



King's Research Portal

Document Version
Peer reviewed version

[Link to publication record in King's Research Portal](#)

Citation for published version (APA):

Gibson, L., & Kahn, R. J. (2016). Digital Museums in the 21st Century: Global Microphones or Universal Mufflers? *Museological Review*, (20), 39-52.

<http://www2.le.ac.uk/departments/museumstudies/documents/museologicalreview/mr-20-2016>

Citing this paper

Please note that where the full-text provided on King's Research Portal is the Author Accepted Manuscript or Post-Print version this may differ from the final Published version. If citing, it is advised that you check and use the publisher's definitive version for pagination, volume/issue, and date of publication details. And where the final published version is provided on the Research Portal, if citing you are again advised to check the publisher's website for any subsequent corrections.

General rights

Copyright and moral rights for the publications made accessible in the Research Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognize and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the Research Portal

Take down policy

If you believe that this document breaches copyright please contact librarypure@kcl.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.

Title of article:

Digital Museums in the 21st Century: Global Microphones or Universal Mufflers?

Abstract: Drawing on arguments that classifications are constructed and unnatural, yet both invisible and powerful, this paper considers how increasingly standardised online catalogues and digitised databases allow museums to reach larger, more diverse audiences than ever while simultaneously silencing the voices and viewpoints these devices exclude. By exposing the constructed nature of schema using examples of digital museum objects, we begin thinking of online catalogues as boundary objects capable of incorporating hybridity and individuality that challenge universalising narratives without necessarily descending into a chimera of systems that meet only the needs of a localised few. We also consider the possibilities for hybrid records and schema, which include a multiplicity of voices and allow museum records to become contact zones in their own right.

Keywords: Cataloguing; Metadata Standards; Online collections; Digital databases; Contact zones

Main body of the paper:

Writing a paper about standardised, online museum catalogues probably qualifies us for automatic membership to Martha Lampland and Susan Leigh Star's 'Society of People Interested in Boring Things' (Lampland and Star, 2009b). Yet, just as their cohort's work deconstructs seemingly innocuous classification systems and standards to demonstrate the dramatic impact they have on people's access to healthcare and other resources (Bowker and Star, 2000), our paper considers how digitised, online catalogues that appear to make museums more available "warts and all" (Pickover, 2014: 7) can in fact further flatten the narratives they tell in their efforts to be interoperable and 'useful' to a global public.

Our interest is in how online catalogues reflect the human and selective ways of classifying and standardising knowledge that reinforce existing power structures while rarely acknowledging this fact. Instead, the online catalogues appear to be part of a natural strategy of 'moving toward universality' where comparisons may be made and communicated across vast distances (Bowker and Star, 2000: 241); they seem indeed to act as global microphones for museums to speak to the world. Drawing on various case study examples, we hope to reveal not only the limitations apparently inherent in many online catalogue records, but also the ways they in turn limit our understanding of the world if we always emphasise the global at the expense of the local. Moreover, that this notion of 'global' is so often constituted within a neo-colonial, Eurocentric framework.

We have chosen specific examples from online catalogues, not as critiques of these museums, but to demonstrate the ways online catalogues *can*, and in some cases do, function as boundary objects, as sites that reveal the constructed, changing nature of the knowledge-making process. If we recognise these spaces as flexible and permeable, as boundary infrastructures that 'retain traces of their construction' but are capable of being more inclusive (Bowker and Star, 2000: 326), they, in turn, offer interesting possibilities for facilitating contact zones that dissolve such entrenched dichotomies as 'museum vs.

community' and 'global vs. local.' While both boundary objects and contact zones are explicitly concerned with power relations, our suggestion is that framing museum catalogues as the former allows us to recognise the way power is enmeshed in more formal structures, such as classification systems and standards. Representing catalogues as boundary objects- something we suggest is more possible in digital spaces- might, we argue, facilitate contact zones. This broader concept can be articulated in less structured, more polyvocal ways but likewise rests on an understanding that knowledge and narratives produced by museums in the past are neither natural nor neutral, and were frequently harmful. Yet, the potential to give voice to communities whose artefacts have been languishing in museum stores since they were collected, museums, re-imagined as contact zones and based on postmodern assumptions, are places of great promise.

Making Meanings Local and Global

In researching museum catalogues, we find ourselves in good company: Boast (2007), Srinivasan (2006), Phillips (2011) and Turner (2015a) all call for a decolonising approach to museum cataloguing, arguing that 'documentation of objects in a catalogue of descriptions' is core museum work through which knowledge is produced and maintained, but that knowledge is always socially and historically constructed (Srinivasan et al., 2009: 166). As Susan Pearce (1994) discussed in detail in *Interpreting Objects and Collections*, the entire project of meaning making in museums depends on acts of selection, ranging from the channels through which the object first enters the collection, to the information included in the records. At each stage, new layers of meaning are added onto the object, and as much as these selection processes include certain things, they likewise exclude. When museum catalogue records are digitised and made available online, they do so as a result of further decision-making and selection processes, and have added impact thanks to the global reach of the Internet.¹ Our concern is that an emphasis on achieving Internet interoperability creates an online environment that favours universalism and so influences decision makers to privilege global identifiers over the local, unwittingly or otherwise.

Heeding Bowker and Star's advice, however, what we do not suggest is that ambitions of interoperability be abandoned altogether in preference of descending into a 'chimera' of systems that meet only the needs of a localised few (Bowker and Star, 2000: 313). That said, we do respect that some Indigenous communities, such as the Zuni (USA) and Anangu (Australia), choose to develop digitised museum catalogues that use their own esoteric classification systems and purposefully limit access to them as a conscious effort to correct historical misappropriation of their people's culture and knowledge (Boast and Enote, 2013; Christen, 2006). But in most cases, the sentiment that 'work must get done, even if one size never fits all' persists (Lampland and Star, 2009a: 4). Our argument is that the 'chosen size' should give sufficient room to manoeuvre so that online catalogues can act as 'boundary objects,' described by Bowker and Star as being those

'...that both inhabit several communities of practice and satisfy the informational requirements of each of them. Boundary objects are thus plastic enough to adapt to local needs and constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. They are weakly structured in common

use and become strongly structured in individual-site use. These objects may be abstract or concrete.’ (Bowker and Star, 2000: 297)

What we are not suggesting is that communities enduring either European colonialism or globalisation have not absorbed the categories and classifications imposed on them during these periods to the extent there is ever a wholly distinct ‘local’ alternative (Keane, 2011; Millerand and Bowker, 2009).ⁱⁱ Instead, we are suggesting that there are mechanisms and methods available to museums which enable them to represent digitised collections and catalogues as boundary objects so that users recognise the simultaneous possibility of constituting information objects in different ways but within a shared infrastructure (Bowker and Star, 2000: 314). Once this structural paradox is established, the museum can locate them as virtual contact zones, where the power relations that shape a museum collection can be thoroughly interrogated.

Museums as Contact Zone

Mary Louise Pratt introduced the notion of a contact zone as somewhere that ‘cultures meet, clash, and grapple with each other, often in the contexts of hugely asymmetrical relations of power, such as colonialism, slavery or their aftermaths as they are lived out in many parts of the world today’ (Pratt, 1991: 34; Pratt, 1992) This concept was quickly embraced by theorists working in the fields of museum studies, notably by James Clifford (1997), who proposed that museums become places of contentious and collaborative conversations and of encounter, exchange and connection between people in a globalised world and, since then, by Tony Bennett (1998), Michael Ames (1999) and Robin Boast (2011).

Ruth Phillips argues that in the last thirty years ‘the combined momentum of post-colonial and post-structuralist critiques in the academic community, and political pressures for decolonization outside it’ have pushed museum practitioners towards reorienting museums and rethinking their daily practice to becoming places of inclusivity, consultation, and innovation (Phillips, 2005: 84). Implicit in this broadening of scope is the notion that museums can have an influence on social practice by shifting their focus from being places where singular expertise and knowledge were collected and displayed, to places where public, and specifically educational engagement are prioritised as part of overall civic education.

At the core of this realignment in museum studies and the actualisation of museum practice are a series of assumptions about the social and political nature of how knowledge is produced and reproduced in museums (Boast, 2011, 58):

- (i) Knowledge is fundamentally relative, and the nature of reality is dependent on the perspective of the observer
- (ii) The way an individual comes to know something is an inherently social process, involving multiple discourses in overlapping networks
- (iii) Knowledge claims take the form of narratives by which the nature of objects may be understood, explained or accounted for
- (iv) Knowledge is knowledge of or about objects, and objects are things of or about which the knower knows.

Raymond Silverman (2015: 3), in his recent introduction to *Museum as Process*, a collection that builds upon Ivan Karp's seminal Museum Studies editions, expresses a growing preference for the term 'knowledges' since the plural form reflects an understanding that 'there are multiple epistemologies, multiple "ways of knowing," that often meet and coalesce in the objects upon which various meanings have been inscribed.' Considering 'objects of knowledge,' a category that potentially encompasses all 'things,' he suggests that they 'possess multiple layers of meaning' and 'an epistemological patina' that is not necessarily immediately available or accessible to everyone encountering and engaging with them (Silverman, 2015: 3). Knowledges, then, may be said to be both situated and embodied in objects.

The multiplicity of meanings which theorists have observed at the object-level can be extrapolated to the macro-level of the institution itself. For Boast, however, museums have failed to fully exploit their potential as contact zones because questions of reference, appropriateness, and legitimacy are framed by the point of view of the party in authority, usually a Eurocentric 'global' position, and in this case, that of the museum. Arguing that the four assumptions outlined above have, by and large, been co-opted and framed by the lenses of the educator and the marketing manager, he suggests museums now engage with narrower audiences, despite curatorial staff being well-aware of the implications of acquisition, preservation and public display of certain objects for the affirmation of certain identities. Ironically, as argued by Srinivasan et al. (2009), this expertise itself is being eroded by the professionalisation of museums, with the unintended consequence that the 'expert curator' is increasingly being replaced by professional collections managers, information officers, and displays artists, who use museum objects as illustrations for larger education objectives, rather than as specimens with individual value. This results in a loss of the cultural significance of the objects and a demotion of the value of the more local contexts in which the objects may be embedded. Some have argued that for contact zones to be successful, the zone itself must move out of the museum. Any contact which involves 'inreach', such as inviting communities into museums for discussion and debate, or allowing access to collection materials held in store will, by association, suffer from the institutionalisation of the zone itself (Brown and Nicholas, 2012: 310).

Global Information Management

Before delving into our specific examples, we wish to draw attention to the ways in which tools used in the day-to-day activities of museum cataloguing can illustrate how museums are moving (or being moved) towards adopting more universal standards when managing information. Used by more than 23,000 museums in 40 countries, global reach is certainly an aim of SPECTRUM, the museum standard that outlines eight *primary* procedures as the minimum set of processes required for a museum to manage its collections, one of which is Cataloguing (Collections Trust UK, 2015). If a museum wishes to be SPECTRUM compliant, it need only include the following information in its catalogue record: Object number; Object name; Number of items/parts; Brief physical description; Acquisition

method, date and source; Location information; Reference to images (Collections Trust UK, 2011). Similarly, the Dublin Core Metadata Standard, a restricted vocabulary of terms devised to describe web resources and physical objects in heritage collections, comprises just fifteen basic elements: Title, Creator, Subject, Description, Publisher, Contributor Date, Type, Format, Identifier, Source, Language, Relation, Coverage and Rights. While neither SPECTRUM nor Dublin Core categories preclude flexibility, they leave little room for granularity of description (Doerr, 2000). The implication of this is that interoperability comes at the cost of detail, or that the model would need to be used in conjunction with specialist vocabularies to capture more depth (Harper, 2010). Such universal tools can thus be seen as inherently constraining. More than this, they give no indication that the object is anything other than an inert physical entity, acted upon by human agents. As Strathern (1988), Gell (1998) and other anthropologists have exemplified, this ontological understanding of how objects function is distressingly Eurocentric.

The Smithsonian National Museum of Natural History: Tlingit Crest Hat

The Tlingit crest hat, or the replica version included in the Smithsonian's online catalogue, is a perfect example of an object that defies easy classification according to a universal standard. The original hat, representing a killer whale emerging from the ocean and repatriated to the Tlingit *Dakl'aweidi* clan, Alaska, by the National Museum of Natural History (NMNH) in 2005, no longer has a publicly accessible record in the online system (Hollinger et al., 2013). Hollinger, the NMNH Repatriation Case Officer who physically returned the original hat to the Tlingit, suggests that one of the limitations of cataloguing systems is that records are removed from the publicly available digital system when items are repatriated since the items are no longer present in the collections. To an outside researcher searching for information on kinds of objects it is as if it never existed. They would need to ask museum staff to search the digital records for all items in a particular category that are, or ever were, in the collections. Some museums go further and also destroy the corresponding accession records, even though this is not required by law under the Native American Graves Protection and Repatriation Act (NAGPRA) (Eric Hollinger, Smithsonian Repatriation Case Officer, personal communication, 22 October 2015). Although physically identical to the original hat- produced as it was through a sophisticated 3D digital milling project conducted by the Smithsonian and Tlingit post-repatriation- the replica is markedly different from the culturally and spiritually significant original *at.óow* that embodies 'Haa Shagóon, clan ancestors, the present generation, and future generation' ((Hollinger et al., 2013: 202). Yet, the replica remains significant since it is still treated as regalia by the Tlingit, making it much more than a Western notion of a copy or replica. Unlike the original, however, the replica is not an *at.óow*. To become a sacred object it would need to be brought out formally by the *Dakl'aweidi* as a crest object during a ceremony witnessed or validated by the clan's opposite moiety (Hollinger et al., 2013: 202).

Nonetheless, this does not mean that the replica doesn't have the *potential* to become an *at.óow*, nor that it has accumulated no history of its own since being incorporated into the collection. Indeed, the replica hat has been danced alongside the original in Alaska and at the

museum and the clan retains a right to check it out from exhibition and dance it as regalia. The community has itself expressed concern that the replica is so exact that it might be confused for an *at.óow*, which would fundamentally upset the clan's equilibrium if it were in fact treated as sacred (Hollinger, personal communication, 2015). Although the online records more than fulfil a required museum standard, details that attest to the item being something more than an inert object are absent from the online standard catalogue fields but are included in a lengthier notes section.ⁱⁱⁱ Identified online as a hat, it can be universally understood as something worn on one's head, which indeed it is, and so comparable with hats listed in other online museum collections across the globe. Of utmost significance, however, is an understanding that this crest hat possesses unique agency that makes it a wholly different entity from, for example, a felt Bernstock and Speirs hat held in the Victoria and Albert (V & A) Museum collections. Certainly, the efforts that the Smithsonian makes to extend its online information beyond a standard catalogue record means the Tlingit and visitors now know more about both the Smithsonian and the objects developed through this digitisation project, which, in turn, opens an engaging dialogue between various audiences.

Cataloguing systems that reflect a more 'Western' understanding of museum objects as devoid of agency potentially muffle this difference in a standardised online space. Without accounting for the spiritual elements or agency embodied in museum objects, such as the crest hat, the online catalogue seems to persist, under a guise of neutrality and universality, in reinforcing a European way of ordering the world at the expense of already marginalised worldviews, including the Tlingit's. As Bowker and Star point out, 'the advantaged are those whose place in a set of classification systems is a powerful one and for whom powerful sets of classifications of knowledge appear natural' (Bowker and Star, 2000: 205). Without challenging the fundamental worldview inherent in the catalogue's structure, we arguably make it less likely that the catalogue can act as a genuine boundary object.

Naming and Renaming Objects in America, Africa and Europe

While not addressing the ontological underpinnings of the catalogue, a Smithsonian staff member suggests that changing the object names themselves is one solution in tackling the inequity inherent in many universal identifiers. His preference is that Native American artefacts be catalogued according to their Native names. Recognising, however, the issues this might cause in terms of interoperability, he argues that items such as *parfleche*, a historical name derived from the French language with which few Native Americans are familiar, should at least be catalogued in more familiar English as 'Native Rawhide Containers' (Smithsonian staff member, personal communication, 27 October, 2015).

With reference to the Smithsonian NMNH's ethnographic collections, Turner (2015b) also addresses the difficulties associated with balancing universalist public engagement interests with local historicity in terms of how objects are named and catalogued in ways that cause neither confusion nor offense (Turner, 2015b). Their South African collection poses several challenges to the Smithsonian in this respect. The majority of these items were collected in

the colonial and apartheid period, with the earliest ‘South African’ item being donated in 1887 and the most recent accessioned in 1999. Interestingly, many of the names used to delineate objects or cultures in this collection are those used specifically in South Africa at the time of collecting, albeit not necessarily by those South Africans to whom they refer. In this sense, we can see that local terminologies have a long history of travelling beyond their immediate use and have indeed been inserted into and adopted by people and institutions for whom the terms are initially less familiar, demonstrating that cataloguing has always been an ongoing dialogue between localities. Yet, we do recognise that the ‘local’ terms entering ‘universal’ discourses likewise reflected severe power inequalities within the locality. Many of the South African items collected, for example, were originally catalogued by culture using ‘the ‘K’ word,’ (‘Kaffir’) a term that referred to black South Africans in colonial and apartheid times and became increasingly derogatory to the point that it would now cause great offense to any South African who encountered the term in an online database (Turner, 2015b: 251). Understandably, this word was included in the Smithsonian’s 2012 list of ‘Culture Terms Not in Use’ in the digital database since they are offensive or confusing (Smithsonian, 2012).

There are, however, other colonial and apartheid era ‘culture’ categories that persist as searchable in the online catalogue, notably ‘Bushman’ and ‘Bantu,’ and not just at the Smithsonian.^{iv} Bantu was first used as a classificatory name in South Africa by William Bleek in 1856; previously, it was a loose linguistic term referring to a heterogeneous group of Bantu-speaking peoples spread across central and southern Africa. In the 1960s, the apartheid government replaced ‘Native’ with ‘Bantu’ in official usage, later changing the name of ‘The Department of Native Affairs’ to the ‘Department of Bantu Administration and Development’. Viewed by black South Africans as another despicable government attempt to isolate them, the term was quickly associated with inferior treatment and ‘took on a skin of emotive meaning’ as ‘a symbol of the oppressors’ (South African History Online, 2015). Similarly, Dutch settlers in the 1600s gave the term ‘Bushman’ to Indigenous South Africans who collected food from the land and kept no domestic animals; people the settlers considered ‘low status.’ This umbrella term is still mistakenly used today to refer to all Indigenous South Africans who continue struggling to be identified as distinct groups and by their own, distinct group names (IPACC, 2010).

Figure 1: Searchable online catalogue record for ‘Bantu’ Drum. Department of Anthropology, National Museum of Natural History, Smithsonian Institution (E418521).

Clearly, then, the online catalogues of even the most sensitive institutions still reflect the unequal power structures in which institutions originally collected. Yet, if the catalogue records are ‘scrubbed clean’ of all historically offensive terms, there’s a risk of muffling testimony of the brutal, local circumstances in which the item was collected. The Smithsonian goes some way towards addressing this challenge by including digitised versions of the original catalogue cards in the online record. Although the text in these cards is not searchable, the public can still view them. The example given in Figures 2 and 3 below shows how traces of the historical record are present, with the K-word having been crossed

through rather than completely erased on the original card (Figure 3). The term is, however, entirely absent from the searchable record (Figure 2).

Figure 2: Searchable online record for Pondo Bead Ornament. Department of Anthropology, National Museum of Natural History, Smithsonian Institution (E150425).

Figure 3: Digitised original catalogue card for Pondo Bead Ornament, E150425. Department of Anthropology, National Museum of Natural History, Smithsonian Institution.

Other museums, such as the V & A, have indeed made attempts in their online catalogue to show that there were power imbalances in the way items were collected. The summary description accompanying a nineteenth century glass bead necklace from South Africa does state, for example, that ‘British people were able to collect examples of beadwork such as this necklace through their involvement in conflicts like the Anglo-Zulu War of 1879 and the South African War of 1899-1902, or via their work as colonial agents’ (V & A Museum, 2015). The language, however, is ambivalent to the point that the violence inherent in these events is somewhat silenced. In terms of being changing spaces, other museums do include statements in their online catalogues to this effect; for example, underneath the online record, the British Museum includes a statement that ‘The British Museum collection database is a work in progress. New records, updates and images are added every week’ (The British Museum, 2015). However, such efforts are, we argue, less visible statements than those made by the Smithsonian’s inclusion of old, edited catalogue records. As such, the Smithsonian online catalogue, albeit imperfect, can be read more easily as an evolving, constructed work, subject to change as ‘good’ boundary objects are. Moreover, recognising it as a dynamic entity opens it up as a possible contact zone since revealing these power inequalities is a first step towards creating spaces for people to meet, grapple and clash, hopefully in a way that both decolonises and enriches the narratives the museum and its catalogues then tell.

The Powerhouse Museum, Sydney: Possum-Skin Cloak

The Powerhouse Museum in Sydney is the major branch of the Museum of Applied Arts & Sciences in Australia. While its official designation is as a science museum, the collection includes a diverse range of objects related to the decorative arts, transport, furniture, photography and other media, computer technology, sport and communication.

Some objects are accompanied by lengthy object statements, statements of significance, production and history notes, such as a Breville Juice Fountain Juice Extractor^v. Others, such as a one gulden coin^{vi}, have only a brief object statement accompanying the formal record. These notes are included as supplementary or in addition to the object’s catalogue entry, which is also available on the page. As such, the supplementary notes are provided in a narrative format, and do not follow a prescribed or restricted vocabulary of terms. For the casual browser of the Museum’s website, the value of the longer descriptions is in their contextual information. In the case of ethnographic materials, the extensive notes add a much deeper layer of understanding to the objects, as well as providing information about the makers, where possible, and the contexts within which they were created. For example, a

possum-skin cloak^{vii}, which was made by Aboriginal women in 2007 using traditional methods as a response to seeing other cloaks in the collections of another museum, is accompanied by the following statement of significance - the length of the statement alone makes it worthy of inclusion here. By allowing room in the informal record for added information, the Powerhouse have managed to exercise and enact the idea of the digital contact zone within their online spaces, as well as re-presenting the catalogue as a boundary object, since it reveals different information objects and their content within a shared knowledge infrastructure, as is visible in Figure 4:

Figure 4: Digital Image, Object Statement and Statement of Significance for Possum Skin Cloak in Powerhouse Museum Collection Online

This extra detail does not simply add object-specific information to the digital record. By including the additional information, the Powerhouse offers one possible example of how a digital contact zone may be established in the online representation of a museum collection.

The Powerhouse also uses technical mechanisms to strengthen and develop the digital contact zones, moving beyond the objects represented online. The Museum has successfully managed to encourage dialogue with their online users through the information architecture of their website, thus extending the contact zone beyond their online collection and the viewer, and into the greater space of the Web. Firstly, and critically, through their provision of short, persistent URLs for every object, which ensures that the URL remains stable and the object locatable. Linkrot, - the inaccessibility of digital resources as a result of the removal of their websites, redirection or content change is an ongoing source of concern for scholars.^{viii} A persistent URL will always point to the content it is associated with, even if that content were to move location on the Web.

Secondly, on every digitised object's page on the site, the Powerhouse has included a block of wiki-markup language, which includes the object's URL, its title or name, the name of creator (where applicable) and a link back to the Museum. This makes it simple for anyone to create and embed a link between the object's page on the Powerhouse website into a wiki-based website, such as Wikipedia. By encouraging this type of reuse, the Museum is able to ensure longevity of the objects online, and wider access to their collection, outside the boundaries of their own site.

Thirdly, the museum has made concerted efforts to open up their records to the public: from the virtual front page of the digital catalogue, users are able to request an API key for direct access to the entire database, and can download ZIP files containing 3-dimensional scans of objects which can be printed out as 3D figures. The museum also offers a downloadable Wordpress Plugin which allows anyone to embed museum objects and the associated records into personal blogs which use the Wordpress platform, as well as a simplified dataset of the basic metadata for the Museum's collection. As well as inviting users to use the museum's information resources, the Powerhouse also encourages them to contribute to object records through user-generated tags which are associated with the objects. While these mechanisms provide users of the museum's website an unusual level of access to the collection

documentation, it is worth noting that having an internet connection is a prerequisite for access - and while 87% of Australia's population has broadband access, low-income households and those in rural areas are less connected (Ewing and Thomas, 2012: 3). In a paper explaining the process of developing the Museum's website, Sebastian Chan (2007) notes that the inclusion of user-generated tags was an attempt by the museum to crowd-source tags for much of the collection which, once digitised, was under-described. An unintended consequence of this was the emergence of new user-generated terms for objects, which were unlikely to be included in any formal vocabulary, but which add to the discoverability of the objects. Another outcome has been the relatively high number of tags added to objects which are not on display in the Museum and are rather kept in storage, but can be seen online. By opening the collection to users and inviting them to add tags the Museum has managed to locate the contact zone outside the physical space of the institution, while embedding it within a larger framework of knowledge, which includes these objects, and therefore the Museum as the repository. Indeed, in this context the Museum's model of knowledge organisation can be seen to indirectly mirror the characterisation of Indigenous knowledge organisation as 'dynamic, heterogeneous, social, and distributed; experimental, collective, and in the process of continuous adaptation and negotiation' (van der Velden, 2010: 6).

By making objects in their collection open to search via interfaces such as Google and programming the objects into larger, online collection aggregations such as Flickr and Wikipedia, the Powerhouse has managed to insert their objects into the global flows of information. The connections between the objects and the wider Web enable them to transcend their immediate location (both online and offline) and situates them in wider interactions and flows of interconnected cultural, political, economic and technological ideas, agendas and resources (Cameron, 2008: 230). By taking up a position within public spaces, the objects and collections invite the development of different meanings within wider cultural and social contexts. If we refer back to the original definition of the contact zone as a 'social space[s] where disparate cultures meet, clash, and grapple with each other' (Pratt, 1991) we can see that the Powerhouse has managed, via its collections, to both invite the types of discussions that mark the contact zone into its webspace by allowing user-tagging and new interpretations of certain objects, but also, and possibly more significantly, it has inserted its collection into the wider contact zone of the Web. Powerhouse objects are able to be included in the greater online collections because they are accessible, and fluid enough to move across platforms in the global flows of information and content that Cameron describes.

Conclusion

In this short paper, we have attempted to problematise the tension we see museums experiencing between wanting to exploit the technological possibilities of the globalising Web while fulfilling a need to re-evaluate traditional forms of classifying and cataloguing. To simply replicate existing catalogues and databases in digital form does allow the museum to use the Web as a microphone to broadcast its collections, at least to those communities who have access to the Web. However, the inherent risk is that they further entrench 'Western'

and colonial ontologies and narratives that have too long muffled source communities' worldviews. As projects such as the Smithsonian's Recovering Voices Program (Smithsonian Institution, 2016) demonstrate, museums *are* committed to shaping their institutions as contact zones where disparate cultures meet, clash, and grapple with each other. We argue this sentiment can be similarly expressed in an online context that is more fluid and flexible than museum databases often are. Revealing the problem at hand is not, in itself, a solution, but is an important first step towards developing one. Visibly exposing the constructed and changing nature of knowledge through their online collections is one way museums allow their catalogues to better function as boundary objects whereby new modes of knowledge arrangement and transfer are possible without fundamentally compromising the integrity or interoperability of the record. Carefully developed digital museums in the twenty-first century might indeed act as global microphones broadcasting at different pitches and volumes so that they don't muffle through universalism.

Acknowledgements:

This work was supported by the UK Arts and Humanities Research Council (AHRC) under the London Arts and Humanities Partnership (LAHP) and the AHRC International Placement Scheme Smithsonian Institution Fellowship.

We are deeply grateful to the staff members at the Smithsonian Institution who shared their time and experience in ways that contributed significantly to this paper, particularly Joshua Bell, Mary-Jo Arnoldi, Eric Hollinger, Günter Waibel, and Joe Horse Capture.

Figures 1, 2 & 3: Information provided courtesy of the National Museum of Natural History, Smithsonian Institution, 10th and Constitution Ave. N.W., Washington, DC 20560-0193. (<http://www.nmnh.si.edu/>)

References:

- Ames MM. (1999) How to Decorate a House: The Re-negotiation of Cultural Representations at the University of British Columbia Museum of Anthropology. *Museum Anthropology* 22: 41-51.
- Bennett T. (1998) Pedagogic Objects, Clean Eyes, and Popular Instruction: On Sensory Regimes and Museum Didactics. *Configurations* 6: 345 - 371.
- Boast R. (2011) NEOCOLONIAL COLLABORATION: Museum as Contact Zone Revisited. *Museum Anthropology* 34: 56-70.
- Boast R, Bravo M and Srinivasan R. (2007) Return to Babel: Emergent Diversity, Digital Resources, and Local Knowledge. *The Information Society* 23: 395-403.
- Boast R and Enoté J. (2013) Virtual Repatriation: It Is Neither Virtual nor Repatriation. In: Biehl PF, Prescott C, Society for American A, et al. (eds) *Heritage in the context of globalization : Europe and the Americas*. New York: Springer, 103-113.
- Bowker GC and Star SL. (2000) *Sorting Things Out: Classification and its Consequences*, Cambridge, Mass: The MIT Press.

- Brown D and Nicholas G. (2012) Protecting indigenous cultural property in the age of digital democracy: Institutional and communal responses to Canadian First Nations and Māori heritage concerns. *Journal of Material Culture* 17: 307-324.
- Cameron FR. (2008) Object-oriented democracies: conceptualising museum collections in networks. *Museum Management and Curatorship* 23: 229-243.
- Chan S. (2007) Tagging and Searching – Serendipity and museum collection databases. *Museums and the Web*. San Francisco.
- Christen K. (2006) Ara Irititja: Protecting the Past, Accessing the Future—Indigenous Memories in a Digital Age. *Museum Anthropology* 29: 56-60.
- Clifford J. (1997) Museums as Contact Zones. *Routes : travel and translation in the late twentieth century*. Cambridge, Mass.: Harvard University Press, 188 - 219.
- Collections Trust UK. (2011) SPECTRUM 4.0. London: Collections Trust.
- Collections Trust UK. (2015) SPECTRUM. Available at: <http://www.collectionstrust.org.uk/collections-link/collections-management/spectrum>.
- Doerr M. (2000) Mapping of the Dublin Core metadata element set to the CIDOC CRM. ICS/FORTH Technical Report 274.
- Ewing S and Thomas J. (2012) CCi digital futures 2012: the Internet in Australia. ARC Centre of Excellence for Creative Industries and Innovation, Swinburne Institute for Social Research.
- Gell A. (1998) *Art and Agency: An Anthropological Theory*, Oxford; New York: Clarendon Press.
- Harper CA. (2010) Dublin core metadata initiative: Beyond the element set. *Information Standards Quarterly* 22: 20 - 28.
- Hollinger RE, John J, Edwell, Jacobs H, et al. (2013) Tlingit-Smithsonian Collaborations with 3D Digitization of Cultural Objects. *Museum Anthropology Review* 7: 201 - 253.
- IPACC IPoAC-oC. (2010) *Southern Africa*. Available at: http://www.ipacc.org.za/eng/regional_southernafrica.asp.
- Keane W. (2011) *Christian moderns : freedom and fetish in the mission encounter*, Berkeley, Calif.: Univ. of California Press.
- Lampland M and Star SL. (2009a) Reckoning with Standards. In: Lampland M and Star SL (eds) *Standards and their stories : how quantifying, classifying, and formalizing practices shape everyday life*. Ithaca: Cornell University Press, 3 - 34.
- Lampland M and Star SL. (2009b) *Standards and their stories : how quantifying, classifying, and formalizing practices shape everyday life*, Ithaca: Cornell University Press.
- Millerand F and Bowker GC. (2009) Metadata Standards: Trajectories and Enactment in the Life of an Ontology. In: Lampland M and Star SL (eds) *Standards and their stories : how quantifying, classifying, and formalizing practices shape everyday life*. Ithaca: Cornell University Press, 149 - 176.
- Pearce SM. (1994) *Interpreting objects and collections*, London; New York: Routledge.
- Phillips R. (2005) Re-placing Objects: Historical Practices for the Second Museum Age. *The Canadian Historical Review* 86: 83 - 110.
- Phillips RB. (2011) Museum pieces toward the indigenization of Canadian museums.
- Pickover M. (2014) Patrimony, Power and Politics: Selecting, Constructing and Preserving Digital Heritage Content in South Africa and Africa. *IFLA WLIC 2014 - Libraries, Citizens, Societies: Confluence for Knowledge*. Lyon, France.
- Pratt ML. (1991) Arts of the Contact Zone. *Profession*: 33-40.
- Pratt ML. (1992) *Imperial eyes : travel writing and transculturation*, London; New York: Routledge.

- Silverman RA. (2015) Introduction: Museum as process. In: Silverman RA (ed) *Museum as Process: Translating Local and Global Knowledges*. London; New York: Routledge, 1-18.
- Smithsonian Institution. (2016) *Recovering Voices*. Available at: <http://recoveringvoices.si.edu/>.
- Smithsonian NDoA. (2012) Culture Terms Not In Use. Maryland: MSC.
- South African History Online. (2015) *Bantu*. Available at: <http://www.sahistory.org.za/article/bantu>.
- Srinivasan R. (2006) Where Information Society and Community Voice Intersect. *The Information Society* 22: 355 - 365.
- Srinivasan R, Enoté J, Becvar KM, et al. (2009) Critical and reflective uses of new media technologies in tribal museums. *Museum Management and Curatorship* 24: 161-181.
- Strathern M. (1988) *The gender of the gift : problems with women and problems with society in Melanesia*, Berkeley: University of California Press.
- The British Museum. (2015) *Collection Online: Male figure carved out of wood, Af1954,+23.3552* Available at: http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=472700&partId=1&searchText=zulu&page=1.
- Turner H. (2015a) Decolonizing Ethnographic Documentation: A Critical History of the Early Museum Catalogs at the Smithsonian's National Museum of Natural History. *Cataloging & Classification Quarterly* 53: 658-676.
- Turner H. (2015b) Information Infrastructures in the Museum: Documenting, Digitizing, and Practising Ethnographic Objects in the Smithsonian's Department of Anthropology. *Faculty of Information*. Toronto: University of Toronto.
- V & A Museum. (2015) *Search the Collections: Necklace 1613 - 1903*. Available at: <http://collections.vam.ac.uk/item/O350/necklace-unknown/>.
- van der Velden M. (2010) Design for the Contact Zone: Knowledge management software and the structures of indigenous knowledges. In: Sudweeks F, Hrachovec H and Ess C (eds) *Cultural Attitudes towards Technology and Communication 2010*. Perth, Australia: School of Information Technology, Murdoch University, 1 - 18.

Endnotes:

ⁱ Online catalogues rarely give access to the museum's entire collection. For example, Smithsonian has identified that it has standard electronic records for 18% of its 37 million object collection, and below-standard electronic records for 14% (Günter Waibel, Director, Smithsonian Digitization Program Office, personal communication, 29 October 2015) while The Powerhouse Museum, Sydney, estimates that 70% of its collections are available online, albeit with varying levels of accompanying information.

ⁱⁱ As Webb Keane's (2011) exploration of semiotic ideology highlights, converted Sumbanese in Indonesia certainly identify themselves as belonging to a 'global' 'Christian' category and check this box during census surveys. Our mistake, however, is to assume too quickly that we know exactly what they mean by 'Christian' since shared language alone is no guarantee of this. (consider rewording this as it reads informally) Similarly, as Millerand and Bowker (2009) point out, while for some the label 'democracy' does mean 'rule of the people', for

others it is merely a euphemism for capitalism; without calibrating such details – and often it is difficult to imagine how localised ‘universal’ terms are – it becomes very difficult to communicate them, especially in a decontextualised online space.

ⁱⁱⁱ There are three online records for this replica: one in the Smithsonian EMu database, another that is available online at the Q?rius web site, and one more on the Smithsonian X-3D site. These incorporate sections that include more details about the repatriation of the original, the making of the hat and the meaning it not being *at.oow* than the standard catalogue fields permit.

^{iv} See also The British Museum Collection Online for examples of items classified by culture as ‘Bantu.’

^v Powerhouse Museum Object registration number 2002/71/1 persistent URL:

<http://from.ph/11554>

^{vi} Powerhouse Museum Object Registration number: 2008/203/1-53 persistent URL:

<http://from.ph/380576>

^{vii} Object registration number 2011/60/1 Persistent URL <http://from.ph/416687>

^{viii} For an overview of the risks posed by linkrot to scholarly communication and research, see Parker, A. (2007) Linkrot: how the inaccessibility of electronic citations affects the quality of New Zealand scholarly literature in *New Zealand Library & Information Management Journal* 50.2 (2007): 172-192 and Koehler, W. (2004) A longitudinal study of Web pages continued: a report after six years. *Information Research*, 9(2) paper 174 [Available at <http://InformationR.net/ir/9-2/paper174.html>]