

Digitizing Pacific Cultural Collections: The Australian Experience

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Abstract: In the absence of specific policies that address the digitization of Pacific cultural collections, it is important to document the practices of Australian museum professionals and cultural experts who deal with close to one-fifth of Pacific cultural objects held in museums. Interviews with 17 museum professionals and cultural experts in Australia help advance reflective practice relating to digitizing Pacific collections. Drawing on principles enshrined in international, regional, and Australian policies and protocols relating to the management of indigenous collections, they favor responsible digitization based on consultation with source and diasporic communities. In order to consult across a region with multiple languages and cultures when time and resources are limited, they begin with areas they know best and when possible, work with curators of Pacific backgrounds. Some practicalities of publishing and protecting digitized images online revolve around validating information about the artifact and going beyond copyright to respect traditional knowledge.

INTRODUCTION

Across the world, approximately 750,000¹ Pacific Islands' cultural objects are held within an estimated 683 museums.² The museums with Pacific collections are located predominantly in Europe, North America, Australia, New Zealand, and the

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Pacific region. An estimated 145,000 Pacific cultural objects are held by 18 Australian museums and galleries.³ Only 1–3% of museum collections are estimated to be on display.⁴ Despite this, there has been a varying level of digitization of Pacific artifacts in the 683 museums around the world with Pacific collections.⁵ Where digitization has occurred, it has happened in different ways and phases.⁶ While there are notable organizations that have digitized their complete Pacific collections (e.g., Musée du Quai Branly), there are also a number of organizations that show inclination to digitize their collections. It is important to understand that digitization of museum collections is an ongoing process that allows for improved consultation and reciprocal curatorship.

For this article, two of the authors, Meredith Blake and Jonathan O'Donnell, reviewed the Pacific collections of 25 museum websites for content and interactivity in 2010. The museums did not have their digitization policies online. When they contacted some of the museum curators, they were unwilling to be cited on their organization's practices. Blake and O'Donnell found that for 11 of the 25 museums surveyed, digitization meant online catalogues including caption-level metadata accompanied by an image of the object where possible. The emphasis was on publishing a large number of objects online with minimal interpretive text. Only five of the 25 had both online catalogues and the more comprehensive online exhibitions with a depth of interpretative content. (See Appendix 1 for the websites reviewed).

Three stood out for different reasons. The Museum of New Zealand Te Papa Tongarewa provided an extraordinarily large collection of objects on its site. Many had accompanying images, and all images could be zoomed to look at details. There was also video of some objects, where curators or other people told the story of an object. The South Australian Museum's Upper Sepik-Central New Guinea Project provided an extraordinary depth of content by drawing in information from around the world. All the information could be precisely located in the area to which it related by clever use of mapping techniques. The American Museum of Natural History not only provided images of the objects, but also images of the original field notes written by the collectors at the time of acquisition.

While acknowledging that digitization can be undertaken within an organization for in-house purposes or for intermuseum cooperative research,⁷ in this article we focus on the digitization of Pacific cultural objects for display on the World Wide Web. This process often involves photographing the object or creating some other image of it, such as a three-dimensional representation and publishing metadata and other information about the object. The process of digitization in museums is well expressed in the following definition.

Digitisation initiatives focus on the means of selecting, collecting, transforming from analogue to digital, storage and organization of information in digital form and the making it available for searching, retrieval and processing via communication networks.⁸

In the same way that the appreciation of digital objects is a social process, the process of creating digital replicas is a social process.⁹ Digitization is also at the

intersection of museums seeing themselves as custodians of traditional knowledge and the use of information and communication technologies for free and universal access. Kansa et al. sum up the conflicts between traditional-knowledge and open-knowledge movements when they say:

The goal of the traditional-knowledge movement is to protect certain forms of knowledge from unfair exploitation. . . . [I]t seeks recognition for communal and culturally situated notions of heritage, property, and knowledge.

The open-knowledge movement aims to open access to information. This movement seeks to counter legal and commercial forces that inhibit individual free expression, knowledge sharing, and creativity.¹⁰

Museums use digitization to extend their reach to new audiences, provide access to hidden collection “treasures,” and keep up with the potential of new information and communication technologies.¹¹

Indigenous populations see digitization as a way of revitalizing their culture, projecting their own voice, and connecting across generations and with other indigenous groups.¹² The movement for indigenous museums and cultural centers is celebratory and at the same time “vexed” because of the need for increased expertise and resources.¹³ There is a strong belief among museum experts in Australia that if digitization is done responsibly, it will combine museums’ custodianship of cultural collections with the provision of broader access for source and diasporic communities.¹⁴ We have to keep in mind that audiences such as the source communities reached via digitization are likely to use information in very different ways from museum professionals. Lissant Bolton, who used to be the Pacific cultural collections manager at the Australian Museum, found that when she went on field documentation trips to the Pacific, the museum professionals and the source communities had different priorities. Museum professionals were interested in getting better provenance. Melanesians were more interested in cultural revival rather than documentation. They were interested in the museum objects to address contemporary issues. Photographs of objects that had emotional and ritual power were important to the source communities. For example, museology focuses on the canoe, and the source communities—like anthropologists—focus on the sailor.¹⁵ This brings to the fore the increased importance of intangible heritage being linked to material culture.¹⁶

While there are great benefits of digitization including “instantaneous access to information without real location constraints,”¹⁷ these benefits are accompanied by “the risk of reduced control over digital material and a raft of new issues related to access rights as well as intellectual and property rights.”¹⁸ Museums advocating the protection of traditional knowledge at times find themselves on the other side of the government and the open-knowledge movement. Since at least 1994, the drive to build the “Information Superhighway” has encouraged government-funded cultural organizations to digitize their collections.¹⁹ This governmental drive has been complemented by an independent technical movement

towards free and open-source software,²⁰ open standards, and copyright-free content. This has led to an extensive debate about what form a universal commons should take, what should be included in the commons, and how things should move into, and out of, the commons.²¹

In the absence of specific policies for international museums holding and wanting to digitize their Pacific collections, Australian museum professionals use principles found in the international, Australian, Canadian, and American policy documents, codes of ethics, and guidelines to manage their relationships with indigenous communities. In Australia it is Aboriginal and Torres Strait Islander people who are considered indigenous. But Australia's past as a colonial power in the Pacific means that museum professionals remain sensitive to imbalances of power.

We identify three principles from our survey of these documents. First, indigenous people are the primary stakeholders in the care and use of their collections. Second, museums should move beyond what the law requires them to do and be guided by ethical principles in their consultations. Third, museums should conduct all consultation with respect for cultural uniqueness.

For Australia, the United States, and Canada, the late 1980s and early 1990s made up the defining period for the development of policies and legislation regarding the management of indigenous collections. These documents were shaped by the key issue confronting museums holding indigenous collections in the 1980s–90s: the call for the repatriation of indigenous human remains and ceremonial artifacts. In 1990 the Native American Graves Protection and Repatriation Act (NAGPRA) became law²² and mandated the preparation of collection inventories and the notification of tribal groups regarding museum holdings that may be subject to repatriation. Particularly relevant at the international level is the International Council of Museums' (ICOM) *Code of Ethics*, which advises that

collections of human remains and material of sacred significance may be acquired and stored only if they can be done so respectfully ... research on such collections must take into account the interests and beliefs of the community, ethnic or religious groups from whom the objects originated, where these are known ... and the exhibition of such collections must be presented with great tact and respect for the feelings of human dignity held by all peoples.²³

The Pacific Islands Museums Association (PIMA) in 2006 supported the primacy of indigenous stakeholders in its *Code of Ethics for Pacific Islands Museums and Cultural Centres*. PIMA recommended that "Pacific museums ensure appropriate representation of the creator communities' knowledge and beliefs in all museum activities, public programs and interpretative materials."²⁴ Though prepared for Pacific museums, the principles within the *PIMA Code* can be applied by foreign museums holding Pacific collections.

Australian museum professionals also look to principles found in the policies designed for the management of the cultural heritage of Aboriginal Australians. In 1992 the landmark *Mabo* native-title legal case finally concluded after a decade

in Australian courts, effectively overturning the legal fiction of *terra nullius*, which characterized Australian law with regard to land and title. One year later, to coincide with the 1993 International Year for the World's Indigenous People, the then Council of Australian Museums Associations²⁵ released *Previous Possessions, New Obligations: Policies for Museums in Australia and Aboriginal and Torres Strait Islander Peoples* (PPNO). This policy, like NAGPRA, holds as its central tenet the acknowledgment that museums should consult with indigenous peoples to collaboratively make decisions about their cultural heritage. PPNO asserted the basic principles, that

‘Museums support the right of Aboriginal and Torres Strait Islander people to self-determination in respect of cultural heritage matters.’ PPNO also asserted that ‘Museums must provide relevant Aboriginal and Torres Strait Islander communities with information, in accessible forms, as to what is in their collections.’²⁶

PPNO “was both a product of, and a catalyst for, fundamental changes in philosophy and practice in the Australian museum industry.”²⁷ A review of PPNO in 2000 found that the policy

... had been effective in addressing cultural protocol issues... [However] new issues have emerged that will require policy initiatives and responses including access to digital databases... intellectual property rights... and extending the policy to include Pacific Indigenous collections/cultures; and uncertainty in regional museums and local historical bodies about protocols for consultation.²⁸

In 2005, the successor policy to PPNO, *Continuous Cultures, Ongoing Responsibilities* (CCOR) asserted that “all museum collections have a range of stakeholders, each of whose rights will guide decisions related to that collection. Recognizing this, museums need to acknowledge the primacy of Aboriginal and Torres Strait Islander stakeholders’ interests in their cultural heritage”²⁹ and that

Aboriginal and Torres Strait Islander people must be given the opportunity to have informed input into decisions affecting how museums store, conserve, research, display or in any other way use collections of their cultural heritage and how such collections and information are presented, whether for exhibition, publication or educational purposes.³⁰

Unfortunately CCOR did not address the issues of Pacific Indigenous collections held in Australian museums, although the document does include an increased focus on digital technologies.

There have been two documents in Australia at the how-to level. In 1998 the regional organization representing museums in the State of Queensland provided cultural protocols for museums and galleries engaging in consultation with indigenous and migrant communities. Entitled *Taking the Time*, the resource guide educates museum workers in cross-cultural communication, citing specific examples where values, beliefs, and verbal and nonverbal communication may

differ across cultural groups, and how to avoid and repair instances of cultural miscommunication.³¹

In 2005 the Australian National Maritime Museum produced a similar protocol document, *Connections: Indigenous Cultures and the Australian National Maritime Museum*, as a reflection of its corporate objective to create a more knowledgeable environment for the appreciation of Indigenous cultural heritage and underpinned by its philosophy of respect for, and commitment to consultation with Indigenous communities and artists at every stage.³²

For museums with Pacific collections, however, there are still no similar industry publications specifying culturally specific protocols for consulting respectfully with people of the Pacific Islands Countries and Territories.

The decade of the 2000s saw a wealth of information produced for Australian museums in relation to standards for digitization and the observation of copyright³³ and issues of indigenous copyright and traditional knowledge.³⁴ Rarely, however, have these two concepts—digitization and indigenous collections—been brought together and discussed as one issue in a how-to publication for museums. The library and archives sector has been more active in this area than museums,³⁵ and 2005 saw the publication of an important Australian document that brought together the issues of digitization and indigenous collections: the *Aboriginal and Torres Strait Islander Library and Information Resources Network (ATSILIRN) Protocols*. The National Library of Australia in 2010 published its important how-to guide, entitled the *Digitisation of Heritage Materials*, and this has provided perhaps the most detailed and technical advice to Australian museums on how to digitize collections, but again this does not cover indigenous or Pacific material. Most guides³⁶ are concerned with ensuring that copyright or rights management has been cleared before digitization of objects.

Regional organizations contributed important work on the protection of indigenous knowledge (Secretariat of the Pacific Community, Pacific Islands Forum Secretariat and UNESCO Pacific Regional Office³⁷), and global organizations such as the international World Intellectual Property Organization (WIPO) have spent much of the 2000s researching the area.³⁸

THE STUDY

RMIT University researchers who are part of the Smart Services Cooperative Research Centre (CRC)³⁹ consulted with the Pacific diasporic community and museum experts about issues related to the digitization of Pacific cultural collections. Within the CRC, we worked collaboratively with the Australian Museum in Sydney, which holds 60,000 objects in its Pacific collection. Of the Australian Museum's Pacific collection, 92% was drawn from the countries and territories of Melanesia (including Irian Jaya/West Papua). This reflects Australia's missionary and colonial presence in the region, and a similarly high concentration of Melanesian ar-

tifacts are in the collections of Australia's other state and national museums.⁴⁰ Though the Australian Museum is seen to have "one of the great collections of Melanesian material internationally"⁴¹ at present, the Australian Museum does not have a permanent exhibition of its Pacific collections. In part as a way of responding to this situation, and to provide better access to the Pacific collection, the Australian Museum, together with the University of Wollongong, has piloted the digitization of 427 cultural objects in the Virtual Museum of the Pacific. This used to be on <http://epoc.cs.uow.edu.au/vmp/#> but has now been removed from the web.⁴² The RMIT qualitative study focuses on the broader issues that lie behind the digitization of Pacific cultural collections, rather than an evaluation of the Virtual Museum of the Pacific.

The study involved open-ended individual and group interviews with 44 people—27 from the Pacific diaspora⁴³ in Australia and 17 museum and cultural experts on the Pacific. It is a convenience sample, drawn from our personal and professional networks. Even when we sought the participants independently, we found they often knew each other and had already discussed our project with the previous interviewees. This reflected the close networks that exist within the museum profession in Australia and the diasporic community.

Our sample included a wide representation from the Pacific diasporic population in Melbourne, Sydney, and Brisbane. We spoke with people from Papua New Guinea, Tonga, Samoa, Vanuatu, Fiji, and the Solomon Islands. Our participants from the Pacific diaspora included IT specialists; teachers; media specialists; artists; academics; health and community workers; those in the defense forces; pastors; and those who saw themselves as mothers, grandfathers, and elders. There was a cross-over between the categories of the diasporic community and the museum and cultural experts, because a number of museum experts were themselves of Pacific ancestry. Our findings from working with the diasporic community are detailed in a separate article: "The Digitization of Pacific Cultural Collections: Consulting with Pacific Diasporic Communities and Museum Experts."⁴⁴ A legal perspective on the digitization of indigenous collections, including Pacific collections, was contributed by our research colleagues Paul Coughlin and Margaret Jackson in another article, "Indigenous Collections and Digital Access—Toward Best Practices."⁴⁵

This article focuses on the opinions and experience of the digitization of Pacific collections of the 17 museum and cultural experts we interviewed. They comprised independent and museum-based curators, collection and exhibition managers, researchers, and scholars. They discussed the responsibilities of museums holding cultural collections, the ethics of digitization, the benefits and disadvantages of digitization, practical reasons to digitize collections, different ways to digitize collections, the ideal steps that need to be taken for a digitization program, and what to digitize.

Some of our participants, together with other museum officials and academics later attended a symposium on Pacific digitization in Sydney, Australia: *Casting the Net Symposium: A Joint Smart Services CRC/RMIT/Australian Museum Forum*

Exploring Issues of Intellectual Property and Traditional Knowledge in Digital Cultural Collections. The symposium presentations and discussions by the 42 participants also informed the findings presented in this article.

This study is based only on the Australian experience. An important limitation of our study is that we were not able to travel to interview museum professionals outside Australia who manage sizeable Pacific cultural collections.

CONSULTING WITH INSUFFICIENT RESOURCES AMONG DIVERSE CULTURES

Agreement has been reached with museums around the world on the need for consultation with indigenous peoples regarding their cultural heritage collections.⁴⁶ In the context of museums with Pacific collections, Lissant Bolton, Conal McCarthy, Haidy Geismar, Anita Herle, Stephen Hooper, and Karen Jacobs, among others, have documented considerable collaborative artistic and research programs that were recently, or are currently being undertaken with source communities.⁴⁷ It is interesting to note that this focus on consultation and collaboration is directed toward research and exhibitions. McCarthy, in *Museums and Māori* (2011), gives a detailed picture of changes in the implications of this partnership between Māori and Pakeha from the 1980s onward. But even as late as 2011, digitization is not a relevant context for this critical reflection on museum practice.⁴⁸

In our interviews, there was a deeply felt need for consultation with Pacific communities regarding digitization, as well as the wider management of cultural collections in Australian museums. At the same time, museums struggled to find the time and resources to conduct this consultation prior to digitization. Penny Iking, collection manager of Oceania, Asia, Africa, and the Americas at Museum Victoria, said, "There would have to be a lot of resourcing and staffing . . . to even get [Pacific collections] up on the net in the first place." Katerina Teaiwa, Pacific Studies convenor at the Australian National University, and of Banaban and I-Kiribati descent, wondered whether the problem underlying the lack of funding was a lack of political interest in Australia to prioritize Pacific projects. She contended that "Australia thinks of the Pacific as out there and not here." She argued that unlike New Zealand, Australia lacks a politically organized pan-Pacific community. Pacific Islanders are fragmented and disconnected across states and territories.

John (pseudonym), a museum professional, who cares for Pacific collections in an Australian art gallery, added a lack of interest from the general public to the list of challenges for museum professionals working with Pacific collections.

There's not enough time, there's not enough staff. When there are enough staff, they're usually too busy in other projects to actually make collections accessible. You've [also] got lack of awareness in a wider sphere, and that lack of awareness is also equally linked to a lack of interest.

Museums facing resource pressures in terms of staff time and funding try then to provide access to collections via digitization, which is seen as less expensive than organizing special and permanent exhibitions. However, culturally sensitive consultation before digitization is costly and can take a long time. This consultation is particularly important, for it is only through a sustained relationship that museum officials can understand the cultural restrictions to access and the traditional knowledge underlying the collections.

“Respect,” “building relationships,” and “trust” were terms consistently used by our interview participants when discussing the approach to consulting for digitization. Museum professionals and diasporic participants alike stressed the importance of entering into consultation either without an agenda at all (for free-ranging discussions with no preconceived outcomes) or with an explicitly expressed agenda (to inspire honesty and transparency). Many of our interview participants advocated using a conversational approach and treating the process of connecting with Pacific communities as an opportunity for genuine human interaction and not as something that was entered into due to procedural requirement. Imelda Miller, assistant curator of Torres Strait Islander and Pacific Indigenous Studies at the Queensland Museum, said, “I always think of consultation—it’s tokenistic sometimes—and I think that our peoples ... just need to have a conversation.”

These difficulties lead to some museum experts philosophically seeming to oppose digitization, because it is difficult in the current environment to do it responsibly. Edward (pseudonym), a cultural expert of the Pacific, said, “I’m not actually ... against these online things. I’m not. But what I’m against is the way ... that [some museums] have actually shown over the last few years a complete indifference or they don’t actually basically give a damn about indigenous rights on intellectual property.”

Jane (pseudonym), who works with a Pacific collection in a state museum, is involved in a digitization project, and is herself of Pacific Islander descent, said that digitization without adequate consultation is “like colonising people all over again... As the museum, we’re publishing stuff that doesn’t really belong to the museum. It belongs to the people, and without working with the community and then just putting it online for the whole world to see ... it’s not very fair.”

The situation is complex and challenging, but digitization, when done responsibly, does broaden access. At the time of our research, Jason Gibson was at the early stages of his research *Reconstructing the Spencer and Gillen Collection: Museums, Indigenous Perspectives and the Production of Cultural Knowledge*. He has previously worked on developing local community digital archives in remote indigenous communities. He said,

Digitization facilitates broader access, and for me, it’s where I put all my efforts. Prior to digitization, you’d either have to visit the institution or curators or researchers would visit communities with paper copies or

VHS copies. . . . The project I worked on for four years showed me that digitization was the best way to manage material.

Museum experts shared some successful ways to deal with the challenges of respectful consultation. They addressed the following questions: How do you best consult across a region with multiple languages and cultures when time and available resources are limited? What tools can you use to broaden access while respecting cultural limits to access? Should you digitize when you have insufficient information about the objects?

SELECTIVE AND KNOWLEDGEABLE DIGITIZATION

Museum professionals and cultural experts are aware of the cultural diversity of the Pacific. There are 7500 islands, spread over 30 million square kilometers of ocean; 500 islands are inhabited and make up the 25 island Pacific Islands Countries and Territories.⁴⁹ Professor Amareswar Galla, who has a long involvement with the Pacific and cultural collections, emphasized:

There's tremendous diversity and a range of colonial experiences and legacies that these collections are symbolic of. So, it really is important to negotiate with each [culture represented within a museum's] collection.

Mali Voi, then Cultural Adviser at the UNESCO Regional Office in Apia, Samoa noted,

. . . although the region is home to just 0.1% of the world's population, it contains a remarkable 1200 languages, comprising one-fifth of the total number of languages in the world. Over 700 languages are spoken in Papua New Guinea alone. Three colonial languages of French, English, and Spanish are also spoken in the Pacific.⁵⁰

However, Australian museums may not hold collections that completely and accurately reflect this diversity. The vast majority of objects in Australian museums are drawn from Melanesia. Unlike New Zealand where museums typically hold a majority of Polynesian objects, Australian museums hold fewer Polynesian objects. Micronesian objects are even rarer.

The museum professionals interviewed identified a number of options open to museums with a small budget for digitization. These include selective digitization of a portion of the collection, which may include objects

- from a particular geographic region,
- of a thematic specialty,
- of significance as identified by museums or creator communities,
- currently on display in museums,
- for which the museum has clear and unconditional copyright,
- that are already well photographed,

- that are associated with good interpretive material, and/or
- that have already been the subjects of a consultation process.

Barry Craig, senior curator of Foreign Ethnology at the South Australian Museum, considered that the major issue with digitization is the accuracy of information.

Digitization requires knowledgeable curators/researchers who can review the information that is associated with the objects to ensure accuracy before the database ever becomes available online. If we want to understand Pacific arts and material culture, we must ensure our data is as valid and reliable as possible. One of the major considerations is to identify exactly where an object was collected, if not exactly where it was made. There are many ways in which errors get into the information associated with objects. . . . They should also place a disclaimer on the website and encourage more information or corrections from users.⁵¹

Recognizing that digitization is a time-consuming and difficult process, Craig recommended starting with the part of the collection where there is significant expertise in the cultural institution. This expertise can be usefully supplemented through collaborative projects like the Upper Sepik-Central New Guinea Project, which Craig has been managing for the past six years. This project used data from museums and private collections worldwide relating to a particular ethnic or geographic region. It is a process that is parallel to his deep involvement in the region. Craig explained, “During the 1960s and early 1970s, I collected thousands of objects from this region of New Guinea for several museums, so I know the objects from that area reasonably well.”⁵²

Craig said that the digitization process is not a single project that “gets done” in a specific period of time with specific funding. It is an ongoing process involving photographing, checking documentation, putting what you have that seems pretty reliable on the web, then progressively changing the dataset on the web as corrections become available.

COLLABORATING WITH PACIFIC MUSEUMS

The combined problems around consultation, inadequate resources, and ensuring respect for traditional knowledge are complex enough that they can indefinitely delay the process of digitization. Frank Howarth expressed this quandary by terming it “analysis paralysis.”⁵³ The issues are serious enough for some people to begin calling for a collaborative approach to both digitization and consulting for digitization. Penny Ikingier said, “there are so few staff in Australian museums working with Pacific collections that it’s a good idea to band together and share the knowledge.” Imelda Miller also expressed her desire for a new resource:

It is so important to think and plan before you actually enter this world of online collections, before the process takes off and you no longer have control. To do that, we need resources, technological capacity, funding, community ownership and involvement, and sustainability. A possible solution . . . is developing community consultation guidelines.⁵⁴

Ron Vanderwal, curator emeritus of Anthropology at Museum Victoria, described the long and mutually beneficial process of collaboration between staff at his organization and the Fiji Museum, and in doing so, summarized the ultimate goal of consultation; “Why it works so well is because we like one another.”

Melanie Raberts, manager of Indigenous Collections at Museum Victoria, spoke about the methodology behind the *Fiji's Treasured Culture: Artefacts and Historical Photographs from the Collections of Museum Victoria and the Fiji Museum* website, which was launched in 2005. Raberts explained the process used by Ron Vanderwal, architect of the project:

By Vanderwal's own admission, his was a “cry in the wilderness” when he embarked on the project in the late 1990s, a time when guidance for indigenous cultural websites was scarce. Instead, he turned to anthropological fieldwork methods for guidance, where the anthropologist actively engages with the community of origin, seeking their knowledge to document the collection and asking their advice as to what they wish to have presented about their culture and heritage and the manner of its presentation or interpretation.⁵⁵

The result was a website coproduced by Museum Victoria and the Fiji Museum, which provided data and historical photographs from their archives to augment the images of selected objects from Museum Victoria's collection.

Museums in Australia often have long-standing relationships with counterpart museums in the Pacific. But where there are no existing relationships, PIMA offers its services as a mediator between Australian museums and Pacific museums to enhance the practice of consultation and mutual cooperation.⁵⁶

CURATORS OF PACIFIC ORIGIN

Increasingly, the Australian museum sector is employing Australian-based Pacific Islander curators, who bring with them their own knowledge bases, networks, and relationships through which they contribute to research and conduct consultation. The hiring of Māori curators was an important part also of the “biculturalism” practiced in museums in New Zealand from the 1980s onwards. But it is important to note that these curators need to be supported by an enabling institutional environment.⁵⁷ Curators with a Pacific background have an awareness of the cultural issues, but do not necessarily feel comfortable with being placed in a position of specialist authority about Pacific cultures. They are acutely aware of the great cultural diversity of the region.

Sana Balai, assistant curator of Indigenous Art at the National Gallery of Victoria is originally from Bougainville. She discussed her thoughts about working with Pacific artifacts:

Being a Melanesian as I am does not necessarily make it easy to work with or present artworks from Melanesia. The reason is that nearly all sculptural artifacts and art forms held in museums and galleries are made by men and therefore can only be handled or presented by men or someone from the culture from which the artworks originate. I am a female working in a male-dominated culture here, and I am constantly debating with myself because of this issue. I often have to remind myself that it is all right for me to work with these artworks. I say to myself, "You are the right person to work with these materials because you are culturally linked to them".

Balai described the process of consultation as something Pacific Islander curators do to "safeguard ourselves." Imelda Miller, of Ni-Vanuatu heritage, explained why consultation is even more important for curators of Pacific Islander heritage:

... as Pacific Islanders, and I think this goes for any indigenous curators ... it's our name, it's our family names that are on the line at the end of the day. ... If we make mud of our name, it ... affects everyone and everyone before us. So, it's not something that we take lightly.

Miller described how her colleagues approached the digitization project from a Pacific perspective:

[They] chose to focus on Melanesia, which is the area that we are closely connected to. My colleagues are connected to New Ireland and East New Britain, so we chose the Papua New Guinea collection. Because of my heritage, we also chose to explore the Australian South Sea Islander *Kastom* Collection. We connect very strongly with these collections, and we feel that it is permissible for us to tell stories about the objects in these collections, as we are able to verify with our families and our communities if it is appropriate for us to tell these stories. Our other determining factor was to use objects that are publicly accessed, and one such group of objects is bark cloth. The museum is touring bark cloth from the collection around the state in a couple of community exhibitions, so we thought it would be another avenue for audiences to connect with those pieces. We also wanted to profile Torres Strait Islander pieces online, as they connect with exhibits that already exist at the museum. This layers the information being provided to the audience about certain objects.

CONSULTING WITH THE PACIFIC DIASPORA

Diasporic Pacific Islanders were often called to be part of reference or advisory groups for museums. Many, however, felt they had limited knowledge. Samuel (pseudonym) from Papua New Guinea is over 65 years old and lives and works in Melbourne. Answering a question on being seen as a source of information about

his culture, he said, "I think that I would probably say yes cautiously and qualify it by saying, 'Okay, but there are only certain things I can talk about and there are others that I'm not qualified to talk about.'" Maryanne Talia Pau, an artist from Samoa, is in her early 30s and said that her relatively young age made her feel less secure in her knowledge level.

I think it's really important to own what you know and . . . to acknowledge that you're speaking on behalf of your community. I think there is a really humble way of doing it. . . . [I tell members of my community] "This is what I'm doing. I've been approached about this. I value your opinion. What do you think?" . . . I'm constantly asked about stuff, and I think a lot of the time it's inappropriate that I'm asked really general questions about Samoan culture when I just don't know. Just because I'm Samoan, I don't know everything about my culture. . . . I often fall back on my parents and ask them.

Jacqui Durrant, Pacific art correspondent for *Art Monthly Australia* suggested speaking with contemporary artists, who were often trained in the traditional methods and still utilize traditional techniques and designs. "If you want to talk about objects . . . if you want to talk to people about art, go talk to artists. If you want to talk to people about woven mats, go talk to weavers."

DECIDING WHAT TO DIGITIZE AND WHAT TO LEAVE ALONE

The museum professionals we interviewed approached digitization in terms of access, rather than in terms of a more cost effective medium alone. It was particularly important for broadening access across space and time. It was especially useful for viewing fragile and valuable objects. But equally important were decisions not to digitize some categories of objects and of restricting access to some that are digitized.

Providing Digital Access

Sometimes museums cannot repatriate very fragile or valuable objects to source countries due to the poor conditions in which they may be housed in Pacific museums. Sometimes, museums are reluctant to grant repatriation requests, such as the signatories to the "Declaration on the Importance and Value of Universal Museums."⁵⁸ In such cases, images of the objects may still be very welcome in source communities, where they can help to stimulate cultural regeneration of lost artistic techniques, inspire contemporary artistic practice, or contribute to historical research.

Durrant spoke of Cook Islander objects being held in an overseas museum:

Having those images available is actually really an important thing for cultural revival. The . . . museum will never give them up; they're never going to let anyone in Rarotonga have them, so the only way that people

from Rarotonga can see them is to actually go into the vault of the . . . museum, and how likely is that? So, for cultural revival, [digitization] is important.

Durrant did not want to use the term *digital repatriation* to describe this practice, and many museum professionals in our study also found that term problematic. Amareswar Galla explained:

Digital repatriation is a misnomer, used by people who don't really understand what they're saying and the impact on people, and this is not only the indigenous people, it's for everybody it's got negative connotations. This is a kind of a trick of the so-called universal museums which see digital repatriation as a way of denying any physical repatriation or other kinds of sharing of collections. But you used the word *access*, which is what we use. I mean digitization as a means to provide access to what is there.

Deciding What Not to Digitize

There was general agreement that human remains and secret and sacred objects should not be digitized. Tarisi Vunidilo, secretary general of the PIMA said,

PIMA supports digitization of Pacific collections, but museums need a reminder that some communities have taboos associated with objects. Before we embark on digitization, it is very important for us to take a step back and look at some of the cultural requirements that are needed to be learnt first.⁵⁹

In the Pacific context, Barry Craig explained,

It is fairly well known which categories of objects require checking with peoples of origin, but it would be impractical and unnecessary to check with every group of people about every type of object in a museum collection. In any case . . . research is necessary to know what objects are in collections and where they are from; otherwise consideration of whether they should go online cannot even commence, let alone be resolved.

The vast majority of experts and diasporic Pacific people interviewed suggested not digitizing human remains. There was one exception, and that was the cultural representation or modification of skeletal remains, in the forms of overmodeled skulls or adornment/warfare artifacts made from skeletal remains. Some curators had previously consulted Melanesian source communities about such objects and had encountered no sensitivities to display—although at the time this was in regard to physical and not digital display. Other curators pointed to differences in opinion between Polynesians and Melanesians in this matter, stating that Polynesians often considered *any* type of human remains sacred, and therefore not appropriate for digitization.

On balance, curators suggested that they would “err on the safe side” and not digitize any human remains, out of courtesy to any viewer, and not just to the (non)sensitivities of a particular source community.

The other category of objects that would rarely (if ever) be considered for digitization is secret/sacred or ritual objects (often referred to in some Pacific languages as taboo, tabu, or tapu objects). These objects have to be treated with particular care, as physical access to them is often restricted. Even when the object is not secret, the rituals around it may not be shared between men and women, the initiated and the uninitiated within the tribe, or across tribes.

There is little uniformity about the cultural objects that are secret and sacred. Museum professionals point to the need to take into account changing ideas of the secret and sacred, and all agree that cultures evolve and may no longer be expressed (particularly by members of the global Pacific diaspora) in a traditional manner. Jason Gibson said that many anthropologists and curators have the knowledge and/or experience about what material is considered sensitive or sacred. It is the material that has a complicated status which is more problematic. Gibson explained:

In Central Australia, where I've had the most experience, it's fairly clear-cut to any anthropologist what is restricted and what isn't. But there is some gray area, and there's been . . . a long history of consultation with community about that portion of the collection. Until access levels are determined, the project will group this material together within the classification "yet to be determined." This material would then feature in future discussions with senior custodians. The access levels may change over time and will change according to contexts as well. . . . We just have to work within the . . . cultural context of the time.

RESTRICTING ACCESS

Museum professionals in Australia and the Pacific and members of the Pacific community in Australia all expressed concern about the digitization of ritual objects. However, sometimes the digitization of ritual objects is necessary for the safeguarding of the tangible and intangible heritage. This is accompanied by a measure of unease and concern. Penny Ikinger explained the problem and provided a possible solution: "In some communities, certain people might only be allowed to have certain levels of knowledge, and you have to really know what you're talking about before you put an image up. You have to be really sure. . . . I suppose they can control knowledge on the Internet in a way if people subscribe to things."

If communities request the digitization of ritual objects, then databases can be restricted to people who were allowed to view certain information or photographs of objects. These could be initiated people, women or men, or approved researchers. Two solutions are possible, and both examples were developed in Australia for Aboriginal heritage collections. The lessons can be translated to the digitization of Pacific collections.

Jason Gibson described one initiative where digitized collections were not made available online:

The Ara Irititja database project⁶⁰ began in the Anangu Pitjantjatjara lands in northern South Australia . . . about 15 years ago, and they developed a database of materials from museums, mainly from the South Australian Museum to start with, to promote access to these collections. The archives that we were building in those communities weren't online; they were offline, but they were digital materials. They were available on a hard drive that was backed up in a local community library or office or whatever, so people had access locally in the community. That was the primary objective.

Melanie Raberts described another example of restricted access:

The Spencer-Gillen Collection encompasses artifacts, photographs, manuscripts, diaries, correspondence, moving film, and other material, distributed in over 30 institutions around the world. Once digitized, an online web application will be created for use by researchers, central Australian Aboriginal communities, and the public. A significant requirement of the system is that of controlling permissions and restrictions. Only content that is classified as *open* or unrestricted will be made available to general users. Content classified as *restricted* will include *sensitive*, *ceremonial*, and *sorrow* material and material *not yet determined*. This content would be made accessible to specific user groups and incorporate cultural protocols related to gender. User groups would include guests (browsers), external researchers (not affiliated with the Australian Research Council project), internal researchers (affiliated with the project), female internal researchers (affiliated with the project), and system administrators.⁶¹

THE PRESENTATION OF A DIGITIZED COLLECTION

Enthusiasm about digitization also revolves around the potential of adding image and voice to the textual description of the cultural collections. Jenny Newell, a Research Fellow at the National Museum of Australia, specializing in Pacific collections at the time of our research, described a feature of the Australian Museum's Virtual Museum of the Pacific Project that accompanied some digitized object images with accompanying audiovisual interpretation from members of source communities:

They've got these fantastic little videos which you can click on [and, for instance, you might see] a Tongan man talking about how an octopus lure is used, why it's in the shape of a rat, and suddenly things are just so much clearer because you've got somebody who's actually talking about it and pointing out the different aspects of the object that have significance. That's a really effective way . . . of bringing that tangible and intangible together, attaching the story to the objects again.

Two issues arose as causes for concern in the public presentation of a digitized collection on a museum's website. The first were the preconditions for digitization. The second was the wisdom of crowd sourcing information to augment what was on the site.

PRECONDITIONS FOR DIGITIZATION

Museum professionals discussed some obvious, but time-consuming, steps that needed to be in place before a digitization project could begin. The first was in establishing ownership and copyright of an object (and its associated image) before digitizing it. Frank Howarth, director of the Australian Museum, explained that even if the ownership of collections is assured by Western legal frameworks, there are still moral questions that concern the people caring for those collections. He said, “we feel strongly that our obligation as an institution goes far beyond a purely Western . . . legal tradition.”⁶² The need to go beyond notions of copyright to understanding traditional knowledge and concepts of ownership was also extensively discussed by our participants.⁶³

The second issue concerns taking high-quality images of the objects, and validating these images and information about the objects. Penny Ikinger described Museum Victoria's image capture project, where in order to place images on the Internet,

you'd want a really good image and you have to validate that image, too. When you take an image and have it on the database, you need to be absolutely sure that that image is the same as that registration number, because sometimes they get dislocated and disconnected from each other. So, that's another project in itself, just checking the actual number that has this information is actually that image.

Barry Craig commented upon the necessary requirement to validate information about objects online, suggesting a

progressive uploading of datasets onto websites as the research is done and the content is verified, rather than all at once. Putting information with mistakes online is useless and counterproductive. Museums will not be able to verify every bit of information, but they should make their best efforts to collect and publish good-quality data.⁶⁴

Craig explained that the time and cost of taking professional photographs of objects was a major obstacle to digitization faced by many museums.

My best guess is that the digitization of 50 objects per day (= 1000 per month) could be achieved by two persons working full time on the process of photographing and measuring objects, and recording existing information, plus a researcher working full time on checking that information.

That suggests three people at a rough estimate of a total of \$200,000 per annum (including on-costs) to record and verify 12,000 objects in one year. The Australian museum, with 60,000 Pacific objects, would therefore require that amount of annual funding for three people over five years, i.e., one million dollars. The SA [South Australian] Museum, with about 18,000 Pacific objects, would require three people for 18 months, i.e., \$300,000. Unless we can get this kind of funding, all the talk-fests in the world are useless, and fancy websites with limited datasets are mere window-dressing.⁶⁵

The third issue was to protect images from theft and modification. Members of the Pacific diaspora community and some museum professionals were worried that the digital image could be used inappropriately or modified. Penny Ikinger explained:

If you have it in a digital format, you can send it anywhere, do anything. You can crop it, but there might be issues there, cultural issues, because I know a lot of Pacific groups with some of our images of Pacifica didn't want images of objects in our *Te Vainui O Pasifika* exhibition cropped. It can go here, there, and everywhere, but that's part of digital technology, isn't it. This is the problem. [Digital] copyright isn't the same. It's not respected in the same way. Like, you might be doing something totally illegal but because it's so easy for anyone to do, it's taken for granted.

She added that part of the unease about digitization is due to issues of lack of control and lack of knowledge about what happens to images when they are made available through the Internet.

Well, you don't know who's viewing it and what they're doing with it . . . you don't know what's happening once that image of an object is up on the web. Whereas, I mean, I know anyone can go into a library and look something up . . . and you can photocopy a page in a book, but that's not the same as grabbing an image off the Internet because of the quality, which is again this problem of digital technology and things being able to be copied.

Some respondents were worried that having a digital image of an object meant that there was more likelihood that the design of the object itself would be stolen or modified. Other museum professionals felt that this concern has probably had its day. Jason Gibson discussed how he has been

working with digital collections in one shape or form since '97, and exactly the same questions have been asked since 1997. I remember some people in the Indigenous community . . . being really concerned about providing access online and wanting to provide highly pixelated images with watermarks across them. What's the point? I think most people have given up on that sort of thing.

INVITING COMMENT

In the spirit of reframing museums as places for debate and the exchange of information rather than as a historical vantage point of the arbiters and distributors of expert knowledge, museums are using social media and Web 2.0 to invite user-generated content in the form of comments, tags, and multimedia to augment the museum's presentation of data as "facts."⁶⁶ Shahani et al. aver that the use of social media particularly allows users to "actively engage and influence the organization, creation, and sharing of online content."⁶⁷

Blake and O'Donnell's survey of 25 museum websites showed that museums handled feedback in a variety of ways:

- Seven sites provided no clear way to provide feedback on an object. This included sites that had no digitized objects.
- Email was the most common channel for interaction. Eleven sites provided interaction via email addresses or web forms that sent a private message to the curator or the manager of the website.
- Two sites permitted interaction directly on the site. Of the two sites, the Australian Museum was the only one that allowed people to comment on an object. These comments appeared to be moderated by the site curator. The Powerhouse Museum allowed people to tag objects with keywords.
- Four sites provided the opportunity to share the object on social networks or email it to a friend. This interaction does not provide a way to engage with the curator, but it does allow people to share the object and comment on it within their own online network.
- Two sites combined the ability to share and email the curator.

The museum professionals we interviewed demonstrated a range of positions on the subject of museums eliciting user-generated content and information about objects and on the use of moderators for museum websites. Barry Craig said,

If I was responsible for digitization of our Foreign Ethnology collections, I wouldn't just photograph everything, attach our registration data to that, put it up on the web, suggest that other people have a look at it, and correct all the mistakes or provide missing information. That would be the easy but unsatisfactory way out. Saying "Oh, we've got digitization—this will get our collections out of their dark and dusty storage" is a quick fix. The careful validation of the registration information has to take place *before* the dataset is put up on the web; we have to do our utmost first. Nevertheless, we have to realize that even then there is potential for incorrect data, and we have to provide a means for corrections to be made by viewers of the site, especially corrections suggested by the communities from which the objects were collected.

The question as to what would happen with the posted material worried some participants, including Penny Iking. "On the legal side of this process . . . what they're finding out is that museums, or any publisher of a website, are responsible for all of the content. So, if there was anything slanderous [written], the museum would be the one sued, not the person who made the comment."

Anna Edmundson, senior curator in the Aboriginal and Torres Strait Islander program at the National Museum of Australia from 2004 to 2008, explained the need for a website moderator in a project she had been involved with concerning indigenous Australians and a museum website. Some public comments were racist and offensive and had to be removed.

If you've got a website that you are trying to encourage indigenous people to access and people who might not normally access these portals, you don't want their first experience to be a negative one, because that's really going to create a lot of damage through word of mouth, and a lot of trauma to people. If you've finally reached a stage where you're willing to go onto a museum website, [to] try and access some information about your family or your ancestors, and then you experience some sort of negative comment, it can be quite traumatic, I think.

Some respondents also worried that inaccurate information found in user-generated content would reflect badly on the museum's position as a respected source of authoritative knowledge; whereas others were comfortable that the community was well versed in the medium. Jacqui Durrant said,

people are getting fairly savvy on how they use information, I think, on the net these days and what they trust and what they don't trust. They wouldn't walk in there blindly and say, "Well, I'm going to believe that comment or that tag." There is a level of saying, "Well, this is not really a forum which is academically sound, so I'll just find it interesting, but I'm not going to take it as fact."

A CHECKLIST FOR DIGITIZATION

Drawing on our study of the practices of museum professionals and cultural experts, we charted the following stages and guidelines for the digitization of Pacific cultural collections.

- Resource the project with sufficient staff and budget.
- For whom do you want to digitize parts of your collection? What does your target audience want?
- Consult with source and diasporic communities.
- Collaborate with other museums and develop capacity within the organization.
- It is preferable to go for selective digitization about objects and areas where your museum professionals already have detailed knowledge.
- Check museum ownership of the object and museum copyright of the image.
- Should you digitize certain cultural objects? If an object is secret/sacred or ritual or human remains, the most responsible and respectful response would be not to digitize. If the community particularly wants any of these objects digitized, work together with the community to devise appropriate checks to access.
- Digitization targets and costs will depend on the availability of good photographs, validating images (cross-checking with registration numbers), and the need to validate knowledge about the object, augmented with intangible knowledge.
- Protect images from modification and misappropriation.
- If you are allowing comments or tagging, then monitor and moderate those comments.

CONCLUSION: THE DIGITIZATION OF PACIFIC CULTURAL COLLECTIONS

In this article we have documented the digitization practices of Australian museum professionals and cultural experts who deal with close to one-fifth of Pacific cultural objects held in museums. International and Australian policies and protocols dealing with indigenous peoples provide broad frameworks. There are general agreements about the need for consultation with source and diasporic communities, about the need to respect cultural restrictions on access, and about moving beyond legal copyright to honoring traditional knowledge. But in the absence of specific guidelines for the digitization of Pacific cultural collections, it was particularly important for museum professionals and cultural experts to share their experiences and concerns. From these shared experiences, we have abstracted a checklist of digitization practices that go from the broad issues of consultation and collaboration to the practicalities of presenting and protecting digitized images.

Digitization broadens access and can offer audiences a multimedia experience of cultural collections. At the same time, new audiences bring with them new needs that differ from traditional concerns of museology. Though museum professionals have to continue to emphasize the need to consult, respect, collaborate, and verify as they have been doing, they also have to be sensitive that digitization will bring a greater need to connect material culture to contemporary needs and cultural context. Though digitization is a cost-effective medium, ensuring access across time and space, the first condition for successful digitization is to ensure that there are sufficient resources for consultation, verification, and presentation. Museum professionals have learned to tread warily, concentrating first on areas where they have detailed knowledge and networks. They try to build capacity by hiring curators of Pacific background. This helps, but only if the museum's organizational environment is enabling.

Increasingly, collaboration with Pacific museums leads to greater confidence, thus enabling digitization. There is the painstaking task of ensuring that information about the digitized objects has been verified, that the photographs are clear, and that systems are in place to balance the curatorial voice with that of the audience. But it becomes even more important in the digital medium to link material culture with the stories and traditions of the source communities. It is only under these conditions that digitization helps empower both museum professionals and their audiences.

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APPENDIX 1: WEBSITES REVIEWED

<i>Institution</i>	<i>Area of site reviewed</i>	<i>Content</i>	<i>Feedback</i>
American Museum of Natural History	http://anthro.amnh.org/anthropology/databases/common/public_access.cfm?database=pacific	Combined	Off-site
Australian Museum	http://epoc.cs.uow.edu.au/vmp/	Combined	On-site
Bishop Museum	http://data.bishopmuseum.org/ethnologydb/index.php	Catalogue	None
British Museum	http://www.britishmuseum.org/research/search_the_collection_database.aspx	Catalogue	Email
Field Museum	http://fm6.fieldmuseum.org:8080/WCE/WorldAreaQuery.do	Exhibition	Email
Glasgow Museums	http://collections.glasgowmuseums.com/cld.html?cid=533690	Catalogue	None
Linden Museum	http://www.lindenmuseum.de/html/deutsch/home/home.php	None	None
Metropolitan Museum of Art	http://www.metmuseum.org/works_of_art/collection_database/	Catalogue	Off-site
Musée du Quai Branly	http://www.queibranly.fr/cc/pod/recherche.aspx?b=1&t=1	Catalogue	Email
Museum der Kulturen	http://www.mkb.ch/en/home.html	Exhibition	Email
Museum für Volkerkunde	http://www.voelkerkundemuseum.com/	Catalogue	None
Museum of Anthropology (MOA), University of British Columbia (UBC)	http://collection-online.moa.ubc.ca/	Catalogue	None
(MAA) University of Cambridge	http://maa.cam.ac.uk/home/index.php?a=40&b=catalogue&c=32	Text only	Combined
Museum of Ethnology, Museen Dahlem	http://www.smb.museum/smb/sammlungen/details.php?lang=en&objID=568&p=0	None	None
Museum of New Zealand Te Papa Tongarewa	http://collections.tepapa.govt.nz/Search.aspx?imagesonly=off&advanced=colCollectionType%3A%22Pacific+Cultures%22	Combined	Off-site
Museum Victoria	http://museumvictoria.com.au/fiji/	Exhibition	Email
National Gallery of Australia	http://nga.gov.au/Collection/index.cfm	Combined	Combined
National Gallery of Victoria	http://www.ngv.vic.gov.au/explore/ngv-collection	Text only	Email
National Museum of Australia	http://www.nma.gov.au/cook/	Exhibition	Email
National Museum of Scotland	http://nms.scran.ac.uk/	Catalogue	None
Powerhouse Museum	http://www.powerhousemuseum.com/collection/database/	Catalogue	On-site
Queensland Museum	http://www.qm.qld.gov.au/Collections/Collection+Online	Exhibition	Off-site
Stichting Volkenkundige Collecties Nederland	http://www.svcn.nl/	Catalogue	Email
Übersee Museum	http://www.uebersee-museum.de/Ozeanien_3.html	Catalogue	Email
Upper Sepik-Central New Guinea Project	http://www.uscngp.com/	Catalogue	Email
South Australian Museum		Combined	Email

ENDNOTES

1. Barry Craig's 1996 PhD dissertation, "Samting Bilong Tumbuna," estimated that there could be in excess of 750,000 Pacific artifacts held in museums worldwide. In a personal communication (28 September 2010), he made this qualification, however: "the fact is that the counting work simply hasn't been done all over the world to arrive at a more accurate estimate." These estimates build on the personal communication (28 September 2010) from Barry Craig and UNESCO's inventories of Pacific collections in the Western world—Gathercole and Clarke, *Survey of Oceanic Collections* (1979); Bolton, *Oceanic Cultural Property in Australia* (1980); Neich *A Preliminary Survey of Pacific Islands* (1982), Bolton and Specht, *Polynesian and Micronesian Artefacts in Australia* (1984); and Kaeppler and Stillman (1985) *Pacific Island and Australian Aboriginal Artifacts*—and a survey by Blake and Gunn, *List of Museums Worldwide*.

2. Blake and Gunn's online *List of Museums Worldwide*, which hold Pacific (Oceanic) cultural material.

3. Rose, *A National Strategy for the Study of the Pacific*, 65–79.

4. Personal communication of 5 October 2010 from Vinod Daniel, head of Cultural Heritage and Science Initiatives, Australian Museum. See also the Powerhouse Museum, "Facts and Figures" website, which states it has only 3% of its collections on display at any one time. Similarly, Geraldine Kendall states, in "Cross Calls for New Debate," that the British Museum has only 1% of its collection on display.

5. There is no published reference detailing the history of the digitization of Pacific collections. The earliest example of a digitized online catalogue to the authors' knowledge is the Museum of Archaeology and Anthropology at the University of Cambridge. This was reportedly one of the first museums in the UK to get most (95%) of its collection digitized (i.e., in a database), and most of this 95% (again 95%) was published online in 1996. Personal correspondence of 10 November 2010, with Carl Hogsden, Research Associate, University of Cambridge.

6. Brown, "Ko to ringa"; Geismar and Mohns, "Social relationships and digital relationships."

7. Craig, "Digitisation of Pacific Collections," 61.

8. Manaf, "The State of Digitisation Initiatives by Cultural Institutions in Malaysia," 49.

9. Kinder, "Honoring the Past and Creating the Future in Cyberspace"; Christen, "Gone Digital: Aboriginal Remix and the Cultural Commons."

10. Kansa et al., "Protecting Traditional Knowledge and Expanding Access to Scientific Data," 286.

11. Dalbello, "Digital Cultural Heritage."

12. Verran and Christie. "Using/Designing Digital"; Srinivasan, "Indigenous, Ethnic and Cultural Articulations of New Media"; Srinivasan et al., "Critical and Reflective Uses of New Media Technologies"; Ginsburg, *Rethinking the Digital Age*.

13. Kreps, "The Theoretical Future of Indigenous Museums"; Stanley, "Introduction: Indigeneity and Museum Practice."

14. Singh and Blake, "The Digitization of Pacific Cultural Collections."

15. Bolton, *Unfolding the Moon*; Bolton, "The Object in View."

16. Kreps, "The Theoretical Future of Indigenous Museums"; Galla, "The First Voice in Heritage Conservation."

17. Burri, "Digital Technologies and Traditional Cultural Expressions," 33.

18. Museums Australia Inc., *Continuous Cultures*, 9.

19. Gore, "Vice President Gore's Speech at UCLA."

20. Raymond, *The Cathedral and the Bazaar*.

21. Lessig, "The Creative Commons"; Lessig, "Re-Crafting a Public Domain"; Christen, "Gone Digital: Aboriginal Remix and the Cultural Commons"; Kansa et al., "Protecting Traditional Knowledge and Expanding Access to Scientific Data"; Recht, "Hearing Indigenous Voices."

22. US Public Law 101–601. 1990. Native American Graves and Repatriation Act [25 USC 3001 et seq.]

23. ICOM, *Code of Ethics*, sections 2.5, 3.7, and 4.3.

24. Pacific Islands Museums Association, *Code of Ethics*, 1.
25. In December 1993, the Council of Australian Museums Association Inc. became incorporated as Museums Australia Inc.
26. Griffin, "Principles of *Previous Possessions*," 1.
27. Dolan, "Making Policy Practice," 1.
28. Sullivan et al., "Museums and Indigenous Peoples in Australia," 214–19.
29. Museums Australia Inc., *Continuous Cultures*, 15.
30. Museums Australia Inc., *Continuous Cultures*, 13.
31. Collections Australian Network, *Taking the Time*.
32. Australian National Maritime Museum, *Connections: Indigenous Cultures*, 1.
33. Hudson and Kenyon, *Copyright and Cultural Institutions*.
34. Janke, *Our Culture Our Future*; Janke, *Visual Cultures*; Janke, "Managing Indigenous Knowledge and Indigenous Cultural and Intellectual Property"; Nakata, "Indigenous knowledge and the Cultural Interface"; Nakata et al., "Libraries, Indigenous Australians."
35. Anderson, "Indigenous Knowledge, Intellectual Property, Libraries and Archives."
36. Francis and Liew, in "Digitized Indigenous Knowledge in Cultural Heritage Organisations," provide a comprehensive guide on the digitization of indigenous collections in Australia and New Zealand.
37. Secretariat of the Pacific Community, *Pacific Regional Framework*.
38. WIPO, "Intellectual Property Needs"; Talakai, *Intellectual Property and Safeguarding Cultural Heritage*; Torsen and Anderson, *Intellectual Property and the Safeguarding of Traditional Cultures*.
39. This is a federal initiative bringing together funding from the Commonwealth Government, industry, and universities for innovative research (<http://www.smartservicescsrc.com.au/>)
40. Rose et al., *A National Strategy for the Study of the Pacific*, 65–79.
41. Bolton, *Unfolding the Moon*, xviii.
42. Eklund et al., "Designing the Digital Ecosystem of the Virtual Museum of the Pacific."
43. In our study we include those who self-identify as Pacific Islanders now living in Australia.
44. Singh and Blake, "The Digitization of Pacific Cultural Collections."
45. Coughlin and Jackson, "Indigenous Collections and Digital Access."
46. Sullivan et al., "NAGPRA: Effective Repatriation Programs"; Sullivan et al., "Museums and Indigenous Peoples in Australia"; Peers and Brown, *Museums and Source Communities*; Christidis et al., "Engaging with Creator Communities."
47. Bolton, "Resourcing Change;" McCarthy, *Museums and Māori*; Geismar and Herle, *Moving Images*; Haidy, "Cultural Property, Museums, and the Pacific: Reframing the Debates"; Herle, "Relational Objects;" Jacobs, "Artists-in-Residence"; Hooper, "Curating *Pacific Encounters*."
48. McCarthy, *Museums and Māori*.
49. These include American Samoa, Cook Islands, Easter Island (Rapa Nui), The Federated States of Micronesia (Chuuk, Kosrae, Pohnpei, Yap), Fiji, French Polynesia, Guam, Hawaii, Kiribati, Marshall Islands, Nauru, New Caledonia, Norfolk Island, Northern Mariana Islands, Niue, Palau, Papua New Guinea, Pitcairn Island, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis, and Futuna.
50. Voi, "Vaka Moana," 211.
51. Craig, "Digitisation of Pacific Collections," 61.
52. Craig, "Digitisation of Pacific Collections," 62.
53. Howarth, "Welcome Address," 1.
54. Miller, "Digitising the Queensland Museum's Pacific Collections," 68–69.
55. Raberts, "Web Initiatives," 44.
56. Vunidilo, "PIMA's Role in the Region."
57. See McCarthy, *Museums and Māori*; Kreps, "The Theoretical Future of Indigenous Museums."
58. "Declaration on the Importance and Value of Universal Museums."
59. Vunidilo, "PIMA's Role in the Region," 7.
60. Also see Hughes and Dallwitz, 2007.
61. Raberts, "Web Initiatives," 44.

62. Howarth, "Welcome Address," 2.
63. Singh and Blake, "The Digitization of Pacific Cultural Collections."
64. Craig, "Digitisation of Pacific Collections," 61.
65. Craig, "Digitisation of Pacific Collections," 65–66.
66. Proctor, "Digital: Museum as Platform"; Russo et al., "Participatory Communication with Social Media."
67. Shahani et al., "Museums Opening Up to Communities," 57.

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