DHQ: Digital Humanities Quarterly

Preview 2025 Volume 19 Number 2

Disentangling Ownership in Digital Collecting Practices: Approaches From Across Galleries, Libraries, Archives, and Museums

Arran J. Rees <arran_at_museumdata_dot_uk>, University of Leeds https://orcid.org/0000-0001-7155-5335

Elizabeth Stainforth <e_dot_m_dot_stainforth_at_leeds_dot_ac_dot_uk>, University of Leeds https://orcid.org/0000-0003-2917-3522

Abstract

This article examines approaches to digital collecting across galleries, libraries, archives, and museums (GLAMs) in order to scrutinize established norms regarding the ownership of collections. Challenges to collecting institutions have been particularly apparent in the context of digital heritage, which encompasses a range of activities including digitization, born-digital collecting, aggregation, and collecting from social media. Digital collections can unsettle collections management processes that assume the retention and control of static holdings, due to their reproducibility, proprietary frameworks, and complex rights issues. Using case studies drawn from across different GLAMs, the article identifies three modes of digital collecting: ownership-led, ambiguous ownership, and shared ownership. These three modes demonstrate ways in which institutional ownership claims affect the status of digital collections. The article argues for the need to practice approaches to ownership that offer more productive means of navigating the complexities of digital collecting, thus preserving a fuller sense of what digital collections are.

Introduction

In contemporary cultural heritage debates, the role of collecting institutions is increasingly contested, for a range of different reasons. Writers such as David C. Harvey, Rodney Harrison, and Laurajane Smith have characterized heritage as a practice and a cultural process in order to counter the historical privileging of material culture and to highlight the relational aspects of cultural artefacts [Harvey 2001] [Smith 2006] [Harrison 2012]. In the museum sector, too, Janet Marstine notes a turn towards processes and relationships, observing, "there is a focus on experience as the link binding people together through things" [Marstine 2012, 45] (see also [Grewcock 2013]. This idea resonates with how archives and libraries have tried to make collecting activities more people-centred and community-driven [Flinn, Stevens, and Shepherd 2009] [Bastian and Alexander 2009], as well as efforts to decolonize cultural heritage institutions [Lonetree 2012] [D'Souza 2018] [Hicks 2020]. Terms like ethical stewardship [Geismar 2008] [Geismar 2015] [Marstine, Dodd and Jones 2015] [Marstine 2017], post-custodial archives [Ham 1981] [Bearman 1991], and appropriate museology [Kreps 2008] [Kreps 2015] try to account for these changes, all of which raise questions about institutional ownership and authority. Challenges to the norms of collecting institutions have been particularly apparent in the field of digital heritage, which encompasses a range of activities including digitization, born-digital collecting, aggregation, and collecting from social media. This is because the issues presented by proprietary frameworks, digital preservation, and rights management unsettle established collections management approaches, which tend to assume the retention and control of static holdings.

Galleries, libraries, archives, and museums (GLAMs) have been collecting digital material with varying degrees of success and commitment for more than twenty years, although museums have been relatively late to join "the fraternity of cultural institutions that are committed to ensuring that the digital legacy we create today is available to everyone tomorrow" [Cumiskey 2018]. Over this period, innovations have occurred in GLAM collections management and

preservation processes, and professional practice organizations like the Digital Preservation Coalition have been established.^[1] During the last couple of years, large organizations like the Library of Congress have, in their latest Digital Collections Strategy, started to designate parts of their major collecting strands as "e-preferred", meaning that the default strategy will be "acquiring a digital instance of content instead of acquiring an analog version" [LOC 2021, 4]. In the UK, The National Archives (TNA) are taking a similar approach, actively working on their digital transfer processes as an increasing number of government records are being transferred to the archive in born-digital formats, in accordance with the Public Record Act's 20-year rule.^[2]

Born-digital objects in particular have presented a number of challenges to GLAMs interested in collecting and preserving them. Institutions have been slow to take account of digital objects' materiality [Cameron and Kenderdine 2007] [Arvanitis and Zuanni 2021] and their boundlessness or fuzziness [Owens 2018] [Hawes and Flood 2018], as well as their often multi-layered intellectual property rights and personal data implications. In this article we focus on collecting social media to highlight the complexities of born-digital collecting, where the issues around materiality, boundlessness, and ownership can be drawn out and compared effectively.

3

4

5

6

7

The act of born-digital collecting is both similar and different to physical collecting. The process of collecting inserts an item into an artificial context, where it takes on a new level of significance through being "selected" or "appraised" by the institution. This process has been referred to as one of "musealisation" [Desvallées and Mairesse 2010] [Macdonald 2013], or "archivization" [Derrida 1995] in museum studies and archival studies, respectively, and this process happens regardless of the composition of an item. However, born-digital material introduces complicating factors with regard to context, consisting of items that are both complexly woven into digital infrastructures and yet entirely replicable; they are therefore capable of existing both inside and outside of the institution at the same time. There have been attempts to differentiate between born-digital material that sits inside and outside of "object" status by Niels Brügger, who suggests that we might understand born-digital objects as "reborn" after they have been incorporated into web archives [Brügger 2016] (see also [Zuanni 2021] for an insightful discussion on museum objects). While this distinction is helpful, the challenges around a born-digital object's fuzziness and its ownership status remain.

Understandably, accommodating born-digital material has demanded a shift in collecting practices in GLAMs and more digitally focused versions of collections management policies; the Spectrum 5.0 Digital Collecting toolkit for museums (2022) and Project Omega at TNA (2021) are concrete examples of this kind of work. The deeply entrenched politics of collecting that hinge on ownership are proving slower to change, however. Nicole Meehan's work surveyed museum professionals' understandings of digital objects (both digitized and born-digital) and found that, in general, digital objects are valued lower than physical objects. Meehan's findings may help us to understand why, in many museums, there has been less impetus to respond to the logic of digital materiality, which unsettles the ownership principle of collections management. Libraries and archives have not tended to have that luxury, being forced to adapt their practices to accommodate born-digital material through legislation that requires them to receive, preserve, and provide access to digital artefacts (legal deposit for libraries and electronic deposits as part of longstanding commitments to preserve government and business documents in archives).

Following a number of years of experimentation with new approaches and models across the cultural sector, this article argues for the need to scrutinize digital collecting practices in order to better understand their distinct implications for ownership. Here, we identify three modes of digital collecting: ownership-led, ambiguous ownership, and shared ownership. These are not necessarily unique to the context of digital media and are well-established within the histories of collecting institutions. However, digital collecting has amplified tensions around the politics, power, and logic of ownership. Therefore, the aim in this article is two-fold: 1) to understand how the issue of institutional ownership affects the status of digital collections; and 2) to suggest modes of ownership that offer more productive means of navigating the complexities of digital collecting, thus preserving a fuller sense of what digital collections are.

Digital Collections Management in GLAMs

Digital collections management practices vary across the discrete institutional domains of GLAMs. Over the years, efforts to draw together scholarly and practical work in these fields has had different emphases. Digital heritage is a

10

broad concept which has been rooted in dialogues dispersed over professional and media boundaries [Parry 2007] [Parry 20120] [Lewi et al. 2020]. Fiona Cameron and Sarah Kenderdine were among the first to call for a "sustained interchange between digital cultural theory and heritage practices" and investigate how cultural heritage institutions use new and emerging digital media [Cameron and Kenderdine 2007, 2–3]. A related area of inquiry concerns how GLAMs' systems can be designed to surface thematic links between media and content [Rayward 1997] [Dempsey 2000] [Cathro 2001] [Kirchhoff, Schwibenz, and Sieglerschmidt 2008]. Some researchers and practitioners have called for a focus on the network of relations in cultural collections and the development of digital tools which allow complex interconnections to be made across institutional boundaries and different record types [Jones 2018] [Dutia and Stack 2021] [Boon 2022].

The steps taken towards creating an expansive understanding of cultural institutions and their purpose have been linked to strategies for more adaptive and ethically appropriate museum work. Christina Kreps' concept of appropriate museology is important here. Kreps argues that museological practices dominant in the global minority are taken as standards for the rest of the world, disregarding forms of cultural heritage management that are local to other geographical regions. She suggests that more culturally and ethically appropriate forms of museology can emerge through acknowledging distinct cultural contexts and adapting established modes of museology to better suit local environments [Kreps 2008]. Such approaches have reinforced arguments for shared ownership of collections and the adoption of forms of guardianship over ownership [Marstine 2017] [Geismar 2008] [Geismar 2015]. The CARE principles for Indigenous Data governance are also relevant here, as a framework which seeks to pay attention to knowledge protocols that are not fully accounted for within other global minority-led data guidelines such as the FAIR principles. [3]. Ideas from appropriate museology and stewardship have also been applied in relation to the distinct cultural context of digital and online space and are closely tied to outreach and more fluid approaches to the museum [Kidd 2019] [Rees 2021b]. Using Zygmunt Bauman's notion of Liquid Modernity, the concept of the Liquid Museum has been proposed as an ontology relevant to any circumstance a museum might have to deal with, removing distinctions between collections and audiences and offering more operational freedom for museums to adapt according to societal changes [Van Oost 2012] [Cameron 2013] [Gonçalves 2019].

In the realm of libraries and archives, there has been a comparable shift towards people-centred practices, specifically as they connect to memory, identity, and social justice movements [Punzalan and Caswell 2016]. This shift is informed by scholarship in critical librarianship and archival studies, as well as the "explosion of efforts to examine the ways in which records and archives serve as tools for both oppression and liberation" [Caswell, Punzalan, and Sangwand 2017]. Work in the field has proposed a change in archival models from those based on legalistic understandings of individual rights to models that cultivate radical empathy and a feminist ethics of care [Caswell and Cifor 2016]. While libraries are oriented differently towards issues of rights and ownership, interventions in this area have started to recognize the role of library acquisitions in the uneven production of knowledge and the attendant need to centre social change [Gregory and Higgins 2013] [Gibson et al. 2017] [Drabinski 2019].

In their efforts to address uneven power and knowledge structures, many recent projects have been generating community-driven collections through the uncovering of racialized violence [Sutherland 2019], state injustice [Evans et al. 2015] [Jones and O'Neill 2014], or the digital capture of contemporary events that have not been well documented in the past, such as police brutality [Foster and Evans 2016] [Williams and Drake 2017]. These activities have built on established approaches, wherein the priority has been ensuring that people "retain their autonomy and independence in any relationship and participate in partnerships and project work very much on their own terms" [Flinn, Stevens, and Shepherd 2009] (see also [Schwartz and Cook 2002] and [Bastian and Alexander 2009]. Among critical archivists, widespread acknowledgement of the historical oppressions and exclusions of collections documentation has led to strategies for reconfiguring proprietary models of ownership through the post-custodial paradigm: the repositioning of collections from institutions into the communities of their creation or use [Ham 1981] [Bearman 1991] [Bastian 2002] [Kelleher 2017]. For Kimberly Christen, "post-custodialism moves away from the ownership model and the collection model, which is very much steeped in the colonial model" [Christen et al. 2018]. Alongside the idea of the post-custodial archive, commentators have foregrounded the potential of digital methods for dislodging custodianship from traditional collections management practices and leveraging the potential of digital technologies for resource-sharing [Ham 1981]

This brief survey of the literature highlights how different terminologies try to account for similar institutional challenges regarding the ownership of cultural collections. Within museum, archival, library, and information studies, there has been a sustained questioning of the status of the material record and a concern with representing and negotiating multiple collections rights. These questions are not unique to, but increasingly overlap with, debates about ownership and digital collecting practices. For example, it has been argued that experimental approaches to digital collecting provide an opportunity to create the conditions of new knowledge and challenge oppressive archival logics [Agostinho 2019]. The distinctive characteristics of digital objects have also prompted demands for more robust digital preservation strategies, involving how collections can be stored across multiple institutional sites [Lucky and Harkema 2018] [Lyman and Besser 1998] [Owens 2018]. John Bell urges that "we need to be willing to let the things we preserve leave our institutional control when that is what's needed to sustain them [...] whatever we can do to make preserved data portable between institutions will help it survive" [Bell 2018] (see also [Chan and Cope 2014]). Lastly, there are ongoing calls to reformulate the tangible focus of intellectual property laws to accommodate digital culture [Lessig 2008] [Perzanowski and Schultz 2016]. These calls are echoed in cultural heritage institutions, where the stress on ownership in collections management and ethical frameworks has proven problematic for collecting new and emerging object types [Fouseki and Vacharopoulou 2013] [Rees 2021b].

The next sections will introduce three modes of digital collecting — ownership-led, ambiguous ownership, and shared ownership — in an effort to account for key issues of institutional ownership when collecting social media. The choice of case studies has been informed by the professional and academic work of the authors and each forms part of a larger research project spanning the period of 2018 to 2020.^[4]

12

Ownership-Led Collecting

The dominance of the ownership-led model of collecting is an inheritance from the first formalized collecting institutions that understood the possession of material as the starting point for preserving them. This model has been codified by international frameworks like the International Council of Museums' (ICOM) and International Council of Archives' Code of Practice and enshrined in more localized guidance like the UK Museum Association's Code of Ethics and the Collections Trust's Spectrum collections management standard. The language of ownership is deeply embedded in the politics of collecting institutions, with notions of acquiring, transferring, possessing, accessioning, and permanence guiding discussions with any potential donor or seller. It is therefore unsurprising that ownership continues to be the default model for collecting, even as digital collecting gains more traction across GLAMs.

13

The implications of digital culture's relation to ownership are beginning to be articulated through the work of scholars like Perzanowski and Schultz, who explain that much of what we consider to be owned digitally is in fact just licensed for use. Even for digital items not necessarily governed by licence agreements, attempting to prove any form of tangible ownership over a digital file that can be copied and replicated an infinite number of times to a degree that would enable a museum, library, or archive to confidently request a transfer of title is incredibly difficult [Arrigoni et al. 2022] [Rees 2021a]. There are, of course, degrees of complexity in digital artefacts that make applying ownership-led models of collecting more or less achievable.

14

However, when the digital artefact is complex, ownership-led models have still been applied and have run into complications. The Victoria and Albert Museum (V&A) has a comparatively long tradition of working with digitally produced objects and is the home of the UK's first digitally produced art collection [V&A Museum 2023]. Until relatively recently, the V&A's digitally produced collections were still being collected physically and therefore being taken through a traditional acquisition process quite comfortably. Since the mid-2010s, the museum has been more actively collecting both born-digital and physical/digital hybrid items. A watershed moment came in 2017, when the V&A collected a version of the Chinese social media platform WeChat after three years of discussions. The final object is made up of 173 individual items, comprising born-digital GIFs, designs on paper, and an APK file (the file type used by Android operating systems to package up individual files used to install and run apps). In collecting WeChat, the curators and collections managers at the V&A were faced with balancing the need to formally own the object, as directed by the

museum's acquisition policy, with the curatorial need to interpret and represent the design features of a social media platform. Here, we highlight two aspects of the ownership-led model used to acquire the V&A's WeChat object. First, we consider the language around "acquisition" and the challenges that this presented for a digital object; and, second, we discuss the impact of the need to own the resulting object on the make-up of that object.

During conversations with Tencent, the creators and owners of the WeChat application, the V&A had to reconsider its use of the term "acquire". Within the business sector, the idea of acquiring a product like WeChat would mean taking over ownership and management of the whole product, rather than owning a version, instance, or copy of it, as was the case with the museum's collecting proposal [Rees 2021a]. In an interview with Brendan Cormier and Esme Hawes, the curators responsible for collecting WeChat, they explained how the conversation with Tencent had to be re-framed to emphasize collecting as an act of preservation rather than taking formal ownership of the WeChat platform [Rees 2021a]. Although it is possible there were some losses in translation, the misunderstanding over the term acquisition was also informed by the digital, downloadable nature of the object. As an item of use, WeChat is one of those digital products that Perzanowski and Schultz are referring to when they explain that the digital items we possess are not owned but licensed. The WeChat application that appears on a smartphone is licensed for our use, and the transactional activities of downloading it, installing it, logging in, and using it result in no change of ownership. In this context, conversations about the V&A acquiring WeChat, a digital object that represents a product distributed to millions of users, without altering its ownership status, has larger implications than other physical objects where ownership status is routinely changed through transactions.

The shape of the eventual collected WeChat object was affected by questions over what could formally be owned. The social element of a social media platform like WeChat is an important aspect of what makes it significant and worth collecting but reflecting this in the collected object was a challenge. Cormier and Hawes explained that the "fuzzy" nature of ownership over individual user profiles on the platform and the potential legal barriers to asking people to donate their profiles meant that the resulting object was populated with "fake content" [Rees 2021a]. WeChat, like many other social media platforms, has a complex rights agreement with users, whereby users retain a form of ownership over content they post to the platform through copyright but assign the platform far-researching licences to do whatever they want with the content. The object in the V&A's collection is a staged copy of the WeChat application, something that was practically separable from the app that users download and use everyday. In order to use existing "transfer of title" documents, a new entity that could be "collected" and "owned" had to be created in collaboration between Tencent and the museum. Although it was a pragmatic solution to owning WeChat as per standard acquisition practices, the collected version, shaped by the need to use a traditional ownership-led approach, led to an artefact that could potentially be perceived as an inauthentic example of social media.

This case from the V&A illustrates some of the implications of trying to extend established ownership-driven approaches to collecting digital material. While libraries and archives have had alternative options to direct ownership, in the form of deposits (where ownership remains with the depositor, but preservation and access to the material is managed and negotiated by the institution), we still see approaches to digital collecting that default to ownership happening within the sector.

Ambiguous Ownership

Ambiguous ownership encompasses a field of practices that elude clear parameters as far as ownership is concerned. Ambiguity often emerges as a result of gray areas in collecting practices, where a shared claim to collections is implied but never explicitly addressed. In order to explore these issues further, this section will focus on the field of large-scale digital heritage aggregation and highlight examples of ambiguous ownership that have arisen in the management of aggregators' collections data.

Digital heritage aggregation is a relatively obscure concept and practice — and one that has not been given extensive critical attention [Grincheva and Stainforth 2024]. Broadly speaking, aggregators are systems that collect, format, and manage metadata from multiple providers and offer federated access to that data via services like online portals and websites. Metadata refers to descriptions of digital objects that facilitate their discovery online. A conceptual framework

16

17

18

19

22

23

that informs the development of aggregation can be found in convergence theory, which foregrounds the blurring of traditional distinctions between cultural organizations in the digital age [Bearman and Trant 1998] [Dempsey 2000] [Cathro 2001] [Kirchhoff, Schwibenz, and Sieglerschmidt 2008] [Trant 2009] [Marty 2014]. The foundations of this theory have been traced back to the mid-1990s, when GLAMs started digitizing their content and making it available online, a practice which was seen to signal new opportunities for cross-institutional search and discovery [Rayward 1997]. Practical examples of digital heritage aggregators include the Digital Library of India, Digital NZ, the Digital Public Library of America (DPLA), Europeana, and the National Library of Australia's Trove. These systems draw together collections data from a range of sources, including both national and local GLAMs. For the end user, the point of entry to an aggregator tends to be a website with a collections search bar and/or a series of exhibitions links themed according to various subject and format types.

Most aggregators necessitate building on top of existing systems and have what could be described as an interinstitutional structure. As such, they offer an interesting if unconventional model for exploring ownership claims. This is because they do not store digital content and their collections data is not representative of a single institution; rather, they harvest digital object metadata, pointing to the institutional sites where the objects are held. Ostensibly, then, they deflect the problem of ownership from the outset, leaving intact prior institutional claims.^[5] However, what could be described as ambiguously owned items have surfaced in heritage aggregation initiatives, not so much as a result of their knowledge discovery remit, but as a bi-product of their community-building efforts. These have frequently taken the form of participation activities such as crowdsourcing with digital and digitized collections [Ridge 2014]. Ambiguous ownership pertains to data created by individual users, which is harvested by the system.

One such example can be found in Click and Flick, an initiative launched by the National Library of Australia (NLA) in 2006. The project was a partnership between the NLA and Flickr, which sought to enable social photo-sharing from users [Hooton 2006]. Click and Flick was an early instance of a cultural heritage institution crowdsourcing social photography collections, whereby thematic groups were created on the NLA's Flickr account for members of the public to upload and tag their images. Metadata and thumbnail images from the groups were then harvested on a weekly basis into the NLA's aggregator PictureAustralia. The motivation for the project was to "build a diverse collection of images of national significance produced by individual Australians" [Hooton 2007]. These aims were met insofar as the project vastly expanded the contemporary image collection of PictureAustralia; after the first year, over 12,000 images had been harvested from the Flickr groups [Hooton 2007]. While the promotion and uptake of the project was quite short-lived (2006-2008), photos did continue to be harvested by PictureAustralia and then by its successor Trove. These images are discoverable on Trove at the time of writing, and the Flickr account is still relatively active, with regular uploads of images from users.

The ambiguous status of the Flickr images in Trove is notable. They were harvested by the aggregator and are discoverable on the website, but they have not been accessioned by the NLA, meaning they are not in the official collections or subject to the institutional standards for image description. Without context or consistent descriptions, the extent to which the photos can be rendered meaningful is limited. They may retain meaning for the individuals who submitted them, but their social history value is questionable. A lack of context for the images also plays out in relation to Trove's interface, which operates via a search bar on the landing page. If the Flickr images appeared in a search results list, they would be difficult to trace back to the original Click and Flick project and the specific circumstances in which collecting took place. As Tim Sherratt observes, "There will always be priorities in digitisation programs. There will always be short-term funding opportunities related to specific initiatives or events... [and] these biases and distortions are not obvious to someone typing queries into a search box" [Sherratt 2016]. While the images were originally solicited by the NLA to build its contemporary photography collection, they were not subject to the institution's own collecting procedures. This issue invites reflection on the logic of aggregation as a system that blurs the boundaries between access and ownership. In surfacing crowdsourced content through the search, Trove appears to *hold* user-generated images without needing to address the question of acquisition. The value of the images is therefore not grounded institutionally, which throws into doubt their status and ongoing relationship to the NLA.

This discussion of aggregation shows how some of the ambiguities of ownership can play out in the context of crowdsourced digital collections. In Click and Flick, it is interesting to observe that the desire to foster a sense of

participation in collections is what led to a lack of clarity about ownership. The issue appeared to stem from inattention to the question of how shared ownership of digital collections might work, with the result that it was avoided altogether.

Shared Ownership

Discourses on shared ownership and authority feature across a spectrum of GLAM work, from deciding what should and should not be displayed to developing accountability and performance frameworks for heritage management [Lagerkvist 2015] [Legget 2018]. In particular, case studies from New Zealand demonstrate how Māori practices of care related to *taonga* are increasingly being incorporated into heritage management processes imposed through colonial institutions and frameworks [Ngata, Ngata-Gibson, and Salmond 2012] [Horwood 2018] [Geismar 2018]. Digital data and systems, aligned with the CARE Principles, are also enabling data sovereignty and the right to control and interpret heritage materials, through tools like the Mukurtu content management system [Thorpe et al. 2021]. Ideas around shared ownership align well with the established work of post-custodial archival theory and Geismar's call for shared guardianship, which develops a more consultative relationship between collecting institutions and the original holders of the material [Geismar 2008, 115]. However, there are fewer examples of how formalized shared ownership models are being used in digital collections. Here, we understand shared ownership to be defined in terms of rights. It entails moving away from a singular and "indisputable" right to ownership, as outlined in documents such as ICOM's Code of Ethics [ICOM 2017, 49], and towards the agreement of non-exclusive ownership rights between the sharing parties.

In researching this article, we have become more aware of how slippery the concept of shared ownership is. Working through the finer details of case studies that initially appeared relevant, we came to realize that the practice of shared ownership is still, in a sense, ambiguous. Often, digital collections are being managed through licences and other forms of agreement that are *aligned with*, rather than *constitutive of*, a shared ownership approach. Moreover, some digital collecting projects we encountered assumed notions of sharing, either because of the reproducibility of digital objects, or because they relied on frameworks borrowed from social media. Such approaches diverge from how we have sought to define the shared ownership of digital collections, as an informed negotiation process. In this section, we try to navigate these tensions and interrogate claims to shared ownership through focusing on both socially and technologically grounded interventions.

A research collaboration between one of the authors and the Stockholm County Museum (SCM) revealed how shared ownership can be a slippery concept. In 2011, the museum began working with Samtidsbild, an online collecting tool for digital photos. The system allows the public to contribute their own images to the museum via a web application. Uploaded images and metadata are automatically accessioned into the photography collection and stored in a database [Boogh 2013]. In an interview in 2019, Elisabeth Boogh, the museum's curator of photography, claimed that SCM did not assert complete ownership over the photos and insisted the ownership was shared, in accordance with the terms and conditions users sign up to when uploading. Extra steps in the upload process address usage rights for the museum, asking users to select a Creative Commons licence for each image [Rees 2021a]. Boogh compared this to instances of images in the collection that had been digitized from analogue photographs before being returned to the holder, an approach often seen within post-custodial archiving.

In late 2019, the Samtidsbild terms and conditions were very close to those of social media platforms like Twitter and Instagram, but they did not explicitly mention SCM's collection or shared ownership. Instead, they granted a "nonexclusive right of use to Stockholm County Museum to [...] produce copies and in other ways make messages available to the public". They also stated that "Stockholm County Museum has the right to place the publication on another's website, on social media or a search portal on the Internet" and that "nothing in these sections restricts the User's right to use its content on its own" [Rees 2021a]. In 2020, the terms and conditions were updated to include the sentence, "By submitting messages and personal data to Samtidsbild, they become part of Stockholm County Museum's cultural-historical archive and will be preserved and managed for future generations and for historical and scientific research purposes" [Rees 2021a]. Here, we can see that assumptions about the nature of ownership had initially been derived from previous experiences of working with digital and digitized material and later from images becoming part of the museum's collection. It is important to note that Samtidsbild has been iteratively developed since 2011, very early for a museum to be thinking actively about digital-first collecting. Still, the terms and conditions did not

25

27

28

directly assert a claim to shared ownership, with SCM only retaining a right to use through Creative Common licences and other stipulations.

The case of SCM shows how models of shared ownership, especially in the realm of digital collecting, are still taking shape. Projects that collect from social media are at the forefront of attempts to grapple with the conditions and licensing issues this throws up. Documenting the Now (DocNow) is an interesting example because it has experimented with archiving born-digital social media content. DocNow's approach acknowledges the need for some traditional archival practices, while also attending to ethical considerations that mean aspects of the archival process need to change to make them more appropriate for the social media environment. The project began in 2016, in response to the murder of Michael Brown, an unarmed Black teenager, by a white police officer in Ferguson, Missouri [Galarza 2018]. After initial discussions about what could be done to document the response to the killing, Bergis Jules and Ed Summers worked together to try and archive relevant Twitter hashtags, and the DocNow project was born [Jules, Summers, and Mitchell 2018].

The project advocates for engaging with the ethics of collecting social media and rooting it in the core values of practitioners [Jules 2016]. It has also highlighted issues such as lack of user awareness or informed consent about how social media platforms use and share data; the potential misuse of social media content; the heightened risk of harm for marginalized communities on social media; and the difficulty in applying traditional ethical archival practices to social media content [Jules, Summers, and Mitchell 2018, 3]. Some of the key recommendations to come out of DocNow centre on active engagement with the communities being documented. The aim is to foster relationships that go beyond what can be collected from the web freely and to move traditional practices towards the practices that social media communities have themselves created [Jules, Summers, and Mitchell 2018, 12].

Although the context is different, it is possible to observe comparable practices in institutions like Aalborg City Archives (ACA) in Denmark. In an interview with one of the authors, the archivists discussed how ACA collects Instagram images. They explained that they cannot own Instagram users' photos, only ever have permission to use them [Rees 2021a]. The archive invites the users to sign formal archival documentation, donating possession of a copy of the digital file and consulting on the most appropriate form of licence to use it. As with SCM, this does not constitute a formal shared ownership agreement, and there is still a process by which the archive becomes the tangible repository of the digital file that represents the image, with the donation form acting as a less ambiguous means of acknowledging ACA's rights over the photograph within their collection. In following and continuing to develop processes like those of SCM, DocNow, and ACA, collecting institutions can take pragmatic steps towards negotiating shared ownership and guardianship approaches, while also reassessing the ethical appropriateness of their claims to total ownership over such material.

Before concluding this section, it is worth mentioning one example of how digital collecting practices might change in relation to shared ownership in the future, specifically in the context of rapidly developing digital infrastructures such as blockchains. While it is beyond the scope of this article to explore in detail, Frances Liddell has carried out research on the potential of blockchain technology for digital collections in museums. She describes how digital tokens (also called non-fungible tokens or NFTs) are "singularized" through blockchain technology, which produces an immutable provenance and "builds in authenticity and exclusivity for any token exchanged within the blockchain network" [Liddell 2021, 221]. Liddell studies the capacity of such networks to materialize value in digital versions of museum objects (cryptocollectibles) as a mode of shared guardianship and audience engagement. Her work also suggests that there may be unexplored uses of blockchains as tools for helping to track and facilitate shared ownership of born-digital material. However, any application of this practice would need to be approached with caution, based on ongoing legal discussions about the gray areas concerning the actual "ownability" of NTF-works [Juhász and Sztermen 2024] and the degree to which GLAMs are computationally set up to take advantage of technology like blockchains.

Conclusion

This article has explored digital collecting practices across the institutional boundaries of GLAMs to assess current perspectives and approaches, as well as the challenges that digital material presents to ownership. The ownership-led

29

31

30

34

model of collecting was discussed in the first part of the article. The case study of the V&A represents an instance of trying to apply traditional ownership and acquisition procedures to non-traditional material, which diminished the possibilities for preserving the dynamic and interactive elements of a social media object. Next, we identified what we termed ambiguous ownership, focusing on digital heritage aggregation. The Click and Flick case study shed light on how deflecting ownership claims can limit the scope for preserving digital objects and their associated contexts over time. Finally, we drew together several examples of digital collecting that loosely correspond with principles of shared ownership. As with the ownership-led model, shared ownership and stewardship approaches have been utilized in non-digital GLAM collections for a number of years. However, the very nature of digital material calls into question notions of control and authority over material objects traditionally associated with ownership. Digital collecting has, to some extent, shifted the balance of institutional models away from those that claim to own cultural heritage outright.

As suggested at the beginning of the article, the issues that digital collecting raises for GLAMs in terms of ownership are taking place against a wider backdrop of practices and movements that are attempting to unsettle institutional authority and the indisputable right to own cultural heritage material. Some commentators have recognized the potential of digital media to change conversations around ownership and bring them more in line with "an increasingly digital environment and pluralistic society" [Light 2019]. Yet a finding of this article is that digital collecting is not inherently more open, plural, and oriented towards shared rights. Indeed, the discussion has shown that, in practice, there are ambiguities to shared ownership, especially when rights and licensing agreements are hidden in the terms and conditions. For digital collecting, then, as with any form of collecting, GLAMs must seek to negotiate rights and shared ownership claims in a clear and informed way.

Ultimately, as GLAMs increase their digital holdings, so too increases the demand for more shared approaches to the collection of cultural heritage. This reality necessitates an institutional mentality shift. Trying to crack the code of shared, ethical ownership and guardianship is one way that GLAMs can start developing collaborative relationships with one another based on deeper understandings of their collections and their stakeholders. It is also a good starting place for creating new strategies for digital collecting as a core part of GLAMs' work.

Notes

- [1] See https://www.dpconline.org/ and https://bitcuratorconsortium.org/, respectively (accessed 2 January 2025).
- [2] The 20-year rule was changed from the 30-year rule in 2013. This means that the number of born-digital records due for transfer from government departments is increasing more rapidly.
- [3] The CARE Principles for Indigenous Data Governance were built on the FAIR Data Principles that delineated how digital data should be made Findable, Accessible, Interoperable, and Reusable. The CARE Principles are designed to take into account the differing world views in indigenous societies. CARE principles include Collective Benefit, the Authority to control, Responsibility, and Ethics. See https://www.gida-global.org/care and https://www.go-fair.org/fair-principles/, respectively (accessed 2 January 2025)
- [4] In collaboration with the Collecting Social Photo research project (2017-2020; see [Rees 2021a]) and as part of an Endeavour-funded postdoctoral fellowship (2018; see chapter on Trove in [Grincheva and Stainforth 2024]).
- [5] It is important to note that, although the question of ownership is put to one side, some aggregation initiatives such as Europeana do require the GLAMs they partner with to subscribe to their open rights principles. All metadata published by Europeana are available free of restriction under the Creative Commons CC0 1.0 Universal Public Domain Dedication. See https://www.europeana.eu/en/rights/usage-guidelines-formetadata (accessed 2 January 2025).

Works Cited

- **Agostinho 2019** Agostinho, D. (2019) "Archival encounters: Rethinking access and care in digital colonial archives", *Archival Science*, 19(2), pp. 141-165.
- **Arrigoni et al. 2022** Arrigoni, G., Kane, N., McConnachie, S., and McKim, J. (2022) *Preserving and sharing born-digital and hybrid objects from and across the National Collection*. London: Victoria and Albert Museum.
- **Arvanitis and Zuanni 2021** Arvanitis, K. and Zuanni, C. (2021) "Digital (and) materiality in museums", *Museum and Society*, 19(2), pp. 143-148.
- **Bastian 2002** Bastian, J.A. (2002) "Taking custody, giving access: a postcustodial role for a new century", *Archivaria*, pp. 76-93.
- Bastian and Alexander 2009 Bastian, J.A. and Alexander, B. (eds.) (2009) Community archives: The shaping of memory.

London: Facet Publishing.

- **Bearman 1991** Bearman, D. (1991) "An indefensible bastion: Archives as repositories in the electronic age", in Bearman, D. (ed.) *Archival management of electronic records*. Pittsburgh, PA: Archives & Museum Informatics.
- **Bearman and Trant 1998** Bearman, D. and Trant, J. (1998) "Unifying our cultural memory: Could electronic environments bridge the historical accidents That fragment cultural collections?", in Dempsey, L., Criddle, S., and Heseltine, R. (eds.) *Information landscapes for a learning society, networking and the future of libraries*, vol. 3. London: Library Association. Available at: http://www.archimuse.com/papers/ukoln98paper/ (Accessed: 2 January 2025).
- **Bell 2018** Bell, J. (2018) "Digital contexts: How communities self-archive online". Available at: https://www.johnpbell.com/digital-contexts-how-communities-self-archive-online/ (Accessed: 2 January 2025).
- **Boogh 2013** Boogh, E. (2013) "Samtidsbild/contemporary images A method of collecting vernacular photography in the digital age", *Museum*, 65, pp. 54-67.
- **Boon 2022** Boon, T. (2022) "Origins and ambitions of the Congruence Engine project"", *Science Museum Group Journal*, 18. https://doi.org/10.15180/221801/001.
- **Bowker 2005** Bowker, G.C. (2005) *Memory practices in the sciences*. Cambridge, MA: MIT Press.
- **Brügger 2016** Brügger, N. (2016) "Digital humanities in the 21st century: Digital material as a driving force", *DHQ: Digital Humanities Quarterly*, 10(3). Available at: https://www.digitalhumanities.org/vol/10/3/000256/000256.html (Accessed: 2 January 2025).
- Cameron 2013 Cameron, F. (2013) "The liquid museum: New institutional ontologies for a complex, uncertain world", in Message, K. and Witcomb, A. (eds.) *The international handbook of museum studies*, vol. 1. Chichester, UK: John Wiley & Sons, pp. 345-361.
- **Cameron and Kenderdine 2007** Cameron, F. and Kenderdine, S. (eds.) (2007) *Theorizing digital cultural heritage: A critical discourse*. Cambridge, MA: MIT Press.
- **Caswell and Cifor 2016** Caswell, M. and Cifor, M. (2016) "From human rights to feminist ethics: Radical empathy in the archives", *Archivaria*, 81(1), pp. 23-43.
- **Caswell, Punzalan, and Sangwand 2017** Caswell, M., Punzalan, R., and Sangwand, T.K. (2017) "Critical archival studies: An introduction", *Journal of Critical Library and Information Studies*, 1(2). https://doi.org/10.24242/jclis.v1i2.50 (Accessed: 2 January 2025).
- **Cathro 2001** Cathro, W. (2001) "Smashing the silos: Towards convergence in information management and resource discovery", *National Library of Australia Staff Papers*. Canberra, Australia: National Library of Australia.
- **Chan and Cope 2014** Chan, S. and Cope, A. (2014) "Collecting the present: Digital code and collections", *Museums and the Web*, 19.
- Christen et al. 2018 Christen, K., Davis, L., Griffith, Z., and Neely, J. (2018) "Traditional knowledge and digital archives: An interview with Kim Christen", disClosure: A Journal of Social Theory, 27(5). https://doi.org/10.13023/disclosure.27.02 (Accessed: 2 January 2025).
- **Cook 2013** Cook, T. (2013) "Evidence, memory, identity, and community: Four shifting archival paradigms", *Archival Science*, 13, pp. 95-120.
- **Cumiskey 2018** Cumiskey, G. (2018) "Introduction to digital preservation", *Museums and digital memory: From creation and curation to digital preservation*. The British Museum.
- D'Souza 2018 D'Souza, A. (2018) Whitewalling: Art, race and protest in 3 acts. New York: Badlands Unlimited.
- **Dempsey 2000** Dempsey, L. (2000) "Scientific, industrial, and cultural heritage: A shared approach", *Ariadne*, 22. Available at: https://www.ariadne.ac.uk/issue/22/dempsey/ (Accessed: 2 January 2025).
- Derrida 1995 Derrida, J. (1995) "Archive fever: A Freudian impression", Diacritics, 25(2), pp. 9-63.
- **Desvallées and Mairesse 2010** Desvallées, A. and Mairesse, F. (2010) *Key concepts of museology*. Paris: Armand Colin-ICOM-ICOFOM.
- **Drabinski 2019** Drabinski, E. (2019) "What is critical about critical librarianship?", *Art Libraries Journal*, 44(2), 49-57. https://doi.org/10.1017/alj.2019.3 (Accessed: 2 January 2025).

- **Dutia and Stack 2021** Dutia, K. and Stack, J. (2021) "Heritage connector: A machine learning framework for building linked open data from museum collections", *Applied AI Letters*, 2(2).
- **Evans et al. 2015** Evans, J., McKemmish, S., Daniels, E., and McCarthy, G. (2015) "Self-determination and archival autonomy: advocating activism", *Archival Science*, 15, pp. 337-368.
- **Flinn, Stevens, and Shepherd 2009** Flinn, A., Stevens, M., and Shepherd, E. (2009) "Whose memories, whose archives? Independent community archives, autonomy and the mainstream", *Archival Science*, 9, pp. 71-86.
- **Foster and Evans 2016** Foster, M.J. and Evans, M.R. (2016) "Libraries creating sustainable services during community crisis: Documenting Ferguson", *Library Management*, 37(6/7), pp. 352-362.
- Fouseki and Vacharopoulou 2013 Fouseki, K. and Vacharopoulou, K. (2013) "Digital museum collections and social media: Ethical considerations of ownership and use", *Journal of Conservation and Museum Studies*, 11(1), pp. 1-10.
- Galarza 2018 Galarza, A. (2018) "Documenting the now", Journal of American History, 105(3), pp. 792-793.
- **Geismar 2008** Geismar, H. (2008) "Cultural property, museums and the Pacific: Reframing the debates", *International Journal of Cultural Property*, 15(2), pp. 109-122.
- Geismar 2015 Geismar, H. (2015) "Anthropology and heritage regimes", Annual Review of Anthropology, 44(1), pp. 71-85.
- Geismar 2018 Geismar, H. (2018) Museum object lessons for the digital age. London: UCL Press.
- **Gibson et al. 2017** Gibson, A.N. et al. (2017) "Libraries on the frontlines: Neutrality and social justice", *Equality, Diversity and Inclusion: An International Journal*, 36(8), pp. 751-766. https://doi.org/10.1108/EDI-11-2016-0100 (Accessed: 2 January 2025).
- **Gonçalves 2019** Gonçalves, J. (2019) "The 'liquid museum': A relational museum that seeks to adapt to today's Society", *The Museum Review*, 4(1), pp. 1-8.
- **Gregory and Higgins 2013** Gregory, L. and Higgins, S. (eds.) (2013) *Information literacy and social justice: Radical professional praxis*. Sacramento, CA: Library Juice Press.
- Grewcock 2013 Grewcock, D. (2013) Doing museology differently. London: Routledge.
- **Grincheva and Stainforth 2024** Grincheva, N. and Stainforth, E. (2024) *Geopolitics of digital heritage*. Cambridge, UK: Cambridge University Press.
- Ham 1981 Ham, F.G. (1981) "Archival strategies for the post-custodial era", American Archivist, 44(3), pp. 207-216.
- Harrison 2012 Harrison, R. (2012) Heritage: Critical Approaches. London: Routledge.
- **Harvey 2001** Harvey, D.C. (2001) "Heritage Pasts and Heritage Presents: temporality, meaning and the scope of heritage studies", *International Journal of Heritage Studies*, 7(4), pp. 319-338.
- **Hawes and Flood 2018** Hawes, A. and Flood, C. (2018) *Curating and collecting digital posters handbook*. Available at: https://ccdgp.co.uk/colophon.html (Accessed: 2 January 2025).
- **Hicks 2020** Hicks, D. (2020) *The brutish museums: The Benin bronzes, colonial violence and cultural restitution*. London: Pluto Press.
- **Hooton 2006** Hooton, F. (2006) "PictureAustralia and the flickr effect", *NLA Gateways*, 80. Available at: https://webarchive.nla.gov.au/awa/20060529045055/http://pandora.nla.gov.au/pan/11779/20060524-0000/www.nla.gov.au/pub/gateways/issues/80/story01.html (Accessed: 2 January 2025).
- **Hooton 2007** Hooton, F. (2007) "Democratising history: Evaluating PictureAustralia's flickr Pilot Project", *NLA Gateways*, 84. Available at: https://webarchive.nla.gov.au/awa/20070525063525/http://pandora.nla.gov.au/pan/11779/20070524-0000/www.nla.gov.au/pub/gateways/issues/84/story13.html (Accessed: 2 January 2025).
- **Horwood 2018** Horwood, M. (2018) *Sharing authority in the museum: Distributed objects, reassembled relationships*. London: Routledge.
- ICOM 2017 International Code of Ethics for Museums (2017) ICOM code of ethics for museums. Paris: ICOM.
- Jones 2018 Jones, M. (2018) Artefacts, archives, and documentation in the relational museum. London: Routledge.
- Jones and O'Neill 2014 Jones, M. and O'Neill, C. (2014) "Identity, records and archival evidence: Exploring the needs of

- forgotten Australians and former child migrants", Archives and Records, 35(2), pp. 110-125.
- **Juhász and Sztermen 2024** Juhász, Á., and Sztermen, O.L. (2024) "Transfering digital artworks on online market platforms", *Public Governance, Administration and Finances Law Review*, 9(1). https://doi.org/10.53116/pgaflr.7060 (Accessed: 2 January 2025).
- Jules 2016 Jules, B. (2016) "Some thoughts on ethics and DocNow", Documenting DocNow. Available at: https://medium.com/documenting-docnow/some-thoughts-on-ethics-and-docnow-d19cfec427f2 (Accessed: 2 January 2025).
- **Jules, Summers, and Mitchell 2018** Jules, B., Summers, E., and Mitchell, V.J. (2018) "Ethical considerations for archiving social media content generated by contemporary social movements: Challenges, opportunities, and recommendations", *DocNow*, 12. Available at: https://www.docnow.io/docs/docnow-whitepaper-2018.pdf (Accessed: 2 January 2025).
- **Kelleher 2017** Kelleher, C. (2017) "Archives without archives: (Re)locating and (re)defining the archive through post-custodial praxis", *Journal of Critical Library and Information Studies*, 1(2). https://doi.org/10.24242/jclis.v1i2.29 (Accessed: 2 January 2025).
- **Kidd 2019** Kidd, J. (2019) "Digital media ethics and museum communication", in Drotner, K. et al (eds.) *The Routledge handbook of museums, media and communication*. New York: Routledge, pp. 193-204.
- **Kirchhoff, Schwibenz, and Sieglerschmidt 2008** Kirchhoff, T., Schweibenz, W., and Sieglerschmidt, J. (2008) "Archives, libraries, museums and the spell of ubiquitous knowledge", *Archival Science*, 8(4), pp. 251-266.
- **Kreps 2008** Kreps, C. (2008) "Appropriate museology in theory and practice", *Museum Management and Curatorship*, 23(1), pp. 23-41.
- **Kreps 2015** Kreps, C. (2015) "Appropriate museology and the 'new museum ethics': Honoring diversity", *Nordisk Museologi*, 2, pp. 4-16.
- **LOC 2021** Library of Congress (2021) *Digital collections strategy overview 2022-2026*. Available at: https://www.loc.gov/acq/devpol/Digital%20Collections%20Strategy%20Overview_final.pdf (Accessed: 2 January 2025).
- **Lagerkvist 2015** Lagerkvist, C. (2015) "Empowerment and anger: Learning how to share ownership of the museum", *Museum and Society*, 4(2), pp. 52-68.
- **Legget 2018** Legget, J. (2018) "Shared heritage, shared authority, shared accountability? Co-generating museum performance criteria as a means of embedding 'shared authority'", *International Journal of Heritage Studies*, 24(7), pp. 723-742.
- Lessig 2008 Lessig, L. (2008) Remix: Making art and commerce thrive in the hybrid economy. London: Penguin.
- **Lewi et al. 2020** Lewi, H., Smith, W., Vom Lehn, D., and Cooke, S. (eds.) (2020) *The Routledge international handbook of new digital practices in galleries, libraries, archives, museums and heritage sites*. New York: Routledge.
- **Liddell 2021** Liddell, F. (2021) "Building shared guardianship through blockchain technology and digital museum objects", *Museum and Society*, 19(2), pp. 220-236.
- **Light 2019** Light, M. (2019) "From responsible custody to responsible stewardship", in Weideman, C. and Caldera, M.A. (eds.) *Society of American Archivists*. Available at: https://digitalscholarship.unlv.edu/lib_articles/590 (Accessed: 2 January 2025).
- **Lonetree 2012** Lonetree, A. (2012) *Decolonizing museums: Representing Native America in national and tribal museums.* Chapel Hill, NC: University of North Carolina Press.
- **Lucky and Harkema 2018** Lucky, S. and Harkema, C. (2018) "Back to basics: Supporting digital humanities and community collaboration using the core strength of the academic library", *Digital Library Perspectives*, 34(3), pp. 188-199.
- **Lyman and Besser 1998** Lyman, P. and Besser, H. (1998) "Defining the problem of our vanishing memory: Background, current status, models for resolution", in Parry, R. (ed.) *Museums in the digital age*. New York: Routledge, pp. 336-343.
- Macdonald 2013 Macdonald, S. (2013) Memorylands: Heritage and identity in Europe today. London: Routledge.
- **Marstine 2012** Marstine, J. (2012) "The contingent nature of the new museum ethics", in Marstine, J. (ed.) *The Routledge companion to museum ethics*. London: Routledge, pp. 3-25.
- Marstine 2017 Marstine, J. (2017) Critical practice: Artists, museums, ethics. New York, Routledge.

- Marstine, Dodd and Jones 2015 Marstine, J., Dodd, J., and Jones, C. (2015) "Reconceptualising museum ethics for the twenty-first century museum", in McCarthy, C. (ed.) *Museum Practice*. Chichester, UK: John Wiley & Sons Ltd, pp. 69-96.
- **Marty 2014** Marty, P.F. (2014) "Digital convergence and the information profession in cultural heritage organizations: Reconciling internal and external demands", *Library Trends*, 62(3), pp. 613-627.
- **Meehan2020** Meehan, N. (2020) "Digital museum objects and memory: Postdigital materiality, aura and value", *Curator: The Museum Journal*, pp. 1-17.
- **Ngata, Ngata-Gibson, and Salmond 2012** Ngata, W., Ngata-Gibson, H., and Salmond, A. (2012) "Te ataakura: Digital taonga and cultural innovation", *Journal of Material Culture*, 17(3), pp. 229-244.
- Owens 2018 Owens, T. (2018) The theory and craft of digital preservation. Baltimore, MD: Johns Hopkins University Press.
- Parry 2007 Parry, R. (2007) Recoding the museum: Digital heritage and the technologies of change. New York: Routledge.
- Parry 20120 Parry, R. (ed.) (2010) Museums in a digital age. New York: Routledge.
- **Perzanowski and Schultz 2016** Perzanowski, A. and Schultz, J.M. (2016) *The end of ownership: Personal property in the digital economy*. Cambridge, MA: MIT Press.
- **Punzalan and Caswell 2016** Punzalan, R.L., and Caswell, M. (2016) "Critical directions for archival approaches to social justice", *The Library Quarterly*, 86(1), pp. 25-42.
- **Rayward 1997** Rayward, W.B. (1997) "Electronic information and the functional integration of libraries, museums, and archives", in Higgs, E. (ed.) *History and Electronic Artefacts*. New York: Clarendon Press, pp. 207-225.
- Rees 2021a Rees, A.J. (2021a) Remixing museology: An approach to collecting social media in museums. PhD thesis. University of Leeds.
- Rees 2021b Rees, A.J. (2021b) "Collecting online memetic cultures: How tho", Museum and Society, 19(2), pp. 199-219.
- Ridge 2014 Ridge, M.M. (2014) Crowdsourcing our cultural heritage. London: Ashgate Publishing, Ltd.
- **Schwartz and Cook 2002** Schwartz, J.M. and Cook, T. (2002) "Archives, records, and power: The making of modern memory", *Archival Science*, 2, pp. 1-19.
- **Sherratt 2016** Sherratt, T. (2016) "Hacking heritage: Power and participation in digital cultural collections" *2016 Digital GLAM symposium*, Melbourne, Australia, 15 July. Available at: http://discontents.com.au/hacking-heritage-power-and-participation-in-digital-cultural-collections/index.html (Accessed: 2 January 2025).
- Smith 2006 Smith, L. (2006) Uses of Heritage. London: Routledge.
- **Sutherland 2019** Sutherland, T. (2019) "The carceral archive: Documentary records, narrative construction, and predictive risk assessment", *Journal of Cultural Analytics*, 4(1). https://doi.org/10.22148/16.039.
- **Thorpe et al. 2021** Thorpe, K., Christen K., Booker, L., and Galassi, M. (2021) "Designing archival information systems through partnerships with Indigenous communities; Developing the Mukurtu Hubs and Spoke model in Australia", *Australasian Journal of Information Systems*, 24, pp. 1-22. Available at: http://hdl.handle.net/10453/159542 (Accessed: 2 January 2025).
- **Trant 2009** Trant, J. (2009) "Emerging convergence? Thoughts on museums, archives, libraries, and professional training", *Museum Management and Curatorship*, 24(4), pp. 369-387.
- **V&A Museum 2023** Victoria & Albert Museum (2023) "A history of collecting digital objects at the V&A". Available at: https://www.vam.ac.uk/articles/a-history-of-collecting-digital-objects-at-the-va (Accessed: 2 January 2025).
- **Van Oost 2012** Van Oost, O. (2012) *Living lab methodology in museum studies: An exploration*. Roskilde, Denmark: Roskilde University.
- **Williams and Drake 2017** Williams, S.M., and Drake, J. (2017) "Power to the people: Documenting police violence in Cleveland", *Journal of Critical Library and Information Studies*, 1(2), pp. 1-27.
- **Zuanni 2021** Zuanni, C. (2021) "Theorizing born digital objects: Museums and contemporary materialities", *Museum and Society*, 19(2), pp. 184-198.



This work is licensed under a Creative Commons Attribution-NoDerivatives 4.0 International License.