

REFLECTION

Archiving the wild, the wild archivist: Bukit Brown Cemetery and Singapore's emerging 'docu-tivists'

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In recent years there has been growing interest in the discipline of computing in relation to cultural heritage, parallel with developments in greater user participation in archives and advances in documentation work. These trends are reflected in the case of a documentation project of an old Chinese cemetery in Singapore, Bukit Brown Cemetery. This case was characterised by tensions among the 'wild' array of emerging individual participants and archivists that took the momentum away from both more formal NGOs and government institutions in documenting, archiving and raising awareness of the heritage of the site when part of it was announced to be set aside for a new highway. The case presents a compelling need for participatory archives, facilitated by computing interventions encouraging public engagement and visits to the site. Being actively involved in the documentation process, the authors reflect on how conceptual frameworks of records may assist in designing new media innovations and informing the ways by which a cemetery may be documented. Through these reflections, the authors argue for the active participation of archivists and records professionals in documentation work, and demonstrate how, in the creation and keeping of records, they shape the collective imagination of the public and other stakeholders in heritage sites.

Keywords: computing; convergence; cultural engagement; documentation; participatory archives

Introduction

Not long after my dad passed away in 2011, the government announced plans for an 8 lane highway that would cut through Bukit Brown, and graves in the way would have to be exhumed. The news of the highway triggered a memory. The last time I visited my grand-

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pa's tomb was more than 40 years ago when I was a young girl. I could vividly recall my grandpa's tomb at Bukit Brown. Concerned it might be affected, I realised it was time to visit him ... Inscribed on the tombstone was my ancestral hometown, Kimen, my grandfather's death date, 1937, and the names of his children. My father was the only son. For the first time I came to know my father's birth name 陈天吉, Tan Tien Kiat, inscribed on the tomb. My grandpa passed away when my dad was only five and dad changed to a simpler name, 陈 亞 旺, Tan Ah Ong. (Serene Tan, 'My Father's Dream Fulfilled', 4 February 2012)

This is one of the numerous entries on the website All Things Bukit Brown: Heritage, Habitat and History, which was set up by a community of concerned members of the Singaporean public known as the Brownies. The purpose of the website has been to raise awareness of both the ecological and heritage value of the Chinese cemetery comprising an estimated 100,000 graves, now hidden within the lush equatorial vegetation that has covered the site since burials ceased in 1973. Established in 1923, the 173 acres of Bukit Brown Cemetery (BBC) came to the forefront of cultural politics in 2011 when the Singaporean government announced that part of it would have to give way for a highway, and the other parts for the development of residences in the longer term. In a country where cemeteries have been regularly cleared since the end of the colonial era for urban developments, the public outcry following the announcement may have been surprising to the government. In response, the government commissioned a documentation team of academics, including the two authors of the present article, to document the graves in the area affected by the planned eight-lane highway project, and create an archive that would be of public interest and useful for future scholarly research. Some members of the documentation team, including the second author of this paper, actively participate and interact with the Brownies behind the website All Things Bukit Brown. Some of the Brownies also volunteer for the documentation team. The work of the documentation team is independent of the activities and interests of the Brownies.

The community of Brownies had been exceptionally active in their efforts to keep BBC relevant to the broader public. They have helped descendants to find gravestones, brought in guided tours and tracked the material cultures of the tomb designs. In addition, they have traced the genealogies and histories of the deceased, exploring the broader contexts of the lives of those buried in the cemetery, ranging from prominent business leaders to revolutionaries. It is through the efforts of these Brownies that the cemetery was placed under the World Monuments Fund Watchlist in 2014, a list that documents endangered heritage sites from around the world.²

The graphic illustration in Figure 1 by Cartoon Press, an independent anonymous cartoonist known for his critique of the Singaporean government through his posts on Facebook, typifies the activities of the Brownies. Carrying out a range of activities entailing research, public education and advocacy, this loose association of individuals has been trying to keep the future of BBC in the public limelight. Through public tours conducted by spirited volunteers every weekend, which have led an estimated 10,000 people through the cemetery since the issue surfaced, the Brownies have been trying to keep a human presence in this otherwise neglected space in order to dispel notions that it is redundant land awaiting infrastructural redevelopment by the state. In addition, they have also pre-empted the official documentation team by launching public exhibitions and lectures on BBC at various venues. Similarly, with related websites, blogs and social media accounts, including the main Singapore Heritage–Bukit Brown Cemetery

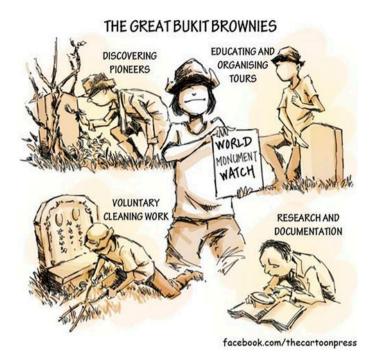


Figure 1. Cartoon Press, 'The Great Bukit Brownies', posted on 19 November 2013. Reproduced with permission.

Facebook page, the Brownies have worked hard to keep their online presence visible and active.

Wright foresaw the possibility of such heritage sites producing public memories through acts of visitation, rediscovery and re-knowing through engagement with the material archives by successive generations.³ In the case of BBC, the Brownies through their engagement with the material documents of the site and interactions with the documentation team have also become amateur or 'wild archivists'. Through their personal research and involvement, they have created a rich repository of information and knowledge about BBC as well as the broader historical context in which the deceased had lived. Here, the digital cultures of the Internet and social media have facilitated in sourcing, collecting, processing and sharing significant records accompanied by meaningful reflections in cyberspace. The reflections of Serene Tan quoted at the start of this article in some ways represent a more active form of participation in one of the many un-orchestrated individual efforts aiming to rescue the repository of genealogical and historical materials that are contained within these graves.

Wright's attempts to reveal the apparent trade-offs between housing the living against that of the dead underscores a developmentalist and functionalist mindset that typified the trends of a modern governance that is less restrained by the religious—cultural taboos of traditional societies as understood by Giddens.⁴ The ideas of extensional and intensional transformations to be expected in modern societies were presented by Giddens in his 1991 book *The Consequences of Modernity*. Giddens reflected on the complexity, characteristics, changes and transformations one should expect of contemporary societies. Modernity in the context of this paper refers to the influences

that Europe exerted upon colonial societies from the seventeenth century onwards, distinguished by the rise of capitalism, industrial revolution, rationality and orientation towards progress. Giddens argues that modernity has brought about complex modes of being or existence. On the one hand, there are what Giddens calls extensional transformations, such as the invention of the printing press and the introduction of participatory media, which are those related to a person or organisation that has global connections and is no longer only confined to the local. These social connections in turn result in assumptions and expectations as to how one should function, exist and behave as part of existing in this world. This existence is mediated by intensional factors: one's intimate desires, goals and reflections.

In the case of BBC, globalising influences driving the urgency for urban development, and likewise the availability of information and communication technologies in enabling and making dialogical communication possible, present extensional transformations. On the other hand, the everyday practices of individuals, even as they make choices concerning their engagement with the significance and issue of BBC, make up intensional transformations. Currently, enthusiastic individuals and civil society groups are already being transformed intensionally using social media tools such as Facebook and blogs⁵ (see Figure 2 for an example).

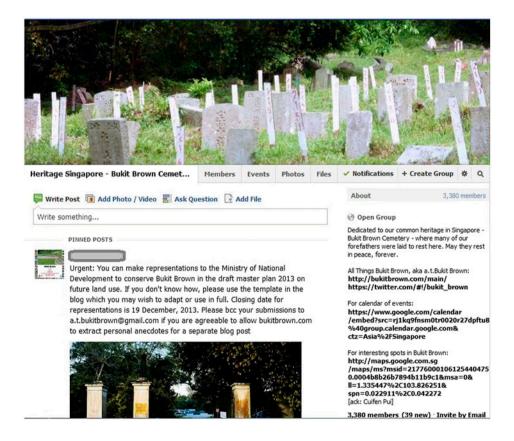


Figure 2. An example of a Facebook group to facilitate engagement: a type of intensional transformation.

At these sites, interested users are allowed to freely post their reflections after visiting the site, pursue active causes (such as the one posted here) and participate in the construction of collective wisdom about records and historical information related to each grave. Since the establishment of Facebook groups and websites for BBC, the significance of the cemetery has gained steady momentum – among academics, the Singapore Heritage Society, the National Heritage Board of Singapore, civil society groups, the government, citizens and, now, the international community with the entry of BBC on the World Monuments Fund's Watchlist. Arguably, without social media the value and meaning of BBC to Singaporean society may never have been so explored or constructed.

Documentation and technology

Since 2011 the authors have been involved as part of a working team to participate in and coordinate the documentation of graves that are potentially affected by the construction of the highway – estimated to be around 3746 graves out of more than 100,000 in the 213-acre site. Through locating, identifying, copying, translating and coding the affected graves with the deployment of a range of photo-videographic technologies, including the use of drones to capture the layout of the larger monuments belonging to more prominent historical personalities, one aspect of the documentation effort focuses on the material aspects of the cemetery as a physical site. Video recordings of exhumations and rituals, oral history interviews with caretakers of the site and descendants of those buried in BBC comprise the immaterial component of the documentation project. This latter could lead to further archival research into the social histories and memories associated with the cemetery site, but also the broader sociocultural significance of the legacy of the Chinese diaspora in Singapore.

The authors have been assisting the principal project director, Dr Hui Yew Foong, by connecting him with computing engineers, designers and photo-ethnographers to use the latest applications in digital and information technologies to layer and network the physical site with a proof-of-concept augmented reality system. Apart from designing signage and directional maps, these professionals have worked, on a voluntary basis, to design interactive and non-invasive software, especially mobile phone apps, to allow users to retrieve relevant curated archival digitised materials instantaneously while visiting the cemetery site. The documentation team has also been working with the National Library Board of Singapore with the goal of accessioning the eventual archive for public access. With more knowledge acquired about BBC as a result of the participatory archive, the documentation team has been able to pursue missions of outreach and advocacy. For instance, public debates on the heritage value of BBC have been conducted with schools.

Having a rather lean documentation team meant heavy reliance on volunteers to help complete the necessary work. With hindsight their involvement had a positive impact on the perceptions of BBC's cultural and heritage value, creating a pool of engaged citizens who were always more than willing to offer their knowledge, time and resources to the work of the BBC documentation project. The volunteers also helped to champion and actively promote the BBC project to fellow Singaporeans as well as the international community, thereby altering the ways by which stakeholders, including archivists, engage in interdisciplinary dialogues about a heritage site. The shift of power towards citizens who are potential users of the eventual archive, underlined by principles of equality and rationality, permeates these dialogues. Without a doubt, there is

much historical and cultural value in BBC, but to us, the BBC site is important because its very existence and process of engagement reflect the collective aspirations of stakeholders.

Passionate engagement is usually accompanied by advocacy. The documentation project took place concurrently with a more heated ongoing public debate over the future of BBC that put the government's plans under a more critical spotlight. Apart from the open reservations to the plans expressed by formal non-governmental organisations such as the Singapore Heritage Society and the Nature Society of Singapore, there was also a growing group of activists who were simultaneously volunteering in the documentation project and part of the Brownies as well. This group has an explicit and focused goal in wanting to preserve BBC as a heritage park.

As activists and volunteers to document BBC, or what we will term 'docu-tivists', this emerging group have actively contributed their own narratives to various aspects of BBC, such as the discoveries of unattended graves and connections to historical and sociocultural contexts. In the process they have become self-taught domain experts and providers of knowledge to interested members of the public, and have spearheaded new forms of advocacy and civil society in Singapore.

The tension arising from the need to preserve the heritage and cultural value of BBC while confronted with growing urbanisation and developmental needs presents a compelling case for technological interventions. Firstly, there is much urgency to document information about the site, and specifically the cultural aspects of BBC, within an interactive system that can facilitate users' engagement with the heritage site. Secondly, an interactive system would also provide an opportunity for individuals to engage with the information and cultural aspects documented, as well as with each other. In a direct way, the system will also facilitate intensional transformations as both Brownies and visitors reflect on the content and make choices with regards to heritage engagement and appraising records as they are being created.

Archiving in the 'wild': opportunities and challenges

As highlighted by Huvila, compared to other memory institutions such as libraries and museums, archives in places such as Singapore have not always been as inclined to involve users or undertake evaluation studies with users. In Huvila's view, this was because archives have always held that users who come to the archives know what they want, the presumption being that they are largely historians and researchers who approach archives seeking particular data and records for their work. In addition to this argument, from our observations over the years it may be due to the administrative boundaries between the work of libraries, museums and archives. In doing so, it creates disciplinary differences between memory institutions and the professional work conducted within each institution. For users, however, such differences are almost invisible. In the case of a heritage site such as Bukit Brown Cemetery, the user is interested in seeking information, engaging in multi-sensory experiences via visual, written and auditory records, and would like to see all of what they themselves perceive as being important included in an archive for long-term storage and preservation.

Because of the pressing need to capture the full tangible and intangible value of the site, the documentation project was composed of people from diverse backgrounds: historians, archivists, photographers, sociologists and computer engineers. This provided archivists with opportunities to build in functionalities and tasks that could enhance knowledge about Bukit Brown Cemetery via contributions from the community. For

instance, the computer engineers that were developing the augmented reality application provided feedback that led to the development of functionalities that would allow users to contribute their own knowledge on various artefacts within the site. Additionally, the historians, sociologists and anthropologists on the team emphasised the importance of indepth knowledge and the way they created meanings and made sense of the materials, which provided insight into how users may eventually engage with the evolving archive of Bukit Brown Cemetery.

The technologies in use (the Facebook page, the augmented reality application), and the documentation and archiving work, function as systemic agents in facilitating both extensional and intensional transformations. The Facebook page and augmented reality application make international connectivity and interactions possible, and prompt extensional transformations with increased velocity. As interactive systems for individuals, these technological interventions facilitate intensional transformations as individuals use such systems to interact with information and cultural artefacts at the BBC site. Users need not visit the site in order to participate, but we have observed that these systems heighten curiosity about the site and ultimately transform virtual visitors into visiting the physical site. At the same time this provides opportunities for users to participate in the creation of what will eventually become a long-term archive. This archive should include records about the cemetery and records of participation; with the latter representing evidence of how members of a society, through their interests, shape knowledge about their own heritage and collective identity. This latter category of records is perhaps even more important than the first group of records, as they function as records of how a particular society makes sense of its own heritage and collective identity. But both types of records should work together to reflect the conversational tone and context by which historical knowledge about various aspects of the cemetery is constructed.

The example shown in Figure 3, for instance, shows how members of a community consisting of both experts and general visitors may interact with each other and construct important records about various aspects of the cemetery, in this case, tiles used at selected graves.

The documentation team, recognising the importance of records being created in the digital spaces of Facebook and smartphone augmented reality applications, has been capturing and keeping records since 2012 for appraisal at a later time. The immediate work ahead has to do with deciding how such records should be appraised, and by whom. Duranti has described appraisal as the 'process of establishing the value of documents made or received ... qualifying that value, and determining its duration'.¹⁰ In the same paper, Duranti explores how value is attributed, but suggests that there has been little discussion as to who should be allocating and establishing such values. This is not for reasons of neglect: traditionally, the process of creating and governing archives has always been typically left to the archivists.

To be truly participative, users should also be empowered to participate in the appraisal and selection of records, a project we have already begun planning within the Bukit Brown Cemetery documentation team. But given the size and diversity of users, the task is at best daunting, and at its worst chaotic and costly. Yet the benefits arguably outweigh the costs, since the process of appraisal and selection is itself perhaps one of the best ways to help archives and users understand each other, for archivists and other stakeholders think differently about how best to arrange and describe the records, and promote long-term usage to justify the sustainability of the archive. The role of archivists in a participatory archive is thus one with an expanded set of competencies. The need to go beyond basic understandings of archival theory and document sensibilities



Figure 3. A record of participation in building knowledge.

has gained pace especially in the contemporary context, with the pressures of globalisation also quickly introducing changes in the ways people connect with each other, think about their heritage and clear lands (which may have cultural value) to make way for industrialisation. These changes culminate in the persistent need for documentation and archival work. Archiving in such contexts requires new facilitation skills, updated knowledge about the latest technologies and innovations, and constant sensitivities towards target users.

More than preservation

The discussion of this case study has so far illustrated two points. The first lies in how doing documentation in the field requires a cultural approach to both designing comput-

ing interventions and archival practices. The second is how the very practices of documenting, technological development and archiving may potentially shape cultural practices in the long run. Understanding that both points are recursive and dialogical is imperative to understanding the convergence of cultural systems (such as the one mentioned in this paper) with sociocultural practices. In other words, designing cultural systems with the sociocultural practices in mind can shape the very same sociocultural practices and, in the long run, lead to the sustainability of both the documentation and archival practices involved, and the technologies in use.

At this point, two factors are imminent which could raise important issues that should be considered in current and future scholarly work. The first is associated with the growing body of work on the digital archiving and preservation of cultural artefacts. Cultural institutions, government and international agencies, academics and technical enterprises alike have been concerned with the potential and challenges posed by digital preservation. Digital preservation, we argue, is not and should not be seen as a one-off activity. It should rather be an ongoing activity that is part of cultural practice. Additionally, the recognition that social systems (such as the BBC cultural system) are shaped by, and shape, cultural practices ¹¹ suggests that the cultural system will contribute a certain trajectory in changes to the cultural practices surrounding Bukit Brown Cemetery. In other words, even as important cultural content is preserved via documentation and archival practices, it promotes ongoing use and accumulation of content which can come directly from users. In the long run, it provides a mechanism to ensure that digital preservation is a process rather than a one-off event.

The second and somewhat related proposition suggests that the system of participatory archives promotes and facilitates an active citizenry, a long-term effect which can only be observed over time. The convergence of multi-disciplinary practices in documentation, computing and archival work, loosely bound together via a structure of user participation, is representative of the function of remembering and collecting (a dialogical relationship) they share in common. In recent years the trend of convergence has been observed and discussed inter-institutions, among libraries, museums and archives, ¹² but not as much has been said of how convergence is happening intra-institutions.

The case of Bukit Brown Cemetery's documentation project demonstrates how convergence may happen within each discipline: borrowing from the concept of the participatory archive, the scope of documentation is expanded to include records of participation, designing computing interventions with cultural inputs from documented information and users, and the examination of how archival requirements may be used to inform computing design and documentation work. While such convergence points to immediate benefits, such as greater innovation, information professionals acquiring diverse competencies, and collaboration at a greater intensity and velocity, Robinson cautions that practices should not be oversimplified for the sake of drawing parallels, and points of integration must be heeded (although her essay was based on memory institutions such as libraries, museums and archives). The use of technologies to facilitate collaboration must also be closely examined.

Conclusion

As both supposedly disinterested scholars assisting in the official documentation team in providing a more structured and technologised archival process, and ordinary citizens concerned with its demolition, the BBC project has posed a substantial affective challenge to the authors. Since the announcement of the planned development of the

highway, the interest shown by the state, academia and the community has combined in an exercise seeking to document the site's inevitable disappearance, and in re-enchanting the site as a meaningful place worthy of preservation. For the government, the archival project has been one of reiterating its position on its cultural sensitivity to the heritage of BBC even if its physical existence could not be guaranteed. In contrast, for the docu-tivists, their efforts have focused on turning BBC into a heritage park that will serve as a cultural resource in which the original material culture of the tombstones has been technologically networked with a broader knowledge base.

For both authors, the BBC documentation project has emphasised missions to advocate for and exhibit archival records in new ways, as well as partnering with the docutivists to create meanings out of collections of records. Along with these functions comes an intricate understanding of the technologies creating the records. While Facebook is a great tool for facilitating social interactions and exchange of knowledge within the community, it is limited in terms of helping users reflect on the meanings of the records being created using the platform. Likewise for the augmented reality application, even though it is useful as a tool to monitor actual behaviour and interactions on site. As academics with backgrounds in social informatics, museum work and participatory archives, we were provided with an opportunity where archivists could pursue outcomes and missions of outreach and advocacy on a much greater scale than other archival projects.

The paper has presented the case of Bukit Brown Cemetery, a site at the brink of partial disappearance due to immediate and future development plans. The erosion of the physical landscape is not the only aspect of this cultural heritage that is at risk — more importantly, the sociocultural practices as well as community ties to the land are also threatened. With this context in mind, the documentation team designed and developed a project that would address the imminent challenges of disappearing cultural records, and also studied, as well as designed, technological interventions to promote cultural engagement. Such cultural engagement is further enhanced by the building of participatory archives within the project. In this discussion we have also reflected on the expanded role of the archivist, as well as what we observe as intra-disciplinary convergence in the case under study.

The eventual archive, although still a work in progress, is already rich with inputs and materials in various formats (images, text, audio recordings, videos), painstakingly generated by volunteers. At the same time pages on Facebook function as a vehicle for crowdsourcing inputs, and prove to be useful especially when information is not available from official sources for various reasons. For instance, some graves have been unattended for so long that it is unclear where to find useful records about the pioneers buried there. In other cases, significant records have been lost because so many generations have passed. We recognise that three important types of records need to be captured: 1) documents of graves as well as intangible records of social practices and memories associated with the graves, 2) user-generated information about various elements found within the site (see Figure 3 above for an example) and 3) salient records of how the Brownies have participated in making meanings about BBC using social media and other platforms.

The enriched archive could also potentially function as a source for the state to understand the heritage value of what will be lost to society. Through its meticulous detail the archive may make the loss more bearable when the site is developed as planned. This situation has posed challenges to both the state and the documentation team, as community stakeholders have criticised the documentation and archiving

efforts as merely providing an excuse to continue the development plans for the area. Archivists engaged in these documentation projects will continue to have to deal with such challenges when working in wildly contested sites.

On the other hand, the archive may also provide an opportunity for archivists to become advocates for heritage preservation. By understanding the value of the archive, what is involved in building the archive and the interests of various stakeholders, the archivist helps to shape what is preserved and how this is preserved in the name of a given society as its heritage. Collaborations between stakeholders can be made possible with the common pursuit of heritage preservation, and the archivist is in a position to understand how that is possible by seeing the contextual connections within the archive.

The end goal, however, should not simply be an enriched archive. The process of participatory archiving and working in a multi-disciplinary documentation team provides opportunities to inform the community as well as other scholars and researchers. As demonstrated in the Bukit Brown Cemetery case, archivists have the opportunity to influence civic engagement and strengthen the ties within communities.

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Notes

- 1. Serene Tan, 'My Father's Dream Fulfilled', *All Things Bukit Brown: Heritage.Habitat.History*, available at http://bukitbrown.com/main/?cat=88, accessed 8 February 2014.
- 2. 'Bukit Brown', World Monuments Fund: Current Watch Site, available at http://www.wmf.org/project/bukit-brown, accessed 2 January 2014.
- 3. E Wright, 'Rhetorical Spaces in Memorial Places: The Cemetery as a Rhetorical Memory Place/Space', *Rhetorical Society Quarterly*, vol. 35, no. 4, 2005, pp. 51–81.
- 4. A Giddens, The Consequences of Modernity, Stanford University Press, Chicago, 1990.
- 5. Social media can be seen as shaping both extensional and intensional transformations. It can move an individual out of his or her locale into the virtual sphere, where new and unexpected social relationships and interactions are to be expected. Yet at the same time the use of social media can also contribute to transformations in the individual's sense-making, desires, goals and purposes, and reflective meanings on life.
- 6. 'Bukit Brown', accessed 30 January 2014.
- Urban Redevelopment Authority, 'LTA Finalises Alignment of New Road Across Bukit Brown', 19 March 2012, available at http://www.ura.gov.sg/pr/text/2012/pr12-26.html, accessed 31 January 2014.
- 8. Bukit Brown, 'iBBC Tech Tombs', available at http://bukitbrown.com/main/?p=6096, accessed 31 January 2014.
- I Huvila, 'Participatory Archive: Towards Decentralised Curation, Radical User Orientation, and Broader Contextualisation of Records Management', *Archival Science*, vol. 8, no. 1, 2008, pp. 15–36.
- L Duranti, 'The Concept of Appraisal and Archival Theory', American Archivist, vol. 57, no. 2, Spring 1994, pp. 328–44.
- 11. WJ Orlikowski and D Robey, 'Information Technology and the Structuring of Organizations', *Information Systems Research*, vol. 2, no. 2, 1991, pp. 143–69.
- 12. R VanderBerg, 'Converging Libraries, Archives and Museums: Overcoming Distinctions, but for What Gain?', *Archives and Manuscripts*, vol. 40, no. 3, 2012, pp. 136–46. H Robinson, 'Remembering Things Differently: Museums, Libraries and Archives as Memory Institutions and the Implications for Convergence', *Museum Management and Curatorship*, vol. 27, no. 4, 2012, pp. 413–29.