occupational health and safety

Awareness of occupational health and safety (OHS) issues was very patchy in the 1970s – some conservation laboratories practised procedures that conformed to the accepted standards of the day, but others fell dramatically short. This lack of awareness and/or lack of appropriate facilities resulted in some conservators suffering acute or chronic health damage. Examples of problems include repetitive strain injury (RSI), chronic back problems, respiratory illnesses, asthma, eczema and dermatitis.

At the same time, OHS issues barely rated a mention in conservation publications – they were usually covered in an appendix that merely listed dangerous chemicals. [38] No mention was made of how to work with these substances, nor was there any discussion of topics such as effective extraction systems, protective equipment, storage and disposal of chemical waste, the dangers of treating mouldy objects, dangers of pesticides and fumigation chemicals, safe handling procedures, or standards and regulations.

In line with more rigorous OHS requirements that have been developed across all industries, conservators are now required to have detailed relevant training. In addition they have to have knowledge of and adhere to relevant legislation, such as that for the storage of dangerous chemicals. Excellent publications that address the full spectrum of OHS issues are available. [39]

Significance assessments and risk management methodology

The use of significance assessment as a management tool for objects and collections was introduced to conservators in the late 1990s. Significance methodology in the collections sector evolved out of earlier work by Australia International Council on Monuments and Sites (ICOMOS) which developed the Burra Charter for places of cultural significance in 1979. The work of the Heritage Collections Council was instrumental in developing methodologies for museum collections.

Many museum professionals, now familiar with making significance assessments for specific items and collections, are still coming to terms with the concept of significance 'thresholds' and the specifics of its application in collections management. The concept of quantifying significance levels as an input to quantitative risk management methodology is at an early stage of development, both in Australia and internationally. Interestingly, the Australian/New Zealand Standard, Risk

Management (AS/NZS 4360:2004), [40] developed by Standards Australia and Standards New Zealand, is being used both internationally and locally for conservation risk management work.

Risk management has been used in a number of conservation applications; for example, it has contributed to a relaxation of environmental standards in certain parts of museums such as those in exhibition and storage areas. The standards previously specified for relative humidity levels have been modified and fluctuations of $\pm 10\%$ RH or more are seen as an acceptable risk for some collections. [41] A risk management strategy accepts a calculated risk and an acceptable level of uncertainty. It also enables limited resources to be used more wisely. [42] The AICCM has recently set up a *Taskforce on Environmental Guidelines* to address these issues. It will report on its finding in 2011/12.

Economic factors

As a consequence of the increasing influence of financial considerations, preventive conservation occupies a more prominent role in modern day conservation than it did in the past. Such practices are generally less expensive than traditional conservation and restoration procedures. This is reflected in the *AICCM Code of Ethics and Code of Practice* (1999) which states:

The AICCM member should recognise the critical importance of preventive conservation as the most effective means of promoting the long-term preservation of cultural property. The AICCM member should provide guidelines for continuing use and care, recommend appropriate environmental conditions for storage and exhibition, and encourage proper procedures for handling, packing and transport to a level of detail as appropriate. [43]

Emphasis on access

A major recommendation of the Heritage Collections Working Group was to improve access for those living in regional Australia to the nation's cultural collections. Two developments have assisted in this regard: an increase in the number of travelling exhibitions featuring material sourced from widely dispersed institutions; and a massive expansion of digitisation activity in most institutions and the subsequent provision of free access to the resulting digital images. While a digital image is not the same as the real thing, it is becoming an accepted method of viewing collection material. Common sense decrees that not all material can or should travel, and a decision as to whether a valuable part of a collection can safely travel should only be made after a careful examination of the risks involved.

Conservators now play a vital role in managing travelling exhibitions. Decisions regarding the safety of travelling fragile objects were often contested among curators, conservators and the senior managers of museums. Conservators on occasions assumed a right to veto the movement of works on conservation grounds, which sometimes led to conflict with other museum staff and management. On other occasions museum directors and curators found it expedient to ask conservators to provide evidence of fragility so that they could refuse the loan of specific works, thus politicising conservation practice. The adoption of clear guidelines and procedures related to loans has made this process considerably less fraught.

Digital preservation

Major Australian libraries and archives have been developing strategies for the preservation of digital material since the early 1990s. [44] For museums, awareness of born-digital preservation has been slow to develop, but increasingly born-digital material is being created by artists and is being collected by museums. For conservators the issues are twofold: preserving the information and preserving meaningful access to it. It is the latter which is the most challenging because of the need to manage frequent changes in technology.

Future directions and challenges

What are the fundamental challenges that museum conservators face in the twenty-first century? There are many, including managing technical, ethical and cultural issues, and their interrelationships. Some key challenges include:

- the complex and costly problems of caring for late twentieth and twenty-first century technological objects, from computers to machinery, vehicles, aircraft and vessels;
- the management of collections and objects broadly dispersed as a result of repatriation to

originating communities, especially if this happens on a global scale;

- cultural impacts resulting from increasing community dependence on digital technologies;
- the costs of conserving collections and providing access to them in a world of global economics, fuel crises and global warming; and
- developing training models that are accessible and relevant across social and cultural communities.

The capacity of museums to manage technological objects in terms of costs and expertise represents an unprecedented challenge. Such objects not only include those that illustrate technological development, but also cover materials that constitute installations and other works of art that interpret our times.

Repatriation of collections to Indigenous and other communities will result in both positive and negative cultural and technical outcomes. The wider distribution of collections may have the potential to both increase and decrease risks related to their sustainability. Such analyses will become more complex, and the overall costs for the management of a distributed global collection will unquestionably rise. However, the politics and economics of caring for collections may be better supported across communities in the coming century because they are more widely 'owned'.

Alternatively, as more collections are available digitally, the value of real objects for governments which have traditionally provided most of the funding for conservation may disappear. This is a debate about authenticity and significance versus substitution of the real with the virtual. It also covers the debate about virtual manipulation of images and the ethics of such practices, and the political will of the conservation profession to keep its agendas front and centre.

Will digital access increase the value of the authentic or render the original less valuable? Alternatively, will processes such as virtual repatriation of objects foster growing support for museum collections and investment in conservation work? What are the consequences of such thinking for conservators and museums more generally? How will museums be able to justify the high costs of storing the real object versus the perceived relatively inexpensive costs of digital storage? How will art museums manage the long term preservation of digital heritage materials?

In a world faced by economic crises, diminishing fossil fuel resources and environmental challenges including climate change, will only those objects of high market value or some other popular criterion be considered to warrant costly remedial treatments? What will be the opportunities for conserving collections that sit outside national value systems or norms? What are the implications of such outcomes for, for example, social history collections versus fine art collections? Will escalating energy costs drive conservation research further towards preventive conservation solutions such as passive climate control? Will such developments prove too difficult for the profession to survive as we know it?

Nobody knows what the future will hold. The conservation profession today is concerned primarily with caring for collections in institutions and a change in the economy of any one country could impact on priorities there and elsewhere. The effects of civil unrest and natural disasters (which may or may not be a result of global warming) present immediate challenges to the preservation of cultural materials. Will the unique skills of conservators and their ability to find pragmatic solutions which are politically and economically acceptable be such as to allow museums to manage their collections effectively for the benefit of society? The Australian conservation profession, with 40 years of experience and a pool of university-trained conservators, is now in a strong position to tackle these challenges.

Footnotes

¹ A brief history of the Australian Museum www.amonline.net.au/archives/fact01.htm.

² *In an attempt to capture the recent history of the profession, the National Library of Australia has embarked on an oral history project involving interviews with a range of people who have been instrumental in shaping the conservation profession in Australia. References to specific interviews occur frequently in this chapter.*

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- ⁵ Alan Lloyd, interviewed by Jan Lyall for the National Library of Australia's Oral History Collection, ORAL TRC 5330, Record Id: 3296700, 4–5 November 2004.
- ⁶ Ian Cook, interviewed by Jan Lyall for the National Library of Australia's Oral History Collection, ORAL TRC 4795, Record Id: 1143255, 18 September 2001.
- ⁷ Allan Byrne, interviewed by Jan Lyall for the National Library of Australia's Oral History Collection, ORAL TRC 4843, Record Id: 23449079 26 March 2002.
- ⁸ Christopher Payne, interviewed by Jan Lyall for the National Library of Australia's Oral History Collection, ORAL TRC 5592, Record Id: 40203832, 7 January 2006.
- ⁹ Wallace Raymond Ambrose, interviewed by Jan Lyall for the National Library of Australia's Oral History Collection, ORAL TRC 5325, Record Id: 3296649, 15 November 2004.
- ¹⁰ Colin Pearson, interviewed by Jan Lyall for the National Library of Australia's Oral History Collection, ORAL TRC 4938, Record Id: 24538246, 24 and 30 April 2003.
- ¹¹ Susan Walston, interviewed by Jan Lyall for the National Library of Australia's Oral History Collection, ORAL TRC 5329, Record Id: 3296625, 30 September 2004.
- ¹² Peter Pigott et al, *Museums in Australia 1975: report of the committee of inquiry on museums and national collections including the report of the planning committee on the Gallery of Aboriginal Australia*, AGPS, Canberra, 1975.
- ¹³ Cook, Byrne, Pearson, Walston, Ambrose interviews.
- ¹⁴ AEA Werner, interviewed by Jan Lyall for the National Library of Australia's Oral History Collection, ORAL TRC 4969, Record Id: 901595, 12 May 2003.
- ¹⁵ Pigott Report.
- ¹⁶ Pigott Report.
- ¹⁷ The Pigott Report noted that the Canberra College of Advanced Education had expressed interest in establishing such a course and recommended that it be established in 1977.
- ¹⁸ Robyn Sloggett, interviewed by Jan Lyall for the National Library of Australia's Oral History Collection, ORAL TRC 5498-0000, Record Id: 28278729, 22 August 2005.
- ¹⁹ Julian Bickersteth, interviewed by Jan Lyall for the National Library of Australia's Oral History Collection, ORAL TRC 5197, Record Id: 3229447, 20–21 July 2004.
- ²⁰ Alan Howell, interviewed by Jan Lyall for the National Library of Australia's Oral History Collection, ORAL TRC 5002, Record Id: 2607498, 23 August and 1 October 2003.
- ²¹ Bickersteth interview.
- ²² Karen Coote, interviewed by Jan Lyall for the National Library of Australia's Oral History Collection, ORAL TRC 5331, Record Id: 3296735, 9 November 2004.
- ²³ Catherine Lillico-Thompson, interviewed by Jan Lyall for the National Library of Australia's Oral History Collection, ORAL TRC 5198, Record Id: 3240253, 20 July 2004.
- ²⁴ Lillico-Thompson interview.
- ²⁵ Jude Fraser, interviewed by Jan Lyall for the National Library of Australia's Oral History Collection, ORAL TRC 5497, Record Id: 3546701, 23 August 2005.
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- ²⁸ Cultural Ministers Council and Heritage Collections Council, *National Conservation and Preservation Policy and Strategy: Australia's heritage collections*, Commonwealth Department of Communication and the Arts, Canberra, 1998.
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- ⁴³ Australian Institute for the Conservation of Cultural Material and Heritage Collections Council, *Code of Ethics and Code of Practice*, AICCM, Canberra, 1999.
- ⁴⁴ The National Library of Australia established one of the first web archiving programmes in the world (PANDORA); and the National Archives of Australia has developed an open source tool to help preserve digital records (XENA). A large body of information is available from PADI – Preserving Access to Digital Information <http://www.nla.gov.au/padi/index.html>, which is a subject gateway to international digital preservation resources.

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Understanding Museums - Issues in museology

Digitisation to social media

by Des Griffin

At the 2007 'Museums and the Web' conference in San Francisco, Sebastian Chan from the Powerhouse Museum recounted the history of a project that offered visitors to the museum's website additional ways of interacting with the museum and its collections. In June 2006, the museum had launched a new means for browsing and searching almost all its collection database in order to optimise usage. The site offered 'folksonomies', ordinary words (tags) employed by users without any hierarchy or reliance on the technical terms used by the museum's curators to describe and classify the objects in the collection. 'Visitors' no longer required familiarity with collecting and museological practice to locate objects of interest to them. They could get the information they wanted about these objects using any search terms they liked. The path they used to get there would be recorded electronically by the museum's software.

From the first use of computers by museum people in the 1960s – astonishingly slow machines accessible by punched tape – computers and electronic devices of all kinds have come to dominate life in museums, as everywhere else, and not simply in size and computing power. It is no longer acceptable simply to provide information and expect people to accept the truth of what is written there. It is now expected that museum visitors – real and virtual – will be able to access the museum's resources in any way they, not the museum curator or IT technical experts, believe to be most appropriate.

From the email and websites of the 1980s, the web has morphed into a resource accessible in multiple ways that are determined by the user, with little or no input by the organisation or person who originally communicated the material. In the very near future, something akin to artificial intelligence will provide information on Internet sites using complex routines that extract and abstract data of all kinds from elsewhere. Portable devices will be able to access this information.

This extended introduction outlines developments and opportunities that museums have used to exploit these innovations.

Information Technology: the revolution in museums

The application of information technology to almost everything museums do is perhaps the fastest growing area in museums, as in many other areas of human endeavour. This is shown by the developments that have occurred since Tim Hart and Martin Hallett completed their chapter on digitisation featured in this section of the publication. They were writing as what is known as Web 2.0 was just emerging. Web 2.0 facilitates information sharing. But it does more than that: it is user-oriented and allows user-centred design. The consequences are social media.

As Hart and Hallett write, referring to the developments of folksonomies at the Powerhouse Museum, 'This approach leverages user interest and community knowledge, which has paid immediate and substantial dividends for the Powerhouse Museum. In the twelve months following the implementation of OPAC2.0, online visitation has increased threefold. This project is attracting significant international interest and is one to watch.'

They also say, 'There are many complex issues around the "voice of the object" and our position of trust and authority. Australian museums cannot simply rely on their existing reputations for authoritative expertise and knowledge if they are to remain relevant and sustainable.'

Everyone associated with museums – especially those working with collections – will recall, often with rather strong feelings, those expressions of surprise by people who do not work in museums as to why museums hold so many objects: 'what is it that museums do with all that stuff?' Web 2.0 offers exciting ways to overcome the seeming remoteness of the collections.

The development of digitisation – conversion of information in analogue form to digital information – allows greater access to museum collections and interaction with the information about objects in those collections. This is especially made possible by the nature of Web 2.0. This was supported throughout the 1990s in Australia by government funding, and by funds from museums

themselves, in a project managed by the Heritage Collections Council sponsored by the Cultural Ministers Council.

But government funding declined and eventually ended in the last couple of years. One could ask why governments, supposedly concerned about efficient and effective use of the 'assets' which they have supported financially, turn away from the opportunities that are now on offer?

Instead of funding further access to collections, in the name of accountability – that so often misused piece of jargon – governments, at the behest of auditors have demanded financial valuation of collections and the placing of the value in the balance sheet. That the valuing of objects that cannot be traded is meaningless is steadfastly ignored. But the huge time and effort is not ignored by the staff whose time is diverted to the task!

Digitisation of collections

The project started by the Heritage Collections Council, Australian Museums on Line (AMOL), as described by Hart and Hallett, aimed to digitise collections and make the information available on the Web, even to children in schools. It later became the Collections Australia Network (CAN), and continued to be funded by governments. But with funding withdrawn, as the Cultural Ministers Council itself ceased to exist, the platform is still managed by the Powerhouse Museum. Further partner organisations are not being sought but social media functionality has been retained.

The CAN site is running essentially as a professional network for the exchange of ideas. Most participants are regional and smaller museums. Listservs – sites using email list management software to which users subscribe so as to receive notices and information by email as they are posted – are managed by CAN's administrators and serve about 3000 users. Administrator Geoff Barker aggregates live Twitter streams into 'The Museum Community Daily'. (There are numerous sites, especially dealing with politics, that aggregate items from other sites.) Traffic on Twitter is high, perhaps because signing on to it is easier than logging into sites like MANexus and Museum 3.0 (see below).

In the area of natural history there are sites containing information mainly for scientists. However, the Atlas of Living Australia (ALA) combines observational and collection/object-based information for a large number of groups of flora and fauna, allowing mapping and inspection of individual records. 'Themes provide stories of general interest to the Australian public about particular groups of organisms. The Atlas aims to provide insight into the importance of these animals, plants and microbes through the amalgamation of rich data sources. However, we cannot develop themes without the assistance of scientists, researchers and other interested parties.' OzCAM, online zoological collections of Australian animals, and the Australian Virtual Herbarium (AVH) form a very solid base, allowing museum and botanical collections to be a central part of the ALA. Restrictions on the use of Australian government funds for digitisation are holding back development in some areas. OZCAM is a great resource for researchers, and a terrific example of collaboration at a national level in the natural sciences.

There are other sites that aggregate collections of various kinds. The National Library aggregates images of artworks from other sites such as Picture Australia. Individual art museums have images of works from their collections on their own websites.

Social Media: engagement and access for audiences

As in so many other things about museums – and anything else – the best ideas are not necessarily found by talking to those who work in that area, or reading only the literature about that area. Too many missteps have been made in managing and leading museums because the reference points were only other museums rather than the wider world.

So it is with social media and museums. After all, the challenges are essentially the same. Social media with its blogs, wikis, nings, Facebook exchanges, tweets, dig commentary, Flickr photos, the journeys on FourSquare and the videos on YouTube all offer new opportunities for communicating about the trivial and the serious, all ignore any notion of authority, all pose the same challenges to distinguish what will make a difference from what will simply satisfy today's problems. Delicious.com lists the best ('tastiest') bookmarks on the Web. New adaptations seem to appear every week. It doesn't matter what organisations we are talking about, though each will have individual approaches and wholesale transposition would be silly.

Social media can also marginalise traditional print and electronic media with their mandatory

mediation by reporters and editors. The temptation is to ignore the traditional media and to believe that new media will attract new audiences, especially younger people who have not previously been part of the audience or customer base. It can be easy to believe that those who are reached by social media will come to value the organisation's offerings, and the organisation itself, more highly. It is reasonable to believe that greater engagement and easier access would lead to larger audiences. Museums already strongly oriented to their audience are more likely to structure their social media strategy in an appealing manner.

One thing is obvious. As soon as even a reasonably large number of people start using any of these platforms, any person or organisation that is the subject of conversation had better take notice of what is being said, just as if there were a near-libellous or fabulously positive piece in traditional media.

In social media, access for anyone posting a comment or request can be directly to the particular platform and not via some other medium such as a website. Go to Facebook or Twitter and search for your favourite museum. The response is near instantaneous, and the capability for galvanising action is astonishing. The 'Arab Spring' is just one example in the political world: photos and comments posted on various sites accessible by hand-held devices drew very rapid comment from traditional media and other platforms, leading to international responses.

Flash mobbing facilitated by text messages on mobile devices can gather hundreds of people for an afternoon of training for a dance routine to become part of an advertisement. Concerted commentary aimed at some person or organisation can create positive awareness or become a source of anguish or misery.

Blogs have been used as part of the 'Open Science' movement allowing, for instance, a mathematician to post an invitation to others to find a mathematical proof about the properties of multidimensional objects. Within days, readers, including high-ranking academics, had chipped in vital pieces of information or new ideas. The joint effort led to several papers published in journals. It was an astonishing and unexpected result. [1]

People using social media have little concern for issues such as privacy, traditionally correct spelling of words, and even the continuation of whatever site they are using. That much of the traffic is superficial is not seen as a problem. People inhabit different sites.

Social media: opportunities for museums

What does all this mean for museums? Firstly – and this is one of the issues most commonly mentioned by many museum people – the museum no longer has control over what is said, what interpretation is drawn out from visits, other people's comments, publicity or lack of it, the nature of the objects, exhibitions or public statements or behaviour of staff or executives. It matters little whether that worries the museum's executives!

Secondly, attention to sites like Facebook and Twitter is very demanding: the museum that decides to involve itself with these platforms needs to have good evidence that it is worthwhile in terms of achieving its goals and, as always, in being distinctive. More than that, genuine communication about issues of importance requires care and attention. Therefore the museum can't just treat this communication in the same way as one would treat casual conversation.

The obvious benefit is engagement with an audience, an opportunity to find out what people think and, more importantly, to encourage people to discuss issues involving the museum and its 'business focus', whether it is an art prize, or an exhibition on some scientific subject.

Museums have made use of social media to publicise exhibitions, by running competitions such as submitting photographs or other artworks relating to some object or exhibition in the museum, even bringing people together (termed crowdsourcing) for the opening of an exhibition. These are part of the marketing function!

Crowdsourcing has been used by a number of museums to create exhibitions. A leading exponent is the Brooklyn Museum where Shelly Bernstein, Chief of Technology, works to further the museum's community-oriented mission through projects including free public wireless access, web-enabled comment books, projects for mobile devices and putting the Brooklyn Museum collection online. Bernstein created 1stfans, a socially networked museum membership, and organised *Click! A Crowd-Curated Exhibition* and *Split Second: Indian Paintings*.

Click! was based on the proposition that the wisdom of crowds is superior to that of individuals, something that has been replicated in social behaviour experiments. *Click!* was an exhibition in three consecutive parts: an open call to artists to electronically submit a work of photography that responds to the exhibition's theme, 'Changing Faces of Brooklyn', along with an artist statement; an online forum for audience evaluation of all submissions (as in other juried exhibitions, all works were anonymous); and an exhibition at the museum, where the artworks were installed according to their relative ranking from the juried process. Visitors were able to see how different groups within the crowd evaluated the same works of art, and the results were analysed and discussed by experts in the fields of art and online communities. Crowd theory (advanced by *New Yorker* business and financial columnist James Surowiecki in his book *The Wisdom of Crowds*) was tested.

For quite a few years visitors, real and virtual, have been able to download exhibition 'guides' to some sort of portable device, including smartphones, or even capture images and commentary to make their own guide to the museum. Obviously a museum has to have a very superior product if it wants visitors to use the audioguide it has developed. The key point is the usability of the information in terms of access, and the quality of the information as determined by the user. Nothing new in that!

Many museums in many countries have made images of objects in their collection available on their websites. Natural history museums have asked people to inform them of the sightings of various animals or plants, images of which are found on websites which can now be viewed on an iPad. Of course this can be problematic because the identification may not be accurate. There are 'workarounds' for this of course.

Most museums and most arts and cultural organisations in Australia make use of social media sites such as Facebook, Twitter and YouTube. What else would one expect! Most of the attention is directed to marketing: informing and seeking to attract audiences to the program or event, even creating special events through video on YouTube promoted through Twitter, publicising a program such as a play or exhibition. Microblogging platforms such as Tumblr allow users to post text, images, videos, links, quotes and audio to a short-form blog from one posting.

The Australian Museum offers blogs on a variety of subjects including social media and a variety of other material. Education outreach programs, such as the long-running 'Museum in a Box' which goes to schools distant from the museum, are assisted by the use of video links: education staff can talk 'face to face' to students using the objects and explanatory notes in the box. There are pages on almost everything within the field of interest of the museum, from biodiversity to microscopy. The National Museum of Australia offers a number of blogs, including one by Director Andrew Sayers; there are links to research diaries, stories about Forgotten Australians and cartoon competitions for schoolchildren.

Museum Victoria has numerous blog posts by staff dealing with subjects ranging from holothuroids – sea cucumbers – to the eclipse of the moon, to the visit by Director Patrick Greene to Egypt (with links to his lecture commencing the Tutankhamun Tuesday lecture series). There are also blogs on exhibitions and behind the scenes happenings and photographs from the collection. Like a number of museums, Museum Victoria also offers podcasts, something that media sites such as the BBC, the ABC and a number of other newspaper, journal and electronic media sites have featured extensively. A number of museums offer video presentations by staff or visiting speakers.

Almost all art museums have pages on Facebook and Twitter with posts about events and exhibitions, and links to stories in other media which are relevant to the museum: for instance the release by Chinese authorities of the artist Ai Weiwei. Museum Victoria offers images of animals and plants and seeks information from the community about sightings of the species depicted. The images are available on iPad and other devices as well as computers.

Art museums such as the Art Gallery of New South Wales, the National Gallery of Victoria, the National Gallery of Australia and the Queensland Art Gallery make extensive use of platforms such as Facebook, gathering between 5000 and 15,000 'fans'. (Non-art museums have between half and a fifth of this number.) Success can be judged by the number of visitors to Facebook who click through to the main web page of the Gallery, as well as the number of fans who like the site. These people are highly engaged, and staff keep up with visitor comments. For its 150th anniversary the National Gallery of Victoria selected 150 artworks from its collection which it posted on its website and asked people to vote for their favourite work: visitor comments were posted. The 10 favourites became part of a tour for visitors.

The National Library of Australia's Trove project has placed online digitised newspapers, journals, articles and datasets, over 100 million Australian and online resources. Trove invites contribution from all users in a variety of ways: they can tag items found with keywords; make comments that could be useful to other users; participate in the user forum; contribute digital photographs via Flickr; and even correct the text of digitised newspaper articles. The Powerhouse Museum provides images of Sydney and its people from its archives on Flickr; visitors to the site can comment on the images.

Nings, platforms for creating social websites that can be used for commenting and exchanging views, currently exist in the museum domain. MANexus, managed by Museums Australia, and Museum 3.0, managed by a small non-profit group founded by Angelina Russo (of RMIT) and Lynda Kelly (of the Australian Museum), each have members who can contribute to forums, post notices of events including conferences, photos and so on. Museum 3.0 has 3000 members around the world. But the question that must be asked is, what difference is this making? The sad fact is that a trawl through the entries on the forum page of both sites reveals very little response to any of the topics. Calls for comments seldom end up with responses from more than half a dozen people. Possibly all the action is on Twitter. The number of responses as well as 'hits' is surely more important than the number of subscribers.

The semantic web, the next wave

Now Web 3.0, termed the 'semantic web', is emerging as the next wave. Wikipedia tells us the following about this.

The Semantic Web is a 'web of data' that enables machines to understand the semantics, or meaning, of information on the World Wide Web. It extends the network of hyperlinked human-readable web pages by inserting machine-readable metadata about pages and how they are related to each other, enabling automated agents to access the Web more intelligently and perform tasks on behalf of users. The term was coined by Tim Berners-Lee, the inventor of the World Wide Web and director of the World Wide Web Consortium ('W3C'), which oversees the development of proposed Semantic Web standards. He defines the Semantic Web as 'a web of data that can be processed directly and indirectly by machines'.

One example is Qwiki, a site linked to Wikipedia from which it extracts the text and to which it adds voice over and images. Qwiki promotes itself thus: 'Qwiki's goal is to forever improve the way people experience information.' The assertion is, 'We are the first to turn information into an experience. We believe that just because data is stored by machines doesn't mean it should be presented as a machine-readable list. Let's try harder.' The Qwiki website offers a glimpse of one possible avenue for online searching where a coherent data source (Wikipedia) is queried and mashed-up to provide a summary response to almost any question in seconds, accompanied by a slideshow.

In Web 3.0 the possibility is that algorithms can be developed to both extract and abstract information from multiple sites and present that as seemingly new matter. How do we know whether what is being presented on such sites is reliable? Who are the authors of this information? On the Wikipedia site it is possible to trace authorship, and the people managing the site place qualifications about entries that for whatever reason are thought not to adequately or accurately represent the topic. (And we should note that algorithms now govern much of the share trading in equities markets, and that by itself has been an important reason for occasional violent fluctuations in share prices on some exchanges.)

Challenges: real opportunities

Discussions amongst museum people about the increasing attention to social media feature comments that question whether, through the emergence of social media, collections are being ignored. Is this part of the same argument we heard 30 years ago when 'blockbuster' exhibitions were all the rage? Back then some people asserted that blockbusters diverted attention from what should be the principal concern of each museum, the presentation of its own collections. Arguably this missed the point! The principal objective – not mission statement – of museums remains encouraging the understanding and appreciation of art (or science or whatever is the principal area of collection focus) amongst the community: social media ought to aim at that, just as should exhibitions of all kinds.

Should we be concerned about social media being most commonly used for marketing and

promotion rather than engagement of audiences in discussions about mission-oriented subjects? We can't get away from the fact that in a number of cases museums use these various platforms to enlarge their information resources for visitors. A link on the Australian Museum's Facebook page takes you to a talk on recycling waste, for instance.

It isn't social media that determines what the museum's spokesperson says or doesn't say. That is a function of the museum's personality and what it sees as its competitive advantage, its uniqueness and its role. This is shown by the success of the Tate in the UK in the way it interacts with visitors on Twitter: it says what is on, when and where in a simple and straightforward way, asks visitors about their experience, helps people with queries or problems and communicates a sense of fun, so revealing that real people are dealing with this interaction. [2] In this age when anything official takes forever and is usually unhelpful if not rude, this is refreshing!

But the point is this. Museum people can control what use they make of the opportunities afforded by Web 2.0 and Web 3.0. As Kristen Purcell, associate director for research at Pew Research Center's Internet & American Life Project said at the 2011 Museums and Web conference, 'these technologies, and others, are revolutionizing how audiences consume information, and are reshaping the public's expectations about information access and immersion, concrete knowledge of their penetration and the speed at which they are being adopted is crucial to shaping responsible institutional responses'. [3]

Social media developed through the emergence of Web 2.0 has enormously broadened and deepened the information and opportunities for learning which museums can provide. Part of the reason is to be found in the kind of thing that online music and book stores provide, sometimes termed the 'long tail'. Rather than focusing on a narrow range of the most popular, a vast array of material can be made available, with the result that far more people are attracted. Populism is discarded as a governing strategy.

Of course there are valid criticisms of some aspects of social media: that much of it is superficial, that people can say they haven't got time to read or listen to other material that some – such as distinguished historian and writer Simon Schama, University Professor of History and Art History at Columbia University in New York – would consider more valuable. But that does not condemn all social media, and certainly does not diminish the richness of offerings and the opportunities for engagement

In every major development undertaken by a small group, an organisation or a country, a person with some form of authority, sometimes position power but more successfully knowledge power, a person respected by others, drives the development and legitimises it. Whether it is action on climate change, support for contemporary dance, attention to Indigenous people, or support for the contribution that art or science makes to our lives, a leader is essential. That is demonstrated by museums' approach to Web 2.0 and social media. Genuine leadership, not by any means always at the top of the organisation, has made a difference to the outcome.

Unfortunately, in some cases, because social media seems to allow everyone to express their opinion, every view comes to be considered equally valid, the ultimate in social constructivism where truth comes to mean only what the majority accepts it to be. That is hardly a position that museums ought to take. Museum people might be concerned about the perceived loss of control – something they never had anyway – but to miss opportunities to broaden and deepen the interaction with the museum by people out there would be to exit the stage.

Compilation of this essay has been very significantly and generously assisted by discussions with Seb Chan and Geoff Barker (Powerhouse Museum), Russ Weakly (Australian Museum), Tikka Wilson (National Museum of Australia), Tim Hart (Museum Victoria), Martin Hallett (Arts Victoria), Brooke Carson-Ewart and Francesca Ford (Art Gallery of New South Wales).

Footnotes

¹ Bobbie Johnson, 'Open science: a future shaped by shared experience', *The Observer*, 22 May 2011 <http://www.guardian.co.uk/education/2011/may/22/open-science-shared-research-internet>. For another example, see 'Gamers succeed where scientists fail: molecular structure of retrovirus enzyme solved, doors open to new AIDS drug design', *ScienceDaily*, September 19, 2011 <http://www.sciencedaily.com/releases/2011/09/110918144955.htm>, an account of how gamers at the University of Washington solved the structure of a retrovirus enzyme which has a critical role in how the AIDS virus matures and proliferates. The configuration of the protein had stumped scientists for more than a decade. The gamers achieved their discovery by playing Foldit, an online game that allows players to

collaborate and compete in predicting the structure of protein molecules.

² Matt Rhodes, 'Why a museum is the UK's top brand on Twitter', freshnetworks, 13 June 2010, <http://www.freshnetworks.com/blog/2010/06/tate-museum-uk-top-brand-twitter/>

³ http://conference.archimuse.com/mw2011/programs/grounding_digital_information_trends

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Understanding Museums - Issues in museology

Australian museums and the technology revolution

by Tim Hart and Martin Hallett

In the early 1970s, museums began to respond to new opportunities arising from computer developments and new forms of electronic communication, in particular for collection documentation, collection management, and scientific research. These early uses of computers provided the first clear demonstration of the power of emerging technology to transform the activities of traditional museology. However, technology's influence soon spread rapidly across almost all areas of museum practice.

Early electronic museum documentation and digitisation

The evolution of systems to transfer traditional paper-based documentation into electronic formats was significantly influenced by library developments and international innovation. The Information Retrieval Group of the Museums Association (UK), now the Collections Trust, pioneered the establishment of standard formats and procedures required for computer-based information systems. Canada's National Museums Policy of 1972 ambitiously proposed a National Inventory Programme to computerise all museum records across the nation, later implemented by the Canadian Heritage Information Network (CHIN). In the United States, the Smithsonian Institution, the Getty Museum, and other major institutions established important documentation projects. The Getty Information Institute (GII), established in 1983 as the Art History Information Program (AHIP), pioneered work that underlies much current documentation practice in Australia and across the world. The influential Consortium for the Interchange of Museum Information (CIMI) was founded in 1990. These developments were closely followed in Australia and stimulated thinking and action.

Early Australian developments emerged during a 10-year period from 1976 at the Science Museum of Victoria and the National Museum of Victoria (now Museum Victoria), the Australian National Gallery (now National Gallery of Australia), the Australian Museum and the Museum of Applied Arts and Sciences (now the Powerhouse Museum).

These developments faced many challenges. Computing technology was primitive. In addition to the technological challenges, the developments required museums to create new disciplines, recruit new categories of staff, and re-skill their existing staff.

The first electronic museum documentation databases required main-frame or mini-computers. Both the software and the hardware involved a capital investment beyond most museums at the time. In this new environment, many museums could not afford to enter the world of computing.

Work on electronic systems for natural science collections emerged in the late 1970s, especially through the joint activities of The University of Melbourne, the National Museum of Victoria and the Australian Museum. This led to the development of the Titan Database (subsequently Texpress and KE EMu). [1] These packages offered powerful tools for those working with material culture collections, as well as those in the natural science disciplines.

Vernon Systems from Auckland, New Zealand, developed the world's first PC-based collections management system, 'Collection', in 1986, [2] based on MDA [3] standards. [4]

By the mid-1990s a wide variety of collection management systems were available to Australian museums; at this time image digitisation also became possible as scanning technologies emerged. As a result, a number of projects were initiated by Australian museums and libraries to include on their documentation systems digital images of collection objects, and other digitised elements such as sound and video. The first JPEG and MPEG [5] standards for digital images were established in 1988 and provided an important basis for this work. Digital cameras were still some years away, [6] and even when they first emerged were of low quality and very high price; it was 2000 before they were used in museums in any number.

Museums also began to add to their documentation systems information on the processes used to manage collections, such as loans, object movements, conservation activities and rights

management, creating the complex integrated systems widely deployed in museums. In the early twenty-first century systems incorporated barcoding or Radio Frequency Identification (RFID).

Setting standards for electronic documentation

Traditional paper-based documentation systems used in museums did not depend on standards. Most organisations and disciplines handled specific data elements in very different ways. Electronic systems, however, demanded data consistency, which raised challenging issues for Australian museums, especially given the inherent differences between natural science specimens and artefacts from social history, technology or Indigenous collections.

Despite such complications, standards are emerging, shaped by international initiatives [7] and ongoing consultation between key stakeholders.

Computer technology also expanded research opportunities for scientists, curators, registrars and conservators. For example, databases provided natural scientists with the means to statistically analyse large volumes of collection and geographic data relating to biological populations. This stimulated ecological and environmental research on a regional, national and global scale, crucially influencing the effective management of Australia's natural resources. The introduction of geographic information systems (GIS) [8] allows the linkage of specimens to locations.

A dramatic impact of technology was the incorporation, from the early 1980s, of multimedia in exhibitions. Multimedia transformed the visitor experience from passive to active engagement.

During the 1980s and 1990s many multimedia technologies came and went. Audiovisual screens proliferated; CD-ROMs and DVDs were widely deployed, replaced in the early twenty-first century by the delivery of multimedia over networks.

Visualisation/simulation is an example of the new presentation methods that have become available to museums over the past 10 years. Using cost effective 'special effects' derived from techniques used in movies and computer games, museums have unprecedented opportunities to offer their audiences powerful storytelling experiences. Many museums have established in-house teams that produce programs of stunning quality on modest budgets – depicting photo-quality scenes of almost anything imaginable effects derived from these techniques, from the planetary system to dinosaurs.

Major museums and many regional and community museums routinely incorporate various audiovisual experiences: projections (large and small), soundscapes, interactive and immersive elements, computer games, simulations and 3-D experiences. These elements are integrated with traditional elements such as objects, labels, text panels, images, illuminated signage and built form to provide audiences with unique and compelling multi-dimensional experiences.

Many of the early experiments with multimedia drew heavy criticism from within the profession and the media. The term 'Disney' was used to denigrate a museum perceived to have forsaken traditional roles and crossed the line where entertainment was valued above traditional approaches and curatorial authority. The word 'edutainment' was coined in the 1990s to describe this phenomenon. The Powerhouse Museum when it opened in 1988 was dubbed a 'Disney' experience. In 2000, Melbourne Museum suffered similar criticism.

However the modern museum is an increasingly complex environment and its visitors have come to expect to use interactive technologies, based on their experience outside museums. Users of mobile devices, for instance, are increasingly expecting cultural information to be available to them. Fortunately the multimedia delivery platforms and software are becoming more intelligent, simplifying the task of distributing quality content.

As technologies converge and become even more complex and sophisticated, maintaining a central place for collection objects and core museum values will be critical in resolving a creative, intelligent, and responsible integration of technology in museum practice. [9]

Arguably, the most significant impact of technology on museums has resulted from the development of the Internet, with its potential for online access to digital content.

Australian museums first began to develop websites from 1993, following the development of the World Wide Web (WWW) through the groundbreaking work at CERN [10] by Tim Berners-Lee. [11] Early Australian networking history is complex, involving a mix of university, government,

private, corporate and telecommunications initiatives from the mid 1970s. Major museums were in a good position to be early adopters of the Internet, because of their links with CSIRO and universities, where the first Australian networks were developed. [12] The role of libraries and their early networks was also influential. The Australian Bibliographic Network (ABN) was established in 1981 by the National Library of Australia, linking for the first time computerised library catalogues from around Australia.

Over the past 15 years, hundreds of Australian museum websites have been developed, providing access to a vast array of collection records and significant stories. For the larger museums, websites constitute an essential core element of their business, with online visitors outstripping physical visitors by a significant margin.

The development and maintenance of museum websites was difficult for most Australian museums during the first 10 years of their evolution. Initial reactions from within the sector often involved fear and suspicion. Many museum professionals struggled with the concept and felt that building 'virtual museums' would reduce visitation to venues. Other museum professionals sensed that the opposite was the case. Recent Australian and international studies suggest websites encourage venue visitation and greatly facilitate access to information. [13]

The need to deliver information online to the education sector, professional industry, internal users and the general public is now an essential consideration and key aspiration for museums. A consequential question is how to enhance and digitise traditional museum documentation so that it is of sufficient quality for effective online use. This issue has major resource implications for large institutions holding hundreds of thousands or millions of records. Content Management Systems (CMSs) and Digital Asset Management Systems (DAMS) jockey with traditional collection management systems as core resource-management tools, particularly to address the imperative for international and national interoperability standards and protocols.

The Australian Museums and Galleries Online (AMOL) project, a key initiative of the Heritage Collections Committee, is an interesting case study reflecting the early efforts of Australian museums to provide online access for national and international audiences to the nation's 'distributed national collection'. [14]

A prototype system [15] was built at the Museum of Victoria in 1993 to guide the development of the first Australian Museums and Galleries Online (AMOL) website. The National Museum of Australia (NMA) developed and launched the first AMOL website in October 1995.

In December 1996, the Cultural Ministers Council established the Heritage Collections Council (HCC) to build on the work of the Heritage Collections Committee. The HCC's On Line Working Party guided the ongoing development and expansion of the AMOL website, supported by the Commonwealth Department of Communication, Information Technology and the Arts. The original principles guiding the website's development were collaboration, comprehensiveness, convergence, and a regional and national focus.

In January 1998, the Powerhouse Museum took on the role of hosting AMOL. Until 2001, the Powerhouse Museum's AMOL Coordination Unit worked closely with the On Line Working Party to ensure that AMOL continued to provide an effective portal to Australia's collecting institutions, and to the collections they hold.

A notable first came in 1994 when AMOL linked to the Western Australian Maritime Museum's online databases.

In 1997, some Australian universities, led by The University of Sydney and funded by an Australian Research Council grant, used AMOL as a model to establish Australian University Museums On Line (AUMOL).

In order to facilitate reliable access to the collection data, AMOL established regional servers at the Museum of Victoria, Western Australian Museum, Queensland Museum, the History Trust of South Australia, Queen Victoria Museum and Art Gallery (Launceston). As a result, by the end of 1998, online users could search the collection records of 52 museums and over 600,000 item-level records. [16]

AMOL took important steps in assisting regional and community museums to provide digital access to their content and collections. Almost 1400 museums across the nation became involved with the

project.

In 2005 AMOL was re-badged as the Collections Australia Network (CAN), with greater emphasis on supporting community museums, and coverage of archives and libraries sectors.

For its time, the AMOL project was remarkably innovative, and the team behind the project was involved in working with international bodies to set international standards for museums and in some cases the World Wide Web in general. AMOL was represented on international standards committees and worked with CIMI on Dublin Core elements for museums, and the World Wide Web Consortium (W3C) on the Resource Discovery Framework. AMOL represented radical thinking and pushed the available technologies and cooperation of museums to their limits. In 1998, AMOL won a prestigious Museums and the Web prize for 'Best Professional Website',^[17] sharing the prize with the Getty Information Institute. AMOL won the award for a second time in 2002.

With the demise of the Heritage Collections Council (HCC) in 2001 the guidance, support and leadership given to the AMOL project through the HCC's Online Working Party was lost. In addition, despite its success, financial support for AMOL/CAN declined in real terms.

The Internet search engine Google has changed the world. Organisations in the cultural sector are its beneficiaries. Their traditional status as trusted sources of information has helped them to establish a similar status in the virtual world.

Web technologies are rapidly evolving in ways that enable people to fully engage with content in modes only dreamed of in the past, as described in Des Griffin's Introduction to this section. The OPAC 2.0 project (2006) at the Powerhouse Museum, led by Sebastian Chan, incorporated Web 2.0 'social media' technologies for the first, including tagging and folksonomies. This approach enabled the public to contribute as well as consume content. There has been a strong public response to this type of engagement with museums.

The extensive use of technology placed new demands on museum management. Information technology departments were established in Australia's larger museums in the early 1980s. Along with new requirements for public accountability and regulatory compliance, the backup of digitised information has become a significant responsibility and risk-management issue. These developments have profoundly reshaped the skills that museums need to recruit and cultivate in their staff.

Australian museums can be proud of their reputation as innovators and leaders in the use of technology; however they need to maintain a creative balance between traditional scholarship, research, and the application of appropriate technologies in all aspects of their operations.

The Australian government and state governments have been an integral part of the adoption of technology by Australian museums over the past 40 years. They have been the primary source of funding for most large-scale computerisation and digitisation projects. Continued government support for ICT in museums is essential to ensure that Australian cultural resources held in museum collections remain visible in the online world and accessible to the community.

Footnotes

¹ An Australian-developed and widely used early database (released in 1984) suitable for large collections that subsequently evolved into KE Emu (2000), now used across the world in natural science museums with huge collections.

² Bil Vernon founded Vernon Systems in 1985 after developing a custom dealer gallery application. From this initial system he saw the need for a general museum and gallery cataloguing system, and he began work on a prototype of the world's first commercial PC-based museum system.

³ MDA Museum Documentation Association <http://www.webarchive.org.uk/ukwa/target/126921>

⁴ <http://www.vernonssystems.com>

⁵ The name JPEG stands for Joint Photographic Experts Group, the name of the committee that created the standard. The group was organised in 1986, issuing a standard in 1992 which was approved in 1994 as ISO 10918-1. JPEG is distinct from MPEG (Moving Picture Experts Group) which produces compression schemes for video. From Wikipedia, <http://en.wikipedia.org/wiki/JPEG>

⁶ <http://inventors.about.com/library/inventors/bldigitalcamera.htm>

⁷ A range of standards is available at <http://www.pro.rcip-chin.gc.ca/index-eng.jsp?Ne=8080&N=8329>

⁸ <http://www.gis.com/whatisgis/index.html>

⁹ As Pat Cooke states, 'Museums, therefore, must constantly interrogate and reformulate their roles, and search for ways of making their collections, their object worlds, more engaging for visitors whose perceptions and expectations are being transformed in any case by the new technology.' Pat Cooke, 'Things and technology: museums as hybrid institutions of the 21st century'. From the excellent paper given at the University of Limerick 2005, at <http://www.idc.ul.ie/museumworkshop/Papers/Cookefull.pdf>

¹⁰ European Organization for Nuclear Research – known as CERN, established in 1954 – the world's largest particle physics laboratory complex.

¹¹ The first website built was at CERN and was first put online on 6 August 1991. It provided an explanation about what the World Wide Web was, how one could own a browser and how to set up a Web server. It was also the world's first Web directory, since Berners-Lee maintained a list of other websites apart from his own. In 1994, Berners-Lee founded the World Wide Web Consortium (W3C) at the Massachusetts Institute of Technology. It comprised various companies that were willing to create standards and recommendations to improve the quality of the Web. In December 2004 he accepted a chair in Computer Science at the School of Electronics and Computer Science, University of Southampton, UK, to work on his new project — the Semantic Web (this information is from Wikipedia http://en.wikipedia.org/wiki/Tim_Berners-Lee)

¹² <http://www.anu.edu.au/people/Roger.Clarke/II/OzIHist.html>

¹³ A 2002 study by the Colorado Digitization Program, for instance, showed that for 70 per cent of visitors, using a museum website would increase their likelihood of a visit.

<http://www.cdphheritage.org/cdp/presentations/documents/aampresentationmay2003.pdf>,
[Http://interconnectionsreport.org](http://interconnectionsreport.org)

¹⁴ The concept of a 'distributed national collection' was championed by the Heritage Collections Committee, formed by the Cultural Ministers Council in 1993.

¹⁵ The prototype was known as the Australian Museums Information System (AMIS).

¹⁶ http://web.archive.org/web/19990418083410/amol.org.au/collection/collections_index.asp

¹⁷ http://www.archimuse.com/mw98/best/win_professional.html

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