

Strokes of serendipity: Community co-curation and engagement with digital heritage

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Abstract

This article explores the potential that community-led digital engagement with heritage holds for stimulating active citizenship through taking responsibility for shared cultural heritage and for fostering long-lasting relationships between local community heritage groups and national museums. Through the lens of a pilot project titled *Science Museum: Community-in-Residence*, we discovered that — despite working with community groups that were already loyal to and enjoyed existing working ties with the Science Museum in London, U.K — this undertaking proved challenging owing to a range of structural and logistical issues even before the application of digital devices and tools had been considered. These challenges notwithstanding, the pilot found that the creation of time and space for face-to-face dialogue and interactions between the Science Museum and the participating community heritage groups helped to establish the parameters within which digital co-curation can effectively occur. This, in turn, informed the development of a digital prototype with huge potential to enable remote, virtual connectivity to, and interactivity with, conversations about shared heritage. The ultimate goal was two-fold: (a) to help facilitate collaborative sense-making of our shared past, and (b) to aid the building of sustainable institutional and community/public working ties around emerging affinities, agendas and research questions in relation to public history and heritage.

Keywords: Virtual collections; 3D modelling; Science Museum; community-in-residence; Ceramic City Stories; Bute Island Heritage; access; social history; active citizenship; community-institutional partnerships

Introduction

Recognising local heritage as a major asset for enhancing cultural identity, community heritage groups are actively seeking to make effective use of new digital tools and social media platforms to consolidate, publicise and contribute to the interpretation of the rich cultural assets in their locales. However, collections of significant value to local areas are often acquired by national museums that are not always able to make these readily available to the general public as a result of a range of structural factors — facilitating regular access being the most prominent. Shut away in storerooms both local communities and national museums are unable to access rich aspects of heritage: communities are not able to access locally relevant artefacts; and museums are missing out on the personal stories, memories and (local and regional) knowledge which make their collections so meaningful to the general public.

While museums do have a history of ‘inviting’ members of the public to work on exhibitions or specific educational and recreational offers, these are often short-term and project-driven meaning that they are designed to achieve a particular objective normally within a very short period of time (Blaser, 2014; Lynch, 2011). In other words, museums approach communities with a subject or agenda already in place and with predetermined terms and timeframes of engagement (Hooper-Greenhill, 2000). In a pilot titled *Science Museum: Community-in-Residence*, we challenged this model by providing community access to the whole of the Science Museum collection¹. Local community members from *Ceramic City Stories* (Stoke-on-Trent, Staffordshire) and *Bute Island Heritage* (Isle of Bute, Scotland)² toured the stores and selected objects of most interest and relevance to them which they commented upon and used to tell their own stories using blogs and Twitter.

Given that museum curators are increasingly recognising the potential of digital technologies as a way to protect and encourage access to our shared material heritage via

often top-down, designed platforms (Bailey, 2008; Boon, 2011; Wallace, 2009), we investigated the role that community-led digital engagement in the form of smartphone devices, tablets, Twitter, Flickr, Historypin and Facebook could play in improving access to stored collections and the challenges associated with this. The remainder of this article is structured as follows. In the proceeding section, we discuss some of the key conceptual perspectives underlying digital engagement with shared heritage that we find useful in framing our empirical analysis followed by a detailed description of the context before, during and after *Science Museum: Community-in-Residence*. We find this fruitful because it provides a sense of how building face-to-face working relationships between local communities and national museums around access and other related practical issues is crucial to engaging with public heritage resources before considering how the perceived affordances of digital technology can be utilised. As such, the analytical discussion that ensues engages first with key offline issues pertaining to access to artefacts and collections more broadly before homing in on the engagement with these using digital tools and resources. Thereafter, we discuss how remote digital connectivity and engagement with memory institutional spaces through the development of a digital modelling prototype specifically tailored to opening up the aforementioned spaces presents an invaluable opportunity for community co-curation and enrichment of our shared cultural assets.

Challenging traditional paradigms through broader digital engagement with shared heritage

The significance of national museum collections in preserving artefacts and memories of utmost interest and relevance to local communities in many parts of the globe has been well documented both in industry and academic circles (Bastian and Alexander, 2009; Crooke, 2007; Keene, 2005; Keene *et al.*, 2008; MLA, 2007; Williams *et al.*, 2006). Scholars have found that such collections contain and maintain a rich record of ‘ceremonies and important

community leaders, [...] significant cultural spaces, translations of language and stories, as well as audio, photographic and video material that document people and events in communities' (Williams *et al.*, 2006: 16). The problem, however, is that the aforementioned record is dictated by perceived 'expert' narratives produced by official memory institutions (Janes, 2009; Lynch, 2011). Such narratives, it has been argued, often do not bear semblance to the experiential knowledge that communities possess (Golding and Modest, 2013). To Wallace and Vincent (2011: 1-2), if communities are not given the opportunity to record their own 'history from below', what passes as the official collective past is neither one they find meaningful nor one they can relate to.

The urge to challenge traditional 'expert' narratives derives from two key points. Firstly, dominant versions of history often either suppress, discredit or omit oppositional representations of the past (Hein, 2000; Urry, 1995), the subsequent versions of which may alienate local communities and sections of the wider public. Until the 1980s and 1990s, this was most evident in the material displays of many mainstream museums and galleries which often omitted any meaningful engagement with and representation of local and community histories for a range of reasons — mostly of a structural and ideological nature. The main reasons for this emanated mainly from institutional acquisition and preservation protocols and their associated implicit agendas (Hooper-Greenhill, 2000; Weissberg, 1999).

Secondly, local communities counter hegemonic versions of history by critiquing what is perceived as the leverage that official memory institutions have gradually gained as significant sites of 'cultural production and ideological assertion' (Katriel, 1999: 99). This leverage is often associated with a 'historical facticity', whereby official memory institutions 'sustain the fiction that the past is told "as it really was", and [in doing so] ignore questions of point-of-view and ideological inflection in narrative constructions of the past, which would point to the possibility of alternative or oppositional readings of it.' (ibid: 107). Although

memory institutions generally, and national museums in particular over the past three to four decades have been developing a series of initiatives to move away from merely being repositories to enabling broader engagement in the construction and conception of our shared past (Bernstein, 2014; Hein, 2000; Hooper-Greenhill, 2000), this has mostly tended to happen in a top-down fashion that limits real, meaningful and sustainable engagement (Lynch, 2011; Watson, 2007).

One way to address this has been to look to digital technologies for solutions (Bailey, 2008; Flinn, 2007; 2010). The proliferation of digital technologies and associated tools, it is argued, not only affords local communities and the public at large an opportunity to become involved in the curation and interpretation of our shared heritage, but that it also provides the possibility to remix cultural artefacts and materials in a bid to facilitate community expression and voice (Affleck and Kvan, 2008; Ketelaar, 2003; Wallace and Vincent, 2011). Much of the research on the application of digital technologies (particularly interactive websites) in this way has focused predominantly on experimental, collaborative projects initiated by national heritage organisations with a view to engaging their users, audiences and other communities more fully with their artefacts and collections (Tallon and Walker, 2008).

Such projects have tended to take the form of collaborative digital heritage ventures³ where national memory institutions — particularly archives and museums — encourage individual users as well as new and existing community groups to submit content and knowledge, including material relating to the description and understanding of institutional collections via social media platforms (Flinn, 2010). More recently, the wider heritage sector has witnessed a rapid increase in the popularity and adoption of crowdsourcing — an approach understood and applied to facilitate online co-curation and wider participation in harnessing a range of expertise, knowledges, ways of working, seeing and thinking with a view to rendering digital cultural heritage content more accessible, relevant and valuable both

for current generations and for posterity (Boon, 2011; Owens, 2013; Procter, 2013; Ridge 2014).

Generally, these collaborative digital heritage ventures seem to have been successful, albeit to varying degrees. What all these ventures demonstrate in common is that they managed to bring together communities of online users willing to take part in contributing and ‘fact-checking’ a range of content that constituted shared experiences and memories and to provide corresponding metadata where this was missing. However, these ventures were initiated and designed in a top-down fashion that limited communities and individual users to commentary and not much else. Furthermore, users’ remote engagement with the institutions in question only lasted for the duration of the ventures, which were all singular undertakings. In what follows, we discuss how *Science Museum: Community-in-Residence* took a different approach by facilitating both offline and online spaces for a deep and meaningful engagement with the Science Museum collections.

Science Museum: Community-in-Residence: From community detective work to the physical tour of the collections storerooms

Science Museum: Community-in-Residence was preceded by a five-month period of careful planning and organising in which the *Ceramic City Stories* and *Bute Island Heritage* community groups were fully embedded. The pilot thrived on pre-existing ties and working relationships developed and nurtured on a storytelling project called *Pararchive*.⁴ Rapport, trust, confidence and enthusiasm for a shared endeavour were much more instrumental in driving the pilot than would have been the case if the pilot had been an exclusively online venture.⁵ Admittedly, this was only possible with a much smaller group of community members but the key objective remained whether this would offer a way into the collections with the aid of existing digital tools, devices and social media platforms and what challenges were encountered in the process.

A key element of the planning phase involved a co-designed, preparatory one-day visit to Blythe House — the Science Museum storerooms — which helped provide guidance and direction to the co-curatorial and participatory process that established the interests and motivations of both community groups and informed the structure of the residency. For example, given the sheer size of Blythe House with its hundreds of thousands of collections not on public display, it was clear from the outset that we would only be able to tour a selection of rooms rather than the whole store. To this end, group members were provided with a detailed list outlining an array of subject-specific collections to choose from based on what they felt was of utmost relevance and interest to them. This was particularly important because there are few places outside of the museum where this information can be accessed by the public. The choices made and common interests expressed informed the schedule of the residency which was designed and finalised collectively.

Of paramount importance to the (successful) execution of the residency was that community group members brought digital cameras, smart phones and tablets to capture the contents of the storerooms. In doing so, group members could reflect on how digital tools and devices could be utilised to improve access to the objects they were about to engage with from a very privileged position and what the limitations of the various technologies they used were. Twelve community group members from Stoke-on-Trent and the Isle of Bute participated in the residency on a late November weekend in 2014. The residency itself started with a brief introduction from the curatorial team who reiterated the overarching ideas behind the pilot and gave a brief and insightful introduction to the history of the site to which the discussion now turns.

Blythe House: From Post Office Savings Bank to a repository of un-displayed national collections

Blythe House was designed by government architect Sir Henry Tanner in 1899 as the headquarters of the Post Office Savings Bank. The building opened in 1903 and was regarded as a modern and well-equipped office, referring specifically to the presence of electric lighting. Thousands of clerks worked at Blythe House to maintain the paper records of millions of Post Office savings accounts across Britain on a daily basis. In the mid-1970s, the Savings Bank relocated to Glasgow leaving Blythe House empty. Over the following decades, the building was used as a location for film and television production. By the mid-1980s, Blythe House had been acquired by the Property Services Agency (PSA) of the Department of the Environment (the successor of the Ministry of Public Buildings and Works) to house the un-displayed collections of three national museums, namely the Science Museum, the Victoria and Albert Museum (V&A) and the British Museum (see Liffen, 2013).

As a result of its past history as well as its current use as a storeroom, Blythe House has carefully controlled atmospheric conditions and a distinctly institutional feel (Geoghegan and Hess, 2014). Collections are stored in a range of conditions: open racking, cupboards, shelves and even on pallets on the floor. This historical account immediately sparked a discussion amongst the group — prompted by a question about how to define an ‘archive’ which elicited a range of responses about who collected things and why, and where the ownership of archived materials lay. This, in turn, triggered a reflective process around the differences between a ‘collection’ and ‘an archive’: from the formal categories of museums, to how we classify our own collection management systems at home.⁶

On entering the stores, the tour took us through two rooms containing items related to the medical collections. The first contained over fifty years of hospital equipment ranging from early x-ray machines to birthing stools. The second contained the ceramics collections with hundreds of years’ worth of pharmaceutical jars, pestles and mortars. We then visited a

small room with medical statues and pendants: clay hands, feet and other body parts as well as healing saints, before moving on to the Engineering room with examples of tools, looms and the decanted shipping collections (Ships and associated equipment that were disassembled and transferred for storage before eventual exhibition). Finally, we visited the Communications collection which encompasses early telegraphs, through to telephones, radios and early televisions. Each room contained different objects organised in different ways. Throughout, group members photographed objects that struck them as interesting.

Where further information was needed, we took down object numbers so that these could be researched later using the Museum's internal object database. Indeed, the metadata retrieved was instrumental not only in informing community group members' storytelling projects, but also in illuminating the social history of group members' ancestors who might have been directly or indirectly involved in the designing, manufacturing and evaluation of some of the objects in the collections as we shall see. We attempted to record the tour as we wandered through the storerooms using audio recorders but, unfortunately, the number of speakers and the atmospheric conditions of Blythe House made this data difficult to work with.

On the next and final day of the residency, we reconvened at the Science Museum to discuss not only the findings of the previous day — particularly how digital tools and devices can be used to improve access to stored collections and associated challenges — but also to exchange ideas pertaining to wider issues arising from community-institutional relationships both online and offline. As we shall see below, the discussion reflected a range of concerns, experiences, and issues around museum curatorial practices. It also foregrounded engagement with personal stories, memories and (local and regional) knowledge, and the role of digital tools in maintaining a sustained engagement with shared heritage deriving from mutual partnerships between local communities and memory institutions more widely. The

discussion was captured using audio and video recording equipment. We now engage with some of the key insights yielded by the discussion.

‘Getting some public return on’ national museums through digital engagement?

We all then share that kind of anxiety about — there’s this massive public cultural investment in this national cultural saving’s bank [Blythe House] that we all need to get some public return on, in some shape or form (Participant 1).

In 2008, a report on stored collections found that of the museums surveyed; only 20% reported 400 or more users of their stored collections a year and in many ways little has changed (Keene, 2008). However, as the experience of *Science Museum: Community-in-Residence* showed, there was a clear interest in the collections and a feeling that better access to this ‘national resource’ was needed. The discussion started with the question: ‘what is a museum? Or what should a museum be?’ following on from the question the previous day in which the participants reflected on the definition of an ‘archive’. The initial response was that museums should ‘collect and preserve and make available’.

However the discussion moved on to the responsibilities that museums have as interpreters and gatekeepers of our national heritage;

We’ve gradually refined that down to talking about things in terms of the Science Museum or the Natural History Museum, but that’s our organisation of the stuff, but essentially it is still collections of stuff. The important bit is the interpretation, and that’s really where the public benefit of museums comes in (Participant 2).

Most of the group saw museums as having two different roles: as educational institutions providing audiences with ‘facts’ but also as storytellers shaping opinion and debate. As one participant stated:

I think there’s probably a critical distinction as well to be made between information and interpretation, because a lot of museums will give information related to things, but the interpretation is something that’s very slanted on the person (Participant 3).

The participants saw this as problematic as the stories presented were always limited and dependent on the people curating the collection displays or exhibitions. It also placed a constraint on the freedom that visitors had to interpret or interact with the things they found interesting. While the need for the museum to interpret objects was seen as important it was equally felt that this should occur in a responsive space:

I think one can over-interpret sometimes, where you just go into a museum and you're kind of led by your hand: 'This is what we want you to think about what we're presenting to you.' And that can be absolutely relevant, but sometimes I think it can also mean that it doesn't leave the opportunity for people to go in and be just sort of taken by a particular artefact or ways of thinking about it and they might have a different interpretation of the same things (Participant 4).

In line with other research into museums and community partners (Golding & Modest, 2013; Janes, 2009; Lynch, 2011; Keene *et al.*, 2008), the participants felt that this meant there should be a diverse group of people involved in planning and guiding the process of curating activities and events such as exhibitions:

I think curators have a responsibility to share as much of it as they can and interpret it in different ways. And not always the obvious, which I suppose is quite difficult, so you need quite an eclectic mix of people behind-the-scenes to bring the collections to life (Participant 5).

In these initial conversations — and prior to the discussion of digital tools — the challenges for visitors to access the information they wanted, and to museums to provide this service, was already apparent. Time, space and access to expertise will always mean that museum displays cannot cover everything and some visitors will always notice gaps. The questions we put to our participants were:

1. What role should community groups play in addressing these gaps in the historical narrative?
2. How can digital tools support this?

Museums and communities

Before discussing the specific issue of digital tools, the group were first encouraged to outline their experience of museum services, as a means of identifying any specific access problems.

Most group members had experience of accessing museums, archives and local or regional records offices in their locales. However, experiences of these local services were mixed, as one participant reflected:

[T]here's actually a really serious lack of access and openness to a lot of our local institutions — they struggle. From a resource point of view, we've got cultural, so it is real old-school gatekeeper kind of culture and I think that's not helped at all by constantly being hammered with resource cuts and staffing, etc (Participant 1).

There was sympathy for the financial position that many museums were in and how community and/or outreach work, while important, was often seen as an added extra (Lynch, 2011; Watson, 2007). With this in mind, the group considered the possibility of a space in which to discuss the ideas, exhibitions and collections experienced in the course of a museum visit as the following pair of comments illustrates:

So some people go up to a display, and say it's a display, and you can read about it, you can look at it, and whatever information is there, but what's more interesting to me are the conversations that some people will have when they're there. And I don't know those people, but they might be saying: 'Oh yeah, that's a bit boring,' or, 'Look at the detail on that,' or whatever, but that is never captured (Participant 6).

What was interesting about yesterday — to touch this point you were saying — it's the conversation around those objects; that was what made yesterday quite special for me... So it was the stories I was wondering about more than the objects, so I wasn't thinking: 'Here's a 1920's radio,' I was thinking: 'Who used to sit around this?' (Participant 7).

The pair of comments above allude to this conversation space and the desire to record and interact with it. This is not seen as replacing the formal work that the museum does, but as complimentary to it. It is a way of enriching the experience by entering into a conversation with and around the objects on display. This is something that some commentators have

found to contribute to the ongoing relevance of such objects — be it by questioning dominant and taken-for-granted meanings ascribed to such objects, or, perhaps interpreting them through a different and/or new perspective (Bastian and Alexander, 2009; Williams *et al.*, 2006). Is this where the digital would come in to help facilitate this process?

Digital tools: Creating a ‘DIY Dirty Archive’

How do existing digital tools create and support these conversation spaces? The group had experience of using a range of social media tools and resources including: Twitter, Facebook, YouTube, Historypin and Flickr. In line with the comments about museum exhibitions and objects, it was not so much the subject matter that was the main draw but the conversations that occurred around them. As one participant stated:

{T}he interesting part isn't what's posted, the interesting part is usually the comments, which is basically our discussion here [...] YouTube takes that a bit further and it always ends up a big fight! (Participant 8).

Creating a digital space was seen as just as valid as the museum space as long as it captured some of the essence of the social interaction of the museum experience and was easily identifiable as an official part of the museum.

I think you have to understand what makes it the experience, which I think is creating that space for a conversation, and if you can re-create that space digitally, which I think you probably could, pushing the right buttons in that sort of way, and choosing carefully the right sort of things to ask people to join the conversation about, then I think it's entirely possible (Participant 9).

The participants also drew attention to the role that individuals played in creating digital content and the potential networks that could be created around these items. The tour of the storerooms the previous day drew particular attention to the volume of content

produced and prompted questions about how and where this might be shared most effectively.

So between us we've actually got a DIY dirty archive — we've digitised probably, between us, about 500 items at least in a couple of hours, in reality, which is fabulous. And between this grouping, some of us have got more obvious bigger networks, like Facebook groups or Twitter accounts, thousands of followers, etc, so straightaway you've got ambassadors (Participant 1).

Twitter and Facebook were often mentioned as key digital spaces where communities could gather to discuss archives and other resources. Participants liked the fact that they could see the conversation evolve and make new connections around their latest archive finds.

Museums, communities, the public and digital tools

What role could digital tools play within a museum setting? It was clear that the participants really enjoyed the visit to the storerooms and referred numerous times to the privileged position they were in. However, it was recognised that this was a difficult experience to scale up. By sharing images of the stored collections in the aforementioned digital spaces, the group felt they were reaching out to and potentially engaging with a much bigger audience:

[Y]ou could have had the institutional voice, if you like, giving the formal background to it [an object] or the research background, but you could have 100 people chipping in or 1000 people chipping in on that conversation, and saying: 'This is what it is to me and that's interesting.' Instead of becoming a passive thing where people receive information, it becomes very much a two-way thing, like you were saying, where people contribute their experience and their knowledge and those things as well, and digitally I think that works (Participant 10).

One example of how these dual voices or dialogue (institutional and visitor/public) had been 'digitally' accommodated in a museum was that of QRator⁷ — described as 'a means of enabling visitors to interact via iPads, through QR codes, or the QRator website

instead of simply reading static museum labels'. It was trialled in the Grant Museum of Zoology and encouraged visitors to discuss provenance, as well as structural issues outlined earlier around institutional acquisition and retention protocols and ideological agendas inherent in curatorial practices and displays. In a similar vein, the Science Museum and the British Postal Museum and Archive both launched online wikis in 2008 to facilitate debate and spur collaboration.⁸

Another digital approach to opening up collections was the use of 3D printers. Museums could share patterns for objects which individuals could print out themselves, particularly with the printers becoming increasingly affordable. There was also particular excitement around the possibilities of using video and virtual tours with built-in Q&A sessions. This is an approach that the Science Museum has taken before, conducting live tours with curators on Twitter. These tours usually receive retweets and interaction from the followers, but there are limits on how much depth can be achieved in the conversation:

Access is difficult — like you were saying — the travel times and things like that. So you touched on virtual tours, so what you could do is you could get like a tablet or whatever you've got access to, and one day you could take us on a virtual tour using like Skype or something, and if we're available we can plug in at that time and we can direct your tour that way. So you can be telling us about an object and we can be asking questions, and actually if you don't do it on Skype, but say if you do it on Google Hangouts, what Google Hangouts lets you do is record that entire conversation, that entire video, and automatically that goes on to YouTube, or you can edit it before it goes to YouTube. So then not only do we have that conversation with you directly, but that's captured for other audiences as well (Participant 11).

'Go Pro'⁹ cameras were suggested as a way to facilitate these kinds of tours. The more formal medium of 'Vikings Live' was also mentioned: a tour produced by the British Museum of their *Vikings: Life and Legend* exhibition and shown in cinemas across the UK.¹⁰ These tours proved to be very popular and the British Museum introduced additional

screenings to meet demand. Tours such as these though lacked the degree of interactivity that the participants were looking for. Though perhaps not known to the participants at the time of the tour, another interesting resource — *Periscope* (a live video streaming service) offers some exciting possibilities for interactive, online museum tours, as some museums are already demonstrating.¹¹

In spite of the perceived uses afforded by digital tools, there were still limitations to the access such tools could facilitate. As one participant remarked:

And that goes back to basic, basic stuff, and at some point how will people know that there is this fantastic community who are all interacting? You hope the viral thing will do it, but it's like that ain't going to get my mum. She doesn't know what a phone is let alone a smartphone! No, that's unfair. So I think there is something and that is so critical, the way in (Participant 1).

There is a temptation to see digital tools as the solution to all museum access issues, however there are still many museum audiences who would not benefit. Digital access to museum collections has to be viewed within the context of more general issues and broader structures associated with accessing the internet such as cost and the availability (or lack) of digital skills and connectivity (See Gómez and Thornham, 2015; Office for National Statistics, 2014; Parry *et al.*, 2013).

Digital stories from the stores

In the weeks that followed *Science Museum: Community-in-Residence*, participants shared their photographs and stories through the Ceramic City Stories blog (<http://www.ceramiccitystories.postach.io/page/science-museum>)¹². In some cases, this involved further research into some of the items that particularly caught participants' attention during the tour or those items that participants found intriguing or simply connected with the most. For instance, one participant shared a blog about the *Pedoscope*: an item in the

medical collections which — according to the details retrieved from the Science Museum’s internal object database — ‘produced an X-ray of the customer’s foot inside a shoe to ensure shoes fitted accurately.’ This item had captured participants’ imagination and had been the focus of a conversation about changing ideas of safety in science over time.

Another participant reflected on the experience of visiting the archive and echoed many of the points that had been at the core of our discussion on the second day of the residency. His blog entry in particular demonstrated the different details that can be revealed by exposing different people to the collections. When we entered the Communications room, the participant describes not finding any of it interesting or that he felt he missed the point. But then, he began looking closely at some of the objects:

It was this weave that interested me. I felt as though I was missing the point of being in a science museum as a weave wasn't real science, was it? It didn't matter. I was interested in capturing the pattern! (Participant 12).

The participant was particularly intrigued by the dirt and signs of use found on some of the objects. For example, his pictures of an *Oscilloscope* — a device for observing constantly varying electrical signals over time on a screen — revealed tiny scratches on the surface of the glass. From these imperfections, he found himself wondering who had owned and used these objects, and what further stories could be uncovered? Finally, one participant used the visit and the blog to reflect on her personal connections to the collections. In particular, a telephone in the Communications collection prompted some childhood memories:

As mentioned earlier, my father was a telephone engineer. Part of his role was called Trunk Test and he would often be called upon to test equipment before it was used by the general public — this included telephones. Perhaps it was because he was the father of 4 accident-prone children but he would often bring home new phones to try out before they went on sale. The phone I liked the best was the original

Trim Phone. However, ours was bright orange and the envy of many of my school friends (Participant 7).

While the blog format suited most of the participants, one also used Twitter to share a series of pictures and thoughts of the residency. These posts were much more ‘visible’ than the blog posts and reached beyond the project members involved in the two-day residency. In the following section, we discuss a 3D prototype that moves beyond mere visibility to help facilitate community co-curation and engagement with our shared cultural assets in an effective and sustained fashion.

Virtual collections: Remote, digital connectivity to and interactivity with shared heritage

In a bid to consolidate the success of the residency — by harnessing many of the ideas generated and with a view to reaching and engaging remote audiences for the Science Museum, we developed the idea of representing the collections’ space virtually. To this end, a prototype virtual archive¹³ was produced of collections stored in two carefully selected rooms in Blythe House: the Dentistry and Communications collections. This approach provided a test platform on which to explore the challenge faced in opening up museum and archive spaces to broader publics without compromising the integrity and safety of content therein.

The production of this prototype posed a significant challenge. The vast number of artefacts stored in each of the two spaces meant that the amount of photography, image processing and interactive authoring required to construct each of the navigable, virtual spaces was considerable. Additionally, the layout of each space posed physical constraints that made it difficult to capture artefacts effectively. Notwithstanding the challenges, the resultant prototype now consists of both interactive 360° scenes (offering a located

experience of the collections and archival space itself) and high-resolution object photography (facilitating the study of the artefacts contained in that space) that can be accessed from anywhere in the world using standard web browser technology. The high definition images contained within the prototype allow the artefacts to be studied in great detail. A good illustration of this concerns the tiny scratches on the surface of the glass of the *Oscilloscope* that one of the participants found intriguing as outlined earlier. Furthermore, the immersive and located experience of navigating the collections and archival space offers a new method of accessing objects and materials in storage very rarely seen by members of the public.

The following two steps are envisioned to significantly enhance the prototype in the future: (a) linking the prototype to the Science Museum internal object database records, and (b) designing intuitive digital tools to allow for broader co-production of social knowledge to sit alongside the ‘formal’ database records. The first step requires users to select an object or artefact within the virtual collections and archival space. With a single click, a new information tab is displayed alongside the ‘detail view’. Expanding the tab displays the database records for the item (See Figures 1, 2 and 3). The second step — which requires users to create an account — allows users to input their experiences, stories, memories, commentary, and knowledge which then sit side by side with the ‘expert’ database records (See Figures 4, 5 and 6). This not only captures the invaluable conversations and discussions that happen around objects but are never documented, but it also facilitates the collaborative production of knowledge. More importantly, it makes room for multiple perspectives and readings in the process of constructing and interpreting our shared past.

The two aforementioned steps speak to three key objectives of this research which, in turn, reflect wider trends and issues in contemporary, collaborative engagement with cultural heritage in the digital era. First, linking the prototype to the Science Museum internal object

database records and designing simple and intuitive digital tools to facilitate collaborative knowledge production and sense-making highlights ‘the coming together of institutional expertise with the experiences and insights of [diverse] communities, both online and on-site’ (Phillips, 2014: 254). But if the findings from our participants’ discussion above are anything to go by, ‘on-site’ engagement seems to be a rarity due a host of logistical issues around access, funding and geographical distance (including ‘travel times’ among many other things). This implies that the physical distance between the Science Museum (and indeed other national memory institutions) and local communities on one hand, and on the other — the physical distance separating local communities from each other will always remain unbridgeable.

By contrast, regular online opportunities that give users more leverage, autonomy and scope for contribution and participation — even though not aiming to particularly replicate the kind of serendipitous encounters and actual experiences generated on *Science Museum: Community-in-Residence* — would invariably boost much deeper, meaningful and sustained engagement with common cultural heritage. Contrary to views that argue otherwise, this does not necessarily have to flare the tensions surrounding the perceived devaluation of ‘formal’ curatorial expertise through soliciting ‘lay’ knowledge and input in a bid to accommodate a rich plurality of perspectives (Golding and Modest, 2013; Ridge, 2014; Watson, 2007). If anything, institutional and community/public co-curation plays an instrumental role in helping update and reinterpret objects and associative social history and knowledge to reflect iterative developments in the interests of public history (Boon, 2011).

Second, the deployment of the prototype in the ways discussed above has the potential to facilitate a productive and arguably high-quality engagement with the past on open and transparent terms that may help address broader issues and concerns around veracity and truthfulness so often raised against democratizing voice and curatorial practices in the current

digital age. To this end, some commentators have pointed to the downside of collaboration and connectivity in our increasingly fast-paced digital world which fosters the generation of all kinds of content that may not always be authentic and as such, requires mechanisms for validation (Affleck and Kvan, 2008; Ketelaar, 2003; Owens, 2013). The requirement for users to create an account to access the above-specified prototype would help guard against this to some extent by allowing institutions ‘to see an individual’s activity and to gain an understanding of who they are and the contributions they have made because this activity is displayed right along with the [formal object records] (Bernstein, 2014: 18). Moreover, this mode of contribution ‘would enable [users] to think more like curators and to get [...] away from quick social-media style ‘like’ button thinking to engage more deeply with the experience’ (Ibid: 31). This, Phillips notes, is more likely to keep users interested in sharing content when in dialogue with others, especially experts (2014: 258).

Lastly, the relationship built between the Science Museum and the participating communities around the creation of the prototype is crucially important. Not only is it testing the extent to which artefacts and collections stored away from the public can be made digitally accessible and the degree to which institutional expertise and lay experiential knowledge can be balanced effectively, but it is also opening up new opportunities and research enquiries. Although this research is currently intended as a closed test and will not be publicly available as a platform prototype without further negotiation, the Science Museum is considering the possibility of capturing more storerooms using this resource in its quest to find out how best the public engage with and want to access archival material.

Here, it is crucial to invite a range of diverse heritage-focused and creative practice-oriented community groups and interested members of the public not only to help develop and test its functionality and suitability, but also to use it as a platform to enhance collections to ensure their ongoing relevance. Emergent community-institutional partnerships of this kind

would seem resourceful, particularly at a time when national museums are experiencing successive public funding cuts (Hein, 2000; Keene *et al.*, 2008; Owens, 2013). Certainly the *Ceramic City Stories* and *Bute Island Heritage* community groups that are ‘loyal and already engaged, be it online or on-site’ (Ibid: 257) would be very enthusiastic. Over and beyond the potential this research has to explore effective ways of browsing collections and to think about their aesthetic qualities, the Science Museum is also considering using the prototype in its wider review of current storage facilities.

Conclusion

This project aimed to investigate how communities access archives and collections with a particular focus on the role of digital tools in this process. We have seen that there is a genuine interest in accessing stored collections and that the serendipity of discovery in a place not usually open to the public was part of the appeal. The guided browsing of the stores and the conversations that occurred were an important part of the experience, something that is neither provided in museum visits nor in the kind of collaborative digital heritage ventures alluded to earlier. Through this pilot, it was discovered that the building itself and the spatial experience of the collection, play a significant role in guiding conversation and engagement.

All the participants felt that museums could do more to create a space for conversation and reflection. While some suggestions were made about how this could be achieved, it is still not clear how these conversation spaces would sit alongside more conventional aspects of museum work. This becomes an even greater challenge when we begin to consider conversational spaces in the context of stored collections. The participant blogs compiled after the two days show that while digital tools currently available afford certain uses and practices, they also exhibit limits in relation to meeting the need for a conversation space. While the participants did post often detailed thoughts on the two days, interaction was generally confined to the original community groups. In these formats, unless

someone knows what they are looking for, it is difficult to repeat the serendipitous discoveries found in the store. In addition, it is highly unlikely that the social media tools and resources outlined above (Twitter, Facebook, YouTube, Historypin and Flickr) would have the capacity to recreate the actual experiences in the storerooms.

Although the residency was a rich and useful experience for both the research team and the participants in terms of strengthening social bonds and working ties that are crucial ingredients for a sustainable and productive working relationship, it is very unlikely to be opened up to the wider public. The time and costs involved in this level of access are beyond the means of most museums to regularly provide, especially in the current economic climate. This presents a huge challenge for the heritage sector as a whole which is striving to make the transition away from being a mere repository of collections to a truly relevant community and public resource in terms of contributing to the collaborative production and circulation of knowledge and culture (Janes, 2009; Watson, 2007). However, this research demonstrated how local community groups want to use the resources of national museums. We can summarise access as:

- The opportunity to browse as well as search collections;
- Having the tools to record interesting items;
- Creating space (both physical and virtual) to discuss collections with other users and the museum;
- Finding a way to record and value the conversations that happen around collections.

This pilot generated a digital prototype which not only has great potential to open up hitherto inaccessible archival and collections spaces for browsing, searching and for facilitating discussion, but the prototype also has the capacity to stimulate the desire to be led by the visual and tangible qualities of collections. Equally important is the platform the prototype offers to contribute to and converse with our national heritage. Refined and made

publicly accessible, the prototype would provide a useful and welcome contribution to the way public cultural institutions more generally are reorganising themselves in the current state of digital flux in a two-fold sense: (a) by attempting to re-establish themselves as authoritative places of reference without laying claim to being arbiters of social history and the past (Hein, 2000; Janes, 2009), and (b) by fulfilling their ‘social obligation to embrace openness, increase accessibility and contribute to broader conversations’ (Phillips, 2014: 263).

Funding acknowledgement

This research was funded by grants awarded by (a) the Sustainable Society Network (SSN+) under the overarching Research Councils U.K (RCUK) and Engineering and Physical Sciences Research Council (EPSRC) Digital Economy theme and, (b) the Higher Education Innovation Fund (HEIF).

Notes

¹ The Science Museum is a public national museum located on Exhibition Road in London, United Kingdom

² *Ceramic City Stories* and *Bute Island Heritage* are heritage community groups based in the United Kingdom. Located in the West Midlands of England, the former documents and tells heritage stories around the industrial production of glass and extensive collections of ceramic ware that have been the lifeblood of the city of Stoke-on-Trent for many decades. Situated on the West Coast of Scotland, the latter similarly records the social history and oral stories associated with agriculture and archaeology among other things around which the identity of the Isle of Bute has been built over time.

³ See Flinn (2010) for illustrative examples of such ventures including *Your Archives* which was launched in 2007 and ran by the National Archives (UK) and *The Polar Bear Expedition Digital Collections* at the University of Michigan, US among others.

⁴ *Pararchive* worked with a range of creative- and heritage-focused community groups across the UK, the Science Museum Group (Science Museum on Exhibition Road and the National Media Museum in Bradford), and the BBC to research and document local and regional histories. See <http://pararchive.com/> for more details.

⁵ We are neither arguing that a close rapport nor trust and confidence cannot be developed in digital spaces. Our point is that the quality of engagement and interaction in face-to-face situations or in physical proximity in a range of contexts has been found to be significantly higher than in virtual spaces. See, for example, Gómez Cruz and Thornham (2015); Parry, Thornham and Thumim (2013) and Surman, Kelemen, and Moffat (2015).

⁶ During this discussion, no clear-cut definitions of a ‘collection’ or an ‘archive’ were presented but there seemed to be a consensus that an archive referred to a building in which different kinds of materials are stored or perhaps any source of information that may or may not be human. For some in the group, archival material was stored in shoe boxes under beds or perhaps in the minds of relatives or even in family photo albums. There was an acknowledgement that the term ‘archive’ with a capital ‘A’ tended to be associated more with the

official memory institutions such as the National Archives.

⁷ For more information on QRator, follow this link: <http://www.qrator.org/about-the-project/what-is-qrator/>

⁸ Visit <https://www.museumsandtheweb.com/mw2009/papers/looseley/looseley.html> for more details.

⁹ Follow this link for more information on 'Go Pro' cameras and other associated accessories <http://gopro.com/>

¹⁰ More details on 'Vikings Live' can be accessed here: <http://www.britishmuseum.org/vikingslive>

¹¹ See <http://blog.nms.ac.uk/2015/04/02/up-periscope/>

¹² A permanent library record of this website can be viewed at <http://dx.doi.org/10.17639/nott.338>

¹³ Accessible at <http://tomjackson.photography/interactive/blythehouse.html?html5=prefer>. A permanent library record of the 3D prototype can be viewed at <http://dx.doi.org/10.17639/nott.339>

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