Carsten Wergin and
Stefanie Affeldt (eds.)

Digitising Heritage

Transoceanic Connections between Australia and Europe

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KEMTE 4

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Preface

This volume came into being through the event "Digitising Heritage – An International Workshop" that took place at the Internationale Wissenschaftsforum Heidelberg (IWH) in September 2019, and for which we gratefully acknowledge financial support from Heidelberg University's Field of Focus 3 "Cultural Dynamics in Globalised Worlds". The workshop also served as the interim meeting of the German Association for Australian Studies (GASt), which allowed us to welcome international guests with a particular research focus on Australia. Together, we discussed the use of digital media and digital resources for the global networking of researchers and institutions engaged in the preservation and study of heritage, focussing on tools and concepts of digitisation and how those advance interdisciplinary collaboration and public engagement. We would like to thank all participants for their generous and insightful contributions. We would furthermore like to acknowledge the participants in the seminar "Heritage goes Digital: Exploring Immaterial Heritage in Times of COVID-19" that was held at Heidelberg University in the spring term of 2020 for highlighting some of the virtual examples referenced in our introductory chapter. A particular thanks go to Clare Harris and Geva Herlyn for their editorial assistance. We are grateful to the series editors of KEMTE, Christiane Brosius, Ludger Lieb, and Christian Witschel for accepting our volume. With its special emphasis on digital media, this series has provided us with an ideal framework for this publication. Thank you also to the team of Heidelberg University Publishing (heiUP), Anja Konopka, Johanna Hildenbeutel, Frank Krabbes, and Katharina Stumpf. Our special thanks go to Nicolai Dollt for his patience and careful revisions. This publication was made possible through the generous support of the SFB 933 Material Text Cultures and the GASt.

Heidelberg, 15 June 2024
Stefanie Affeldt and Carsten Wergin

CARSTEN WERGIN WITH STEFANIE AFFELDT

Heritage Transformations in Virtual Space

Heritage positions cultures and societies. It offers people orientation and a means of attachment across time and scale. Central to heritage are questions of ownership, intellectual property rights, and knowledge preservation. In recent times, significant transformations in the engagement with heritage as a global phenomenon have been driven by the decolonial turn – an intellectual and political push beyond mere compensation for the devastation caused by the colonial encounter. Decolonisation demands that the Global North make way for countries of the Global South to play a decisive role in how we imagine a globalised future (LONETREE 2012; WHITTINGTON 2021). Transformations in regards to our engagement with our globalised past as shared heritage are central to this.

Digitisation has significant consequences for material content and forms of knowledge that are both preserved and shared under the label of heritage, and the acknowledgement of multiple epistemes in the realms of politics, culture, and ecology is but one task in which heritage practitioners must engage with new virtual infrastructures. Digital technologies are therefore at the heart of a reorientation of humanities and social science research into the preservation and display of heritage. The hypothesis put forward in this volume is that digitisation can help generate new collaborative spaces within which we can craft more cosmopolitical heritage futures (see also TURUNEN 2020).

Across the globe, we witness transformations in university policy and practice, and in the funding and stakeholder support that is provided to introduce the digital into heritage studies and related disciplines. This push for the digital also means a push towards more interdisciplinarity and interconnectedness among research(ers), which is represented in an increase in demand for digital humanities in heritage studies, from funding applications to the dissemination of research results. Meanwhile, new virtual infrastructures like the Metaverse and AI platforms such as ChatGPT open up further possibilities for critical museum and heritage studies, while also provoking anxieties through the ways in which they scrutinise authorship, originality, and ownership.

The presence of digital media in daily life has been producing alterations in social science research practices for quite some time, particularly in the field of anthropology (COLEMAN 2010). Anthropologists and other social science scholars have made significant adjustments to their theoretical and methodological toolkits in order to accommodate the growing importance of virtual space, with a strong emphasis on how digital technologies – including those that drive social media – have transformed heritage across various scales. The related shift from observational to participatory approaches to digitisation is paired with the increased involvement

of reflective ethnographers in digital media. This has also impacted heritage and museum studies, for example in regard to curatorial practices and the accessibility of heritage objects on display (KRAUS/NOACK 2015).

Sound criticism of the shortcomings of large-scale museum projects like the *Humboldt Forum* in Berlin (SARR/SAVOY 2018), of artefacts unlawfully held in ethnographic collections, and of acquisition histories spanning from no documented provenance up to proven colonial theft and plunder have also led to a transformation of the international museum landscape. In Germany, for example, not only have nearly all ethnographic museums changed their names to become places in which "Five Continents" (Munich) or "World Cultures" (Frankfurt) meet, they have also put much emphasis on the development of new collaborative approaches and engagements with their collections, moving away from merely using cultural objects as representations of past peoples (as previously suggested in the conventional name of *Völkerkundemuseum*) and towards dialogue via these very objects – and, most notably, their source communities.

To a significant extent, this change has been driven by a reorientation towards provenance research (including more funding) and the development of inclusive models that make the voices of people in source communities heard and honour the knowledge they provide (WERGIN 2018). Digitisation is a central component of these endeavours. It is hailed as a means of connecting people and places across the globe in shared engagement with intangible and tangible heritage objects via collaborative research, the co-curation of exhibitions, or virtual participation in ceremonies if, for example, physical participation is impossible due to travel restrictions in times of a global pandemic. However, such shared heritage has its limits. For one, the question of whether digital replicas can compensate for the physical absence of a heritage object held in museums – particularly if its significance cannot be grasped through display but needs to be experienced in cultural performance and ceremony – is yet to be answered. And there is no straightforward answer to such a question. It is for this reason that the digitising of heritage is accompanied by a broad and profound need for more research and education on local, national, and international levels.

This new terrain of digital heritage studies transcends time and scales. Institutions such as museums and university collections both explore and commit to new collaborative practices within and beyond their existing digital repositories, platforms and spaces. All the while, the plurality of understandings of the terms 'heritage', 'dialogue', and 'digital' continue to create tensions for these institutional recalibrations (cf. GALANI et al. 2020). Digitisation thus not only assists but also complicates the multilayered initiatives that seek to emphasise collaborative approaches to heritage. Most objects held in museums by now have biographies that are strongly cross-cultural and transregional in the making. However, key terms such as 'intercultural' and 'diversity' have remained largely absent from official policy documents on the digitisation of heritage resources, such as for example

the 2006 and 2011 editions of the European Commission's "Recommendation on the Digitisation and Online Accessibility of Cultural Material and Digital Preservation". In fact, the latter has been criticised as demonstrating only a limited interpretation of the digital as 'new technologies' or 'tools' (cf. GALANI/MARKHAM/MASON 2020, 10–11). This fails to take into account the profound transformations triggered by digital media usage – both those outlined above, and those related to the representation and upkeep of local traditions in light of global movements, migration and trade. As digital dissemination of heritage objects crosses borders, jurisdictions, and significations, platforms do more than provide spaces for cross-cultural collaboration. This volume addresses this important gap in the research landscape, highlighting ways in which heritage fosters new connections between people and places, with an emphasis on Australia and Europe, their (post)colonial legacies, and the transformations that these entangled heritage-scapes trigger.

Digitising heritage rewrites the way in which heritage impacts culture and society. It enables transactions that facilitate the roaming of data, knowledge exchange, and migration. Museums have been rather reluctant to embrace the significant changes that are now found on the technological level and include digitisation initiatives that promote the aforementioned decolonial project, such as collaborative approaches to museum collections that mandate the participation of source communities, and as long as decision-makers in the Global North remain fundamentally biased regarding how best to care for and preserve heritage objects, they will continue to promote the power asymmetries that the decolonial turn seeks to overcome. However, BOAST (2011) also warns against the uncritical acceptance of promises attached to the decolonial project and the effects of such newly emerging collaborative practices (cf. GALANI/MARKHAM/MASON 2020, 16), arguing that it is equally important to understand the relations between digital possibilities and local realities and to distribute digital skills and expertise. It is not enough to offer digital tools. Such possibilities have to be accompanied by relevant training incentives, along with appropriate considerations of what will happen after digitisation. What will become of the heritage objects under digital scrutiny? What are the provisions for heritage practitioners?

The above amply shows that digitisation is strongly entwined with post- and decolonial agendas that transform the ways in which we approach and think about the purposes of museums and archives. As new forms of transaction among diverse stakeholders, enabled by digital technologies, impact heritage pasts, presents, and futures, it remains crucial to critically engage with the associated advantages and disadvantages that digitising heritage conjures up. This triggers yet another series of questions: Who decides what to preserve or reconstruct in digital form? Who determines the ethical implications behind the circulation and storage of, and access to, digital archives, or the distribution of (intellectual) property rights? How do we address cultural taboos on specific exhibition pieces – particularly if such taboos extend to digital copies? How are we to balance the danger of withholding archives

that could benefit the source community with the danger of sharing too much of that community's heritage content with global audiences? And finally, since digitising is not merely a tool, what further domains of material and immaterial heritage does it produce?

To answer the above questions is a complex task that requires interdisciplinary engagement from digital humanities scholars, heritage practitioners, lawyers, local community members, and many more. There is clearly a need for more robust criteria that will need to be met before new collaborative modes of research and distribution of digitised heritage are put in place. Open access might have positive connotations for those eager to learn and take part in a global heritage-scape, but it might also perpetuate an unresolved tension between universal value and localised ownership.

The contributors to this edited volume put forward diverse means of facilitating such a critical assessment of the ways in which new forms of digitisation are affecting the governance, management, and circulation of heritage as transcultural expression. All of them embrace the dialogical approach more and more museums and heritage practitioners are taking towards engagement with immaterial and material heritage through digital means. Equally, they stress that digital technologies are more than mere tools that can be applied to existing forms of heritage usage. Digitisation transforms heritage itself, and if the dialogical approach is taken seriously, it demands the integration of diverse users into the (re)presentation of heritage, and in particular the engagement of source communities with museum and university collections. Collaborations on various levels become imaginable and indispensable in and through digital means. This enables people on various ends to mobilise heritage not as a relic from the past but as a means to conceive of the world differently. The digital allows those deprived of their traditions through theft and colonial plunder to reinstate an emotional, affective connection to cultural traditions, some of which may have been deemed lost to colonial violence. Today, these traditions are also vital sources in the search for adequate responses to global challenges – for example, the importance given to so-called traditional ecological knowledge (TEK).

The contributors to this volume show diverse ways in which we can facilitate such critical assessment of heritage, and how digital means can impact the governance, management, and circulation of related knowledge practices. Digitised heritage enables people on a global scale to conceive their lifeworlds differently. It can both establish new transcultural connections and reinstate emotional, affective, localised responses to global challenges. Digitising heritage thus connects diverse agents in a media ecology that provides space for many people, imaginations, and envisionings. In other words, it might lead towards more sustainable heritage futures.

Our contributors from anthropology, archaeology, history, geography, political science, the digital humanities, mathematics, and museum, literary and cultural heritage studies discuss related transformations triggered via the practices and

politics of digitisation. They explore (1) digitisation as creating new frameworks for intellectual property, Indigenous and traditional knowledge, and cultural rights, and (2) the materiality of digital archives and the status of digital objects in production and circulation (see below: *Transforming Policies and Practices*). They also engage with (3) challenges in the participation and positioning of heritage practitioners in digital media ecologies, and discuss (4) old and new epistemologies and forms of representation that emerge from digital reflection (see below: Transforming Ecologies and Epistemes). Along these four strands, this volume presents potentials and constraints in the processes of digitising heritage for global audiences.

Transforming Policies and Practices

The state of museum and university collections varies greatly, from fully accessible (i.e. having a complete inventory, curators, and exhibitions with opening hours), to non-explored (i.e. in storage).[1] Most collections consist of valuable objects that are only locally available. This lack of accessibility can be scrutinised through digital means, which allow for objects to be reproduced, displayed, or published for large-scale distribution and engagement without the risk of damage to the originals. Digitisation is thus central to the transformation of museum and university collections that will enable them to reach wider audiences, and also to engaging students and an interested public in curatorial practices. It allows for the production of catalogues, provides for conserving, protecting, and archiving, and offers new platforms for interdisciplinary teaching and research activities. Such efforts are linked to what MARTTILA AND BOTERO (2013) have termed the 'openness turn' in cultural heritage institutions, which promotes participation and attentiveness to how an institution and its collection(s) might change through visitor engagement (cf. STUEDAHL et al. 2020, 62).

   Digitisation also has wider implications for related ideas of a shared cultural heritage, which transform the self-understanding of societies and the formation of identity and difference, stimulating feelings of belonging or foreignness, with humanities and social science perspectives providing new perspectives for societal debate about these media-saturated transformations. Heritage objects have, of course, previously been the subject of transformations triggered by different media uses. Representations and interpretations of such objects in written texts and reproductions of them in videos and photographic images have enabled researchers and curators to make their collections accessible to wider audiences and source communities (GEISMAR 2018). Digitisation should not be perceived as a tool in this regard, but as a transformative agent through which diverse audiences can make

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1   We thank Maarten DeKieviet for elaborating on this in his presentation for the *Digitising Heritage* Workshop 2019.

use of and/or ascribe value to immaterial and material forms of heritage. Many such uses cater for stereotypes, pride in a (national) identity, or other discourses of power/knowledge. Others, however, offer viable alternatives to outdated scholarly paradigms or museum practices that put objects on display but fail to contextualise their provenance. At the same time, some policy-makers embrace digital technologies under the false pretence that they can do the radical rethinking of their institutions for them (cf. Galani/Markham/Mason 2020, 16–17).

The latter, in particular, seem to underestimate the transformative puissance of digitisation, for example with regard to the contributions that museums and university collections can make towards local, regional, national and global conceptualisations of and engagements with people's interconnected pasts, presents and futures. This needs highly skilled practitioners to put digitisation to adequate use, and equally strong ethical considerations as to what is defined as adequate in the first place – not least since accessibility and availability across borders and scales have juridical and political implications, and since, given that digitising heritage is central to the urgent task of documenting collections sustainably and protecting their inventory from temporal decline, there is a demand for best-practice responses towards complex questions of ownership, distribution, and copyright.

Meanwhile, digitisation not only means the documentation of existing works. It also means the production of works that add to the unique holdings in museums, libraries, and archives an opportunity for simultaneous research and presentation in ways that transgress geographical and cultural boundaries. This has significant consequences for the education of heritage practitioners. For example, using photogrammetric and laser scan-based methods, it is already possible for students to create high-resolution, fully-textured three-dimensional models and secure them sustainably (Redweik et al. 2017). Photogrammetric processes can calculate three-dimensional surfaces from two-dimensional image information and thus create realistic three-dimensional models of recorded objects. This allows for preservation and engagement up to the level of recreation of heritage in ways that other media have been unable to provide. But even classic three-dimensional laser scanners allow the geometry of objects to be scanned by a laser beam, via which three-dimensional point clouds assist in the creation of closed models, while the texturing of these models can be realised by simultaneously taking pictures (Becker et al. 2016). It is worth noting that such photogrammetric process chains can also be applied to human remains, where they might lead to facial soft tissue reconstruction and assist in the attribution of those remains to their places of origin even if written documentation of their provenance remains unavailable.[2]

Last but not least, digitising heritage proves important for material objects – not only human remains but also what the 2003 UNESCO *Convention for the Safeguarding*

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2   Many thanks to Sven Becker and Jasmin Rosenfelder for presenting a concrete example during the *Digitising Heritage* Workshop 2019 in Heidelberg.

of the Intangible Cultural Heritage 2003 Article 2.1 defines as intangible heritage, i.e. "practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognise as part of their cultural heritage". Digital technologies are a vital means through which to fulfil UNESCO's goal to protect and safeguard. They assist in the identification, documentation, research, promotion, and enhancement of such heritage. At the same time, however, subsuming to particular digital technologies (for example, the European platform EUROPEANA) means adhering to a particular definition of heritage, in this case one that assists the people of Europe in fostering a sense of European identity.

In her comparative analysis of digitisation policy white papers from European countries and Australia, **Ana Luisa Sánchez Laws** sheds light on related political incentives for digitisation that are well covered by institutional doctrine, and compares them to those that still lack attention. One hypothesis she puts forward relates to these imbalances being fuelled by a need to meet prioritisation targets stemming from other government policies that pertain to digitisation more broadly. While digitisation is generally accepted as a necessary step in future-proofing European politics and policy, LAWS demonstrates that it lacks appropriate measures that meet the special demands of the heritage sector, where juridical, institutional, and individual interests intersect and nation-state borders complicate the engagement with immaterial and material heritage whose origins transcend those very boundaries.

A second hypothesis LAWS fleshes out is that practical needs related to the physical process of digitisation play a more significant role than previously thought, hindering progress in some areas while easing it in others. She argues that it is important to understand the governmental conditions that underpin digitisation before assuming that an imbalance of available digital material in a given area is connected to a lack of attention to certain groups or topics. The repercussions of Brexit within the heritage sector present a prominent case in point, as it has severed the governmental ties enabling heritage items held in the UK to make an immediate contribution to prominent European digitation initiatives such as the aforementioned EUROPEANA platform. Viewed through the lens of critical museum and heritage studies, this adds to the critique of Brexit as a failure in acknowledging the fundamental qualities of a cosmopolitical heritage-scape.

In Australia, a central matter of concern is the repatriation of ancestral remains from European collections, which is of profound significance for Aboriginal and Torres Strait Islander peoples (as well as many other Indigenous peoples worldwide). A coming to terms with the unlawful theft and plunder of gravesites across the colonised world has transformed most of the institutions that have held or continue to hold ancestral remains. For many years, **Paul Turnbull** has been working at the forefront of repatriation efforts, which he describes as an extraordinary Indigenous achievement and, for Australia, the single most important agent of change in the relationships between Indigenous peoples, museums, and academia

over the past fifty years. Some expect the completion of a repatriation process to put an end to a difficult past. Such expectations are short-sighted, however, in particular if viewed through the lens of digitisation. For one, agency within any repatriation process rests with the source communities, not the museums, university collections, or private collectors holding the remains of their ancestors. Only the source community can put an end to the process. But repatriation might also function not as an end, but as the start of new relationships between people and places based on the transcultural biography of the cultural objects or human remains in question. Along these lines, Turnbull presents the Research, Reconcile, Renew Network (RRRN), which since 2016 has been engaged in creating a digital resource with funding from the Australian Research Council and partnering universities that is intended to help Indigenous communities, provenance researchers, and other parties with interests in the history of scientific collecting and uses of Indigenous ancestral remains to locate and assess information about the origins of remains held in overseas collections. His chapter focuses on RRRN's efforts to develop solutions to key challenges in creating this resource.

Indigenous groups, and what in Australia are termed Traditional Owners of what museums and university collections in the Global North hold as cultural objects and human remains, provide important expertise for both the identification of heritage and their potential management through digital means. This expertise demands community access. Digitisation cannot democratise heritage so long as its collaborative means are not acknowledged in practice. Digitisation is thus both that which enables and that which is enabled by transcultural exchange and collaboration. This calls into question traditional power dynamics and museum structures. The latter might persist in digital spaces only if source communities are not met on equitable terms (cf. Galani/Markham/Mason 2020, 28; Taylor/Gibson 2017). But for various reasons already outlined above, digitisation makes this continued disregard for marginalised voices increasingly unlikely. Their unique agency within repatriation processes is a case in point. Meanwhile, Meskell (2013) points to shortcomings in official initiatives that seek out the knowledge of source communities, such as the World Heritage Indigenous Peoples Council of Experts (WHIPCOE). Indigenous communities may act as advisory bodies and contribute to knowledge creation and the identification of heritage, but their leadership in processes of heritage preservation is hardly ever acknowledged. Instead, Eurocentric approaches and the 'othering' of peoples and cultures continue in conventional heritage practices governed by Western academics and experts, financed by Western funding bodies, and annotated in digital collections of the Global North.

These practices can be challenged, however – if research employs the full potential of the digital sphere, which among other things allows for unconditional repatriation that leaves museums with a digital copy (if the source community permits it). This is but one example of how digitisation can assist heritage in unfolding its transformative potential. As Hill points out, "one of the most salient features of

heritage is not only its multiplicity but also its mediation through a variety of human and nonhuman actors" (HILL 2018, 1194). Digital technologies can enhance this important feature because they offer viable and sustainable means for inclusive approaches to heritage preservation which also allow for the development of collaborative engagements with difficult pasts through the creation of a digital heritage-scape. This might transgress boundaries between former colonisers and colonised, between oppressors and oppressed, and assist the attempt to eliminate binary oppositions such as tangible and intangible or natural and cultural heritage and open up research and teaching to a cosmopolitical engagement with a globalised past, present, and future (DAUGBJERG/FIBIGER 2011).

At the same time, even though digital platforms seem to provide infinite connection, they also enable individuals to filter content to match their own interests and perspectives, making it easier to silence the 'other' (cf. GALANI/MARKHAM/MASON 2020, 23–24). Along these lines, **Friederike Schmidt** highlights the possibilities that digitisation offers when it comes to investigating the collecting processes of private collectors and British officials in Australia through a mixed-method approach. Her examination of written sources is accompanied by interviews with descendants and representatives of Indigenous communities. It offers a comprehensive dataset for statistical and geographical analysis and a visualisation of both artworks' and collectors' specific transcultural biographies. **Paul Longley Arthur** and **Isabel Smith** add to this a discussion of the development of an online exhibition exploring legacies of slavery in Australia. Their focus is on the experiences used to represent and understand these legacies, and how these link up with policies and practices that govern engagements with difficult pasts to put an end to colonial legacies of guilt and shame. ARTHUR and SMITH disentangle some of the complex relationships and responsibilities between individuals, communities, and institutions which start rather than stop with the digitisation process. Digital and online storytelling contribute to the democratisation of content but not in a neutral manner; selections of voice, medium, space, and audience impact on and interact with the complex connections with British culture that are spelled out in these heritage processes and produce specific representations of slavery in Australia, with significant implications for its perception in terms of national identity and also for the lived realities of its people.

As the final contributor to this section, **Romany Reagan** takes her readers back to Europe, and from the visual to the acoustic experience of heritage materialities. She curated four audio walks through Abney Park cemetery located in the north London community of Stoke Newington, each being a different exploration of one layer of heritage within the cemetery. In her contribution, she demonstrates how the availability of these heritage experiences in virtual space expands the 'visitor' footprint of Abney Park. Through digitisation, the Park comes to include not only globalised audiences but also those who have not engaged with the space previously due to sight or mobility impairment. Along these lines, REAGAN explores how

digitising heritage journeys can assist public engagement and expand audience demographics to become more inclusive. This final contribution to the section on *Transforming Policies and Practices* also marks the transition towards the second part of our edited volume, which moves from practical engagements towards the theoretical and geographical implications of digitisation for heritage audiences.

Transforming Ecologies and Epistemes

The previous section discussed the extent to which heritage objects, biographies, and legacies of slavery and colonialism are not simply inherited from the past but also constantly transformed in and through policies and practices that actively involve a great variety of actors in widely dispersed locations. Digitisation allows for related processes and research to be accompanied by experimental, artistic formats, and for the close involvement of an interested public. This opens up new perspectives on how societies worldwide deal with the destruction of the environment, with disputed cultural assets and with the memory of crimes against humanity. Ecology, Bruno Latour writes, is a "new way to handle all the objects of human and non-human collective life [...] Nature is here considered as what assembles all entities into one whole" (Latour 1998, 239). If we were to translate these observations into the transformations triggered through heritage discourse and practice, and more precisely into the digitisation of heritage, what might such an ecology look like?

A useful concept that aligns the notion of ecology as proposed by Latour with technological advancements has been that of 'media ecology'.[3] Media ecologies, **Kimberly Coulter** argues, are what illuminate not only the diverse relationships that heritage manifests between humans and beyond them, but also the mediated nature of the connections, representations, and engagement opportunities that play out in digitisation. In her essay, which draws on original posts she wrote for her academic blog *Ant Spider Bee*, Coulter reflects on her participation in the 2016 exhibition "Reset Modernity!" and its set of procedures as what she terms a kind of "exit counselling". "Reset Modernity!" at the *Zentrum für Kunst und Medientechnologie* (ZKM) in Karlsruhe, which Latour co-curated together with Martin Guinard-Terrin, Donato Ricci, and Christophe Leclercq, offered an opportunity to engage with media ecologies that questioned fundamental dualisms between nature and culture. Inspired by the workshop "Media Ecologies" that took place in Heidelberg the same year, and by panellists' claims that digital and environmental humanities

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3   Our use of the term 'media ecology' stems from discussions during the interdisciplinary workshop "Media Ecologies: How Digital and Environmental Humanities Research Reshape the World" organised by Carsten Wergin at the *Internationale Wissenschaftsforum Heidelberg* (IWH) in 2016 (see also Coulter, this volume). The authors would like to express their sincere gratitude to all workshop participants for their insightful contributions.

can destabilise paradigms, allay fears, cultivate diplomacy, and amplify serendipity, Coulter presents ways in which exhibitions like "Reset Modernity!" have done so through the use of digital technologies. Arguing that environmental destruction is often fuelled by tenets of progress, growth, and the nature/culture dichotomy, the exhibition disoriented and gently 'reset' visitors' paradigms of (ecological) observation and representation. Experiences like this have also set a new standard for engagement with heritage in more traditional museum contexts. The task becomes moving visitor experiences away from a mere presentation of objects as relics of the past and towards a questioning of the ways in which curatorial practices can mobilise heritage for the crafting of sustainable futures.

As the digital extends curatorial practices and experiences, explorations like "Reset Modernity!" and their translatability into heritage research and curatorial practice have become more important than ever. The global spread of COVID-19 and its diverse constraints have produced striking examples of how digital technologies are crucial for the engagement with and perception of heritage. Forced into lockdown, many museums quickly expanded their online presences through the promotion of access to digital collections or digital walks. One example of many is the Uffizi galleries in Florence,[4] which established a series of video blogs (#lamisala) in which museum guards presented their favourite rooms and objects to their virtual audiences, highlighting how digitisation might transform and diversify not only audiences but also those producing museum content.

Along these lines, the Getty Museum put forward a challenge on social media for people to re-create their favourite art objects and paintings at home.[5] Such initiatives establish feedback loops that link domestic spaces and museums. They blur boundaries, and in doing so open up heritage ecologies beyond institutionalised settings. The Rijksmuseum Amsterdam's free online project "Rijksmuseum from Home" is another case in point, providing art education and online museum tours that include the Gallery of Honour – the home of Rembrandt's *The Night Watch* and Vermeer's *The Milkmaid* – made accessible for global audiences via the new online platform "Rijksmuseum Masterpieces Up Close".[6]

While museums open up their institutional settings via digital means, university collections face additional challenges, as 'study collections' that combine academic teaching, research, and public outreach. Despite this triple importance, they are often given very poor financial or human resources support, or none at all. Given these constraints, digitising university collections represents an enormous task for their (often underfunded) staff. In her contribution, **Polly Lohmann** addresses this situation regarding Heidelberg University's collection of classical antiquities and

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4   https://www.uffizi.it/en/online-exhibitions, accessed 2/5/2023.

5   https://archivesportaleurope.blog/2020/04/07/getty-museums-social-media-art-challenge/, accessed 2/5/2023.

6   https://www.rijksmuseum.nl/en/masterpieces-up-close, accessed 2/5/2023.

plaster casts. Her chapter questions what 'digitising' *could* mean with regard to specific kinds of objects, selections, and access to information if the necessary resources were made available.

Aaron Pattee adds a further layer of possibilities for research and education, invoked through the idea of digitising heritage and currently being explored in Germany. He discusses the application of a graph-database management system to model and analyse the political and economic networks of two *ministeriales* families of the German Palatinate from the late twelfth century to the mid-fourteenth century. Pattee shows how the Neo4j-based graph-database provides an excellent platform for adding information extracted from over 500 charters and dozens of historical texts, allowing users to assign unique properties to the different entities and explore the interconnectivity between the families and their peers. His example emphasises the relevance of digitisation across scales, potentially allowing for the exposure of unlimited detail when zooming into a particular heritage. The ability the technology grants to visualise real interactions between individuals within these documented proceedings in the form of a network, with descriptive properties ascribed to each entity and relationship, adds further transparency. It also caters for the acknowledgement of a multitude of factors the impact of which on particular historical events become visible through digitisation. In this capacity, Pattee argues that from today's perspective, graph-databases are invaluable and indispensable tools for exploration, learning, and analysis if one seeks to understand the complexities of medieval society.

The final three contributions to this volume take readers back to the opportunities digital technologies offer for heritage as narratory practice, with a special focus on migration histories. They highlight means through which digitising heritage can transform epistemes towards more inclusive, cosmopolitical engagements with the past. **Victoria Herche** reflects on media aesthetics and narratives of refugees arriving by boat in both the Pacific region and the Mediterranean Sea. Images of boats often stand in for discussions of a refugee crisis at large. Contemporary authors and artists have used digital technologies to shift this focus away from generalised images of 'boat people' and back to personalised stories of asylum seekers which are illustrated through digital means. By referring to two interactive, web-based graphic stories – adaptations of Khaled Hosseini's *Sea Prayer* (2018) and Nam Le's *The Boat* (2009) – Herche discusses the choices made by authors and media artists when illustrating these narratives of migration or adapting them into intermedial forms. The relevance of these stories for contemporary and future heritage discourse lies in their affective investment in the representation of boat migration and the ways in which digital technologies afford critical engagement with the reading and narration process. Herche demonstrates how digital representations assist heritage in its capacity to not only connect the past with the present, but also mobilise recollections of the past, both private and public, as the building blocks for collaborative remembrance.

Adding to the artistic engagements with and narratives of refugees explored by HERCHE, **Marijke van Faassen** and **Rik Hoekstra** demonstrate that even if we connect all available data, migration stories will always contain blind spots and alter the past, as some perspectives will always be overexposed while others remain under-represented. The authors point to the pitfalls of large-scale digitisation should it only be meant to reconcile the perspectives of the institutional and the individual, of governments and marginalised groups. These observations resonate with the aforementioned concerns in regards to efforts around the restitution of cultural objects and human remains if these are understood merely as a means of putting an end to a negative past. Here, the authors recognise digitised heritage's ability to connect, network, enable, and enhance conversations across scales, and across geographical and political boundaries. Their contribution draws on Dutch Australian migration stories to offer evidence for how digitisation can profoundly transform heritage and the ways in which it is used, not as something of the past but as something on which to construct a different future (WERGIN 2021).

Well before the interactive, digital formats described by the aforementioned authors became available, newspapers provided 'big data' which mass audiences could use to reconcile their pasts. The dramatic expansion of newspapers throughout the nineteenth century created a global culture of abundant, rapidly circulating information. Today, the digitisation of newspaper archives, along with a growing array of tools for accessing and assessing them, provides a fruitful platform for re-evaluating some of the transoceanic networks through which news and concepts of culture travelled. With this in mind, **Jana Keck** offers another perspective on transoceanic entanglements and transformations between Australia and Europe which have been documented in an abundance of written sources and can now be reassessed through digital means. She outlines research into computational periodicals from the US, Mexico, Germany, the Netherlands, Finland and the UK to examine patterns of information flow across national and linguistic borders. Along these lines, her chapter questions the accessibility and interoperability of emerging and well-established newspaper digitisation efforts, and gives recommendations for structuring such development in the future.

Digitising heritage in the wake of COVID-19 expands the possibilities for old and new stories to emerge and become part of the global heritage-scape. AFFLECK and KVAN (2008) have pointed out that sharing individual stories online can create a "discursive interpretation of heritage" (cf. GALANI/MARKHAM/MASON 2020, 21). During the pandemic, the "Museum of Ordinary People" recorded personal experiences on Twitter, using the hashtag #TheseTimes.[7] The World Storytelling Café marks a similar initiative in reference to a Moroccan storytelling café where international contributors share their oral tradition in virtual space.[8] UNESCO also collected stories

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[7] https://www.museumofordinarypeople.com/, accessed 2/5/2023.
[8] https://worldstorytellingcafe.com/, accessed 2/5/2023.

on how living heritage experiences changed due to lockdown restrictions,[9] including the 500-year-old Croatian Easter tradition of 'following the cross', which during the pandemic could only take place with fifteen representatives from each of the six towns surrounding Stari Grad Plain. However, much like the Holy Week procession in Colombia, it was transmitted via digital media, and accompanied by presentations, talks, and conferences. Meanwhile, the Tower of David Museum's "Jerusalem Experience" opened as a virtual interfaith pilgrimage space for Jewish people, Muslims, and Christians that allowed for a three-dimensional experience of Jerusalem's holiest sites and festivals, from Orthodox Easter celebrations at the Holy Sepulchre to Ramadan prayers at Al-Aqsa Mosque and priestly blessings for Passover at the Western Wall.

Digitisation has proven an important space for heritage itself, in which dialogical approaches nurture not only the upkeep of traditions but also stories closely associated with material and immaterial heritage places and objects. It is beyond the scope of this introductory chapter to flesh out in detail what can be learned about the importance of digital media for the upkeep of heritage, traditions and rituals in moments of crises. COVID-19 was not the last such crisis, and digital technologies will be able to assist in the preservation of heritage when the next one strikes, as some cultural expressions have found parallel homes in the digital sphere. While digital engagement cannot substitute for a physical experience, participation in a ritual, or a visit to a site, it can help us remember and reiterate the stories attached to places that might otherwise become lost.

Re-Locating Culture Expression

The digitisation of not only museum objects but also exhibition spaces and sightseeing tours continues to blur the boundaries between material and immaterial heritage. Physical and virtual engagements now go hand-in-hand, for both heritage practitioners and an interested public. Diaspora communities have longstanding experiences with the potential to visit their culturally important sites without being physically present. Elderly and disabled people undertake virtual pilgrimages. This, however, reaches new dimensions when cultural expression is fully relocated into virtual space: that is, when visits to heritage sites are only possible virtually. Can a digital tour stimulate and uphold the same emotional experience as a physical encounter? Can the immaterial ever be as fascinating as its material origin? Such questions foster a need for more research into the virtual infrastructures that facilitate the upkeep of heritage, and with it the interconnection of people and places. Some of these mediated ecologies and their modes of participation are described in this

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[9]   https://ich.unesco.org/en/living-heritage-experiences-and-the-covid-19-pandemic-01123, accessed 2/5/2023.

volume. Its contributors unravel their particular modes of practice, of commemoration and collaboration. While the precarious state of many (in)tangible heritage sites due to war, political and economic encroachments, environmental degradation or over-tourism requires fast and professional digital documentation, digital heritage spaces can equally cater to collaborative work with people and data rather than a conventional desire for 'expert protection' of cultural objects and information.

Digitisation offers a framework for participation, in which museum practitioners and an engaged public can seek out ethically responsible ways to decolonise the past through shared provenance research and means of making archives accessible to wider audiences and on more equitable terms. The latter in particular requires sustainable digital archives that are accessible to very diverse stakeholders, from the general public to students, academics, politicians and source communities. It therefore needs more interdisciplinary experts trained at the intersections of critical heritage, ethics and technology to balance out the benefits that stem from digitisation for heritage preservation and practices against the control and access strategies offered by the same.

Individual chapters in this volume provide theoretical, methodological, and practical engagements with heritage in digital form that span the arts and history, forensics and physics, law and curation, and migration and museum studies. They highlight how digitisation advances interdisciplinary research in and across Europe and Australia. Ethical issues related to such networking are equally addressed, for example in regard to the digital dissemination of cultural assets or the legal foundations of digitisation and its presentation to public audiences. Chapters with a regional focus in Australia link these ethical issues to questions of preservation of heritage and the determination of related places of remembrance for Indigenous communities. This brings together interdisciplinary studies that describe manifestations of heritage in digital form as a means of facilitating dialogue about contestations surrounding the production of heritage as a concept and practice, with further emphasis on questions of digital representations in museums, academic institutions, politics, and history. Together, those demonstrate how heritage can help reassess, describe, and refine transoceanic connections between Australia and Europe, be it through knowledge exchange in migrant communities, object biographies, or diverse modes of storytelling.

Finally, contributors emphasise that in order for the future engagement with heritage held in the Global North to acknowledge the decolonial project, digitisation must facilitate further collaboration with heritage practitioners in the Global South. While collaborations with Indigenous groups in the context of provenance research, restitution and curatorial exchanges will only increase, the sustainability of these encounters remains questionable. The mere use of digital tools does not necessarily lead to the implementation of a decolonial agenda. However, digitisation offers means of engagement with and documentation of heritage that open up new possibilities for the transcultural encounter between former colonisers and colonised.

Digitising heritage that ends in the scanning and listing of technicalities falls short of adequate ethical conduct both towards the social polyphony of the past and the political implications of generating new means of preserving it for the future. Beyond general standards as spelled out in the FAIR principles (Findable, Accessible, Interoperable, Reusable), inventorying and categorising heritage through digital means is both a mirror and a generator of new knowledge systems that are impacted on by diverse interests which need to be acknowledged before and after digitisation takes place. With this in mind, digitising heritage holds great potential as a tool, process, and discourse, through which many voices can work together in and beyond imagined communities.

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ANA LUISA SÁNCHEZ LAWS

Digital Significance

This chapter proposes the idea of 'digital significance' as a governance and decision-making process for assessing the value of digital collections. This concept is inspired by Australian approaches to valuing heritage, which have had an important international impact in providing an alternative to the built-fabric conceptions of heritage (e.g., Venice Charter) that have dominated the field. Specifically, Australia's 1979 Burra Charter helped establish a set of guidelines for assessments that amended the bias towards the built fabric (a bias that favoured the heritage of colonisers) implicit in the 1964 Venice Charter. The Burra Charter introduced the concept of 'significance' and became a step in creating pathways for the recognition of Aboriginal heritage, for which criteria based on the Venice Charter proved insufficient. I would like to argue that the focus on significance should also play a role in digitisation policy.

The structure of the chapter is as follows: I begin with a brief presentation of the concept of significance, to then discuss how digital significance could be an extension of this approach. I then look at key aspects of digitisation in the EU to then present in more detail the case of Norway, where I worked for a brief period as senior advisor on museums and digitisation issues at the Arts Council of Norway in 2018. I end the chapter by reassessing the idea of digital significance presented above and how it could aid in further developing collection digitisation policy.

Significance

According to Russell and Winkworth (2009), significance "refers to the values and meanings that items and collections have for people and communities." Significance is an analytical standpoint that approaches a collection item from the point of view of the network of values that communities attribute to it. It is a decision-making method to collectively find the most compelling story about an item and use consensus to reach a conclusion about its worth. Speaking about significance, Mason (2003) argues that one of the things to bear in mind in heritage work is why we preserve. For him, preservation has its origins in our desire to highlight the connection between memory and environment and adds that this connection is dynamic. An important point Mason makes in his evaluation of the concept of significance, however, is that it tends towards exclusion, as it leaves the task solely to experts that often fail to acknowledge community voices. Mason argues that if one wishes to undertake a complete significance assessment, it is necessary to establish a dialogue between architects, historians, city planners, community members who are experts on the site because of prolonged relation to it, and stakeholders may

have little direct contact with a site but still value it highly. He calls for a more open process in which both the community and the experts have a dialogue to come to a fuller understanding of the reasons why a particular site should be preserved. In a review of the way in which the Australian NSW Heritage office was conducting its assessments of heritage value, BYRNE, BRAYSHAW and IRELAND (2003) made a similar call, stating that "the Service should encourage a culture in which the questions 'Who values this heritage and how do they value it?'" should be the starting point.

Briefly, 'significance assessments' involve the non-hierarchical evaluation of aesthetic, historical, scientific, and social value (AUSTRALIA ICOMOS 2000, and interview with IRELAND 2012[1]). The definition of social value explicitly states that "social value embraces the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiment to a majority or minority group" (AUSTRALIA ICOMOS 2000, emphasis added).

The spirit of the Australian approach is echoed in other countries around the world.[2] In the UK, for example, the matter of more inclusive policies for heritage has recently been in the agenda. Several instruments have helped guide heritage policy to better address the issue of unequal power that biases in heritage protection reflect. Since 2000, the Race Relations Amendment Act has required public authority heritage institutions to promote racial equality (CHEDDIE 2012). As CHEDDIE (2012) has written, in the GREATER LONDON AUTHORITY's Report on *Delivering Shared Heritage: The Mayor's Commission on African and Asian Heritage* (2005), the case for more inclusive heritage policy needed to address a variety of fora: the legal, ethical, human rights, intellectual, business, and corporate responsibility. It was also based on international frameworks (UN conventions that the UK abode to) as well as legal and business frameworks. As a result, definitions of heritage proposed by the commission "moved away from concepts of materiality towards concepts of the ritual, memory, transmission and orality" (CHEDDIE 2012). The resulting expanded idea of heritage "guardianship" gave impulse to new spaces for dialogue about cultural diversity in the sector (CHEDDIE 2012).

The Australian experience shows that the task is not only to establish concepts as significance within policies, but also to create clearer guidelines that ensure that participation from a broad range of stakeholders is embedded in the process – and this seems to be very much needed in the domain of digital heritage. Moreover, the

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1   Personal Conversation with Tracy Ireland 2012 in Canberra.

2   For examples of the Australian context see the other contributions in this volume: for the application of digital resources in the repatriation of ancestral remains, see Paul TURNBULL: *Restoring Dignity,* pp. 29–45; for digital interpretations in the context of Australia's difficult and traumatic pasts see Paul Longley ARTHUR and Isabel SMITH: *Digital Representations of Slavery in Australia,* pp. 47–62; for the pathways onto which items of Indigenous Australian origins were sent, see Friederike SCHMIDT: *Retracing the Mobile Object,* pp. 63–72.

questions of unequal power in any dialogue about the significance of heritage, be it analogue or digital, must be explicitly addressed in policy.

Significance in the Digital Domain

Digital participation has been on the agenda of policymakers for at least a decade now. Perhaps as in the case of the significance of built heritage, the dream of open participation has not been realised in the digital domain also because the existing social infrastructure has not been disrupted enough for this to happen. As the review of European and Norwegian digital collection policy documents in the next sections will reveal, digital media has transformed museum functions, yet has in many cases left the deeper governance infrastructure of museums intact. For digital heritage, it would seem straightforward to make an approach such as significance central to digitisation policy.

An inclusion of social values also in what concerns digital heritage, such as is done in Australia for other types of heritage via significance, would help mend some of the current gaps in policy formulations regarding the digitisation of collections. While museums and collecting organisations have made of significance assessments for material items or the built environment a common practice, these (at least in the author's experience) are less used in the process of digitisation. Since many digitisation processes revolve around creating digital copies of existing material items, it is understood that the significance assessment accompanies the object. However, for born-digital objects, attempting to simply transfer significance assessment practices directly from the physical domain may not be appropriate, or even feasible. I will come back to this issue at the end of the chapter.

The next sections leave the topic of significance aside for a moment to concentrate on what has been the trend so far in collection digitisation policies in Europe. A brief look at European and especially Norwegian collection digitisation policy whitepapers shows that the focus of policymakers has been on practical matters such as platforms, standards for metadata, and speed, and amount of digitisation. These practical matters related to the physical process of collection digitisation may have been the focus attention because material conditions slow down progress in some areas hindering the more ambitious social goals of policymakers. However, as digitisation efforts continue to improve in terms of the technical aspects of digitisation (in speed, amount, and interoperability), other areas of policy that have already received much attention in the physical spaces of museums (for instance, the social significance of a collection) will also need to be addressed more explicitly in digital collection policies, which I propose could be done through the idea of digital significance as an explicit part of the frameworks for the work that museums, archives, universities, and other public and private heritage organisations can conduct in the field.

Collection Digitisation Policy in Europe

At a governance level, the European Union's (EU) structure presents several challenges for digitisation of museum collections: Member States balance digitisation policies between centralised and decentralised approaches, sometimes relying on both regional and sectoral directions, even though about two thirds of Member States centralise the country's digitisation strategy for cultural heritage at the Ministry level (European Commission 2013). However, coordination efforts have a long history, and are strongly anchored in the democratic structures of the EU as a whole and of EU Member States. Nevertheless, one can also see that this democratic structure may prompt individual organisations to choose their own approach (platforms, policies, practices) over a collective effort such as Europeana, since the collective strategy remains too diffuse or too distant.

One of the key documents for digitisation policy at an overarching level (though not necessarily binding for individual museums) in the EU is *Cultural Heritage: Digitisation, Online Accessibility and Digital Preservation – Consolidated Progress Report on the implementation of Commission Recommendation (2011/711/EU) 2015–2017* (European Commission 2013). This policy document states that EU policy is to make the European cultural heritage accessible to all EU citizens. Precedents for this document include the *eContentPlus (2005–2008) programme* and *i2010 – A European Information Society for growth and employment (2005–2010)* strategy (Publications Office of the European Union 2010). Amongst the issues of concern pointed out in this progress report, are long-term storage, access, and copyright issues. Investments in this regard include Europeana, which has been the flagship initiative in the EU. This platform is meant to address the need for a common digital arena for cultural heritage in Europe, yet while policies and investment in Europeana promote growth of digital heritage collections, they seem to be inward looking: the public does not access Europeana as much as they access other collections of cultural digital media. In Europeana's 2016 benchmarking study *Europeana as Online Cultural Information Services,* the author found that Europeana ranked "in the mid to low range popularity among services for online cultural content, making it comparable to the World Digital Library and the Rijksmuseum in Amsterdam" (Navarrete, 2016).

While the EU cultural heritage report from 2011 called for investment in open-source technologies and open access such as Europeana, it also considered how to include commercial actors in the digitisation effort. Service providers and technology companies seemed to have had limited emphasis on how regular citizens may use such services, and users were seen mainly as providers in the digitisation chain, so one question asked in the report was how to create policies that addressed this participation imbalance.

The question of how to promote open, fair, and secure access also through commercial services operating in the EU is tightly connected to changes in policies

regarding digital privacy and security, and the turn towards stronger regulation (e.g., GDPR). The policy, economic, social, and political factors within which the EU operates are said to call for a heterogeneous yet coordinated approach, where concerns with the democratic function of information access and exchange are central and equally important than economic concerns. The emphasis so far has been on open source, free services, and open data. How this is planned to happen is still unclear. Perhaps it is here that a concept such as digital significance could become an organising principle for further coordination.

The heterogeneity one sees at EU level is also present at national levels, and this is well exemplified by the case of Norway. Three widely different types of organizations administer the country's Government-managed digitisation of collections, a) the National Library, which has the main responsibility for printed material and leads the national network of libraries, b) the National Archives, which manage material from a variety of government agencies, and c) museums, which manage artifacts, specimens, buildings, monuments, printed materials, photographs, artworks, and immaterial heritage.

The museum sector is very heterogeneous. It is composed of large, medium, and small museums organised as private/public businesses with a board of directors, inter-communal partnerships, or ideal organisations grouped into regional networks under the jurisdiction of the Culture and Church Department. There is also a strong university museum sector that falls under the jurisdiction of the Knowledge Department. In addition, several local private small collections operate independently yet receive State or municipal funding for their activities.[3]

In Norway, digitalisation strategy started early. Already in the late 1990s, the *Research whitepaper* (St.meld. nr. 39 [1998–1999], *Forskning ved et tidsskille*) spoke about the knowledge commons (building on HESS and ÖSTROM's 2007 view of the growing online shared knowledge resoures as a 'commons'), as a vision of "an open and accessible shared space" which should be the first priority of the public sector, and the *ICT whitepaper* (St.meld. nr. 17 (2006–2007), *Et informasjonssamfunn for alle*) stated that "Everyone should be able to participate in the Information Society."

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[3] The museum sector in Norway has in recent years opened for for-profit projects that would not fit with the definition of museums that is currently under debate at ICOM, where it is proposed that museums should be defined as "democratising, inclusive and polyphonic spaces for critical dialogue about the pasts and the futures […] Museums are not for profit. They are participatory and transparent, and work in active partnership with and for diverse communities to collect, preserve, research, interpret, exhibit, and enhance understandings of the world, aiming to contribute to human dignity and social justice, global equality and planetary wellbeing." (ICOM 2019). The museums in the network supported by the Department of Culture and the university museums supported by the Department of Knowledge would fit with this proposed definition, but other privately run organisations that run on a profit-based, non-participatory model may not be allowed to continue to call themselves museums if such definition is approved and later enforced through legislation and policy in Norway.

To this end, the Norwegian government should invest in the development of a digital commons, which should be as large as possible and have high quality information. Meeting user's needs (as defined by users themselves, for instance in terms of access to information, participation, accessibility and ease of use, type of information made available, language requirements etc.) should be the focus. There should be access to free non-commercial use of digital materials, albeit respecting existing copyright arrangements.

For Norwegian museums, the purpose, scope, and pace of digitisation was discussed more specifically in the *Museums of the Future* whitepaper (St.meld. nr. 49 (2008–2009), *Framtidas museum – Forvaltning, forskning, formidling, fornying*). This whitepaper defined four key aspects of museum work: management, research, dissemination, and renewal (renewal hereby understood as the way in which museums must constantly work to make their collections relevant to their publics). Two key factors were identified as crucial for the pace and form of digitisation in Norwegian public collections: the first was the public's high trust in government, which led therefore to high expectations of quality and accuracy of digitisation; the second was having to deal with very large collections. In the chapter about digital dissemination, the government was concerned with the balance between dissemination activities for the public visiting the physical museum and for the public visiting the museum online. The discussion was that many museums were just at the start phase of preparing their digital offers, and so, a confusion could be seen amongst museums in relation to the digital administration of the museum vs the museum's digital public outreach, where they were mixing the broader idea of digitalisation of their organisations with the task of digital dissemination of collections. The main problem was a misunderstanding of what digital dissemination should accomplish.

The technical discussion in this whitepaper was very detailed when it came to specific needs for digital collection management. Amongst other things, the Department was interested in good metadata, good authority registers, and standards of practice. The way in which prioritisation of what should be digitised would take place was up to the regional networks and to individual organisations. The main request from the Department was in terms of the number of items to be digitised, with an expectation of a strong increase in the next decade. This was partly connected to a report by the Auditor General (Riksrevisjonen), which stated that the pace of digitisation of collections was too slow and argued that the Department of Culture and Church had not followed up appropriately the digitisation process, museums and archives were not doing enough and that there was no plan for long-term storage.

To address some of these issues, the Department created *digitaltfortalt.no*, a national dissemination channel for museums, libraries, and archives, which was meant to stimulate to new thinking in terms of digital dissemination (now discontinued with content moved to Digitalt Museum). The idea was to encourage the creation of channels where the museum and the public could engage in dialogue

about collection items. In *digitaltfortalt.no*, any regional cultural network member could publish a story based on collection items. For the Department, this was the way forward in terms of innovation in museum dissemination practices. The Department also highlighted a second example of innovation in digital dissemination which aimed at making the online virtual museum a rich embodied experience: *Rockheim*, the national centre for rock and pop, part of the network of Museums in Sør-Trondelag, planned to have a virtual offer where the museum would offer spaces very similar to those of the physical museum, with museum employees also walking around those virtual spaces, and with the public being able to choose an avatar, put on their favourite costume from the collection, and walk around exhibition spaces to learn more about Norwegian rock and pop (St.meld. nr. 49 [2008–2009], 107–108).

When it came to digital collection management, the Department identified as the biggest challenge a lack of full registration of collection items in ICT infrastructure. At the time, only 39 % of about 2,8 million cultural historical artifacts on hold at Norwegian museums had been digitally registered, and of these, only 15 % were registered with a photograph (St.meld. nr. 49 [2008–2009], 107–108). Another issue was that those collections involving audiovisual materials were often in a state of disorder, not registered, and not digitised, or not following international standards for electronic registration (other types of collections suffered from similar issues, though not as badly as audiovisual material). This all meant that there was not enough capacity to add the knowledge embedded in collections to the public digital knowledge commons. One reason for this was that the job of digital registration had so far consisted of transforming catalogue and accession forms to digital format. This was partly to make work easier for museums, and partly because the electronic material was mainly intended for internal curators working in the given organisation. The problem, however, was that the transformation into a database for public access was being hindered precisely by this very specialised type of registration.

The then authority for libraries, museums, and archives, *ABM-utvikling*, was given then the task to try to organise the effort of all these institutions, to harmonise digital collection management. They would be assisted by KulturIT, an organisation created by the Norwegian Folk Museum. Amongst the main challenges identified as affecting the digitisation work and needing more attention are understanding how to exploit the potential of new technologies for systematic management and dissemination of information, managing long-term storage of digital information, cross-sector collaboration, finding coherent approaches at local, regional and national level, improving the ability to document fast changes in society, and finding ways to communicate history in a pedagogical way to as many as possible.

About five years later, in the report entitled *Digital infrastructure for museums* (GLEINSVIK/WEDDE/NAGELL 2015), an evaluation was made of the results from the work of the Arts Council, which manages an important number of the Department's Museum programs and investments, in creating appropriate infrastructure for the

digitisation of collections. The conclusion was that the Arts Council had made appropriate investments in infrastructure, creating the resource *DigitalMuseum.no* – Norway's national equivalent to Europeana. However, and as in previous reports and whitepapers, the question of why digitise was only briefly dealt with, naming amongst other things that the various investments in infrastructure should help support the new digital sharing culture, and provide more public access to the country's knowledge commons. Additionally, it was mentioned how this should also contribute to the broader European commons, since services such as *DigitaltMuseum.no* would feed directly into Europeana.

Digital Significance as Common Standpoint, Analytical Framework, and Decision-Making Principle

The presentation in the previous sections of the way in which European policy has tackled digitisation in heritage organisations shows that there is still a lack of a cohesive principle to coordinate the various infrastructure and general policy activities. It shows that the focus has been predominantly on infrastructure, at the expense of dealing with the social aspects of digital collections. I argue that digital significance could be the common standpoint, analytical framework, and decision-making principle to address this gap. I would like to end this chapter by outlining some key points for future discussion in this regard.

First, digital significance would mean considering how the qualities for which a digital material has become a focus of spiritual, political, national, or other cultural sentiment to a majority or minority group. Yet defining groups (majority/minority) in such a disruptive context as the internet is not a trivial matter. Let us imagine for a moment the composition of a board dealing with a digital significance assessment online: who should be the interested parties? Facebook, Twitter, Google, along with the individuals and communities that used their platforms to create the digital heritage item? These questions show the issues that may arise in the digital domain that cannot be so easily tackled when directly transferring practices of significance assessment from the built environment or material collections to 'born-digital' items.

Second, digital significance should be an opportunity to reflect upon both the 'why' and the 'who' in digitisation very carefully, without taking for granted that social inclusion is an implicit attribute of digital media. It is my hope that in coming years, the very important discussions about 'how' that have so far dominated policy will finally start giving way to the more pressing issues surrounding the 'why', that is, the governance and social goals of our digital collection commons.

Third, digital significance could bring to the fore the problem of ownership of digital materials. The idea of significance implies someone who is taking responsibility for assigning value, and who will be willing to function as caretaker of the

heritage item. In this regard, the differential power technology companies (service providers, software producers, code developers) have over the future of born-digital items must be re-examined.

I leave the reader with these three points as prompts for a new conversation, which I hope we may continue asynchronously in a new branch of the digital domain to which this volume extends.

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PAUL TURNBULL

Restoring Dignity

The Ethical and Technical Challenges of Creating Digital Resources for the Repatriation of Indigenous Australian Ancestral Remains

The repatriation of Ancestral Remains is of great significance for Aboriginal, Torres Strait Islander and many other Indigenous peoples worldwide. An extraordinary Indigenous achievement, repatriation has been the single most important agent of change in the relationship between Indigenous peoples, museums and the academy over the past 40 years. Its importance is enshrined in the UN Declaration on the Rights of Indigenous Peoples. Repatriation has revealed subaltern histories, enabled new narratives and continues to provide rich opportunity for understanding cross-cultural relations, reconciliation approaches and the work of Indigenous organisations and nations to achieve social goals. It has challenged orthodoxies, prompted radical shifts in policy, driven legislative change, and engaged politicians and diplomats at the highest level.

There is now widespread public appreciation that, starting within the first decade of Australian colonisation, the remains of the land's first peoples were removed from funerary sites, morgues and sites of violent conflict and sent to scientific institutions worldwide. Tracing where they are now and establishing their communities of origin are complex processes that pose major research challenges. But from where and how ancestral remains were acquired forms the basis of repatriation requests to holding institutions and has, in various instances, proved a key factor in securing their return. Establishing, as best as surviving historical sources allow, the provenance of remains has also essential in communities' determining the appropriate ceremonies and form of their reburial.

Since 2013, the Return, Reconcile, Renew Network (RRRN) has illuminated over 40 years of the repatriation of Indigenous human remains. It has brought together Indigenous community organisations, government, cultural institutions, and universities in Australia and overseas. One of the networks main initiatives has been the creation of a digital knowledge base,[1] with funding to date from the Australian Research Council, Australia's federal Ministry of the Arts, and six Australian universities.[2]

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1 The beta version of publicly accessible resources within the knowledge base can be explored via https://returnreconcilerenew.info/ (accessed 12/7/2021).

2 The University of Melbourne, University of Tasmania, Flinders University, Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS), Ministry for the Arts (Department of Communication and the Arts), the Kimberley Aboriginal Law and

To date, RRRN resources comprise guides to repatriation processes prepared in collaboration with the three Indigenous Australian representative organisations participating in the network. All three organisations have gained a wealth of experience in repatriation over the past 20 years, and are keen to share what they have learnt with communities only beginning the journey of securing the return of their Ancestors, ideally for burial in ancestral country. RRRN also aims to provide communities, provenance researchers and scholars with interests in the history of scientific acquisition and uses of Indigenous human remains with the outcomes of what amounts to nearly 30 years of research by members of RRRN in museum and other scientific archives, the personal papers of collectors and scientists and copies of publications in the vast literature relating to the collecting of Indigenous human remains from the 1790s to the early 1980s.

This chapter discusses RRRN's efforts to find workable solutions to two key problems it has faced in creating digital resources. One challenge will be familiar to anyone working in the still highly experimental fields of digital history and heritage research: how might various kinds of information be provided to potential users in durable digital forms that do not unduly diminish understanding of the complexities of the past thought, intentions and actions. A second problem is that arising from the culturally sensitive nature of a significant amount of the information within historical sources located by RRRN researchers, illustrative of the acquisition and scientific uses of the bodily remains of Australian and other Indigenous peoples. Finding workable solutions to dealing with information that, in the context of repatriation, is extremely useful to have in digital forms, but which relates to elements of traditional knowledge, cultural beliefs and practices, or otherwise sensitive matters that necessarily warrant restriction on circulation and access. Finding workable solutions to creation and curation of sensitive or culturally restricted knowledge have proved no easy task. Indeed, reasonably good solutions to the challenges in terms of informatics in creating, curating and ensuring the possible reuse of RRRN digital resources have proved easier to identify and implement than developing appropriate access protocols and governance arrangements for ensuring appropriate access to and ethical use of what Indigenous members of RRRN judge to be highly sensitive information.

Given this, it seems best to devote the better part of this chapter to discussing the challenges of dealing with information that the communities served by our three partnering Indigenous Australian organisations consider culturally sensitive information. And in doing so, it seems useful to reflecting on a recent article by Timothy Neale and Emma Kowal, addressing the question of how Indigenous and

Culture Centre (KALACC), the Ngarrindjeri Regional Authority (NRA), National Museum of Australia, University of Otago, Association on American Indian Affairs (AAIA), Museum of New Zealand Te Papa Tongarewa, and Gur A Baradharaw Kod Torres Strait Sea and Land Council.

non-Indigenous scholars might best seek to harmonise their aspirations in respect of decolonising Western traditions of knowledge making (Neale/Kowal 2020).

Decolonisation and Its Challenges

As Neale and Kowal (2020) point out, the differences in theory and praxis between Indigenous and non-Indigenous scholars of colonialism by no means amount to dichotomous perspectives on colonialism and its legacies. But there are differences. Even so, the approaches of postcolonial historians of science and museum professionals since the 1980s to decolonisation of Western ways of knowing they suggest can be characterised as 'epistemic', in that they have been primarily concerned to explore the implication of Western sciences in settler colonialism through contextual studies of the ways in which the ambitions, activities and interactions between scientists in colonially situated universities and museums and their metropolitan peers, produced knowledge that served, in obvious and also in subtle ways, to legitimate Indigenous dispossession and relegation to slave-like existence on the margins of settler society. In the case of museums in the Australian colonial capital cities of Sydney, Melbourne, Adelaide and Brisbane – all of which began systematic ethnological and anthropological collecting on the basis of recurrent public funding in the middle of the 19th century – here have been concerted efforts since the turn of the 21st century by staff and scholars associated with these institutions, to critically assess the circumstances in which Indigenous ancestral human remains and ethnographic objects came into their possession – although in the case of Sydney's Australian Museum, the decolonisation of exhibition practices date back to the mid-1970s.[3]

Indigenous Australian material culture is now routinely displayed to the museum-going public in ways that readily acknowledge the colonial context in which many artefacts were produced and acquired,[4] but which aim to contextualise them through Indigenous interpretations of their meanings and values that emphasise the continuing richness and vibrancy of present-day cultural to these objects and their makers.[5] This transformation in curatorial aspirations has been seen the

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3 Interview with Phil Gordon, Head of Indigenous Australian Collections, Australian Museum, 20/12/2019. Recording available on application to info@returnreconcilerenew.info.

4 For a critical discussion of exhibition practices in the case of another sensitive topic – slavery – and technical possibilities of crediting Indigenous authorial voice and ownership, see Paul Longley Arthur and Isabel Smith: *Digital Representations of Slavery in Australia*, pp. 47–62 in this volume.

5 See, for example, the website of the Bunjilaka Aboriginal Culture Centre of Museum Victoria, https://museumsvictoria.com.au/bunjilaka/; the Australian Museum's Indigenous collections, https://australian.museum/learn/cultures/atsi-collection/; and the Indigenous collections of the National Museum of Australia, https://www.nma.gov.au/explore/collection/collection/indigenous (accessed 12/7/2021).

employment of Indigenous people as curators, who often have genealogical connections to communities from which substantial numbers of artefacts were acquired, or communities with ancestral ties to the land on which the museum stands. Since the 1980s, there have also been unconditional repatriations of ancestral human remains, which were mostly acquired between the early 1860s and the late 1920s, through the plundering traditional burial places either by field collectors of natural history specimens employed by museums, or amateur naturalists with ethnological interests.[6] There have also been returns of artefacts, mostly of sacred or profound cultural significance, on the basis of consultation with community Elders and knowledge custodians. And all these initiatives have helped museums to build new connections with source communities and collaborations centering on the curation and display of items that by mutual agreement have been left in the care of museums.

Neale and Kowal (2020) suggest that we can usefully distinguish these epistemic decolonising initiatives from what they call more 'reparative' approaches to overcoming the hegemonic legacies of Western ways of meaning and knowledge-making, and its makers. What they have in mind when speaking of reparative initiatives are the growing number of scholars, many of whom are Indigenous, who have argued that scholarship needs to go beyond fostering awareness of the entanglements of Western sciences in colonialism (Smith 1999; Moreton-Robinson 2016). These scholars concede that postcolonial historiography has done important work, not least in showing in contextual depth how Western natural and human sciences variously contributed to the erroneous and pernicious categorisation of Indigenous meaning and knowledge-making traditions as myth. However, what is required, scholars favouring reparative approaches to decolonisation argue, is political action, in solidarity with Indigenous communities, to support their efforts to regain ownership and enjoyment of their ancestral lands, and make positive steps towards dismantling surviving structural legacies of colonialism that continue to perpetuate everyday social and economic inequalities. Indigenous scholars have questioned whether it is inescapable that epistemic approaches to decolonsation can work against Indigenous aspirations, due to their grounding in Western ontological assumptions and employ epistemic practices which treats all meaning and knowledge-making as historically contingent, socially situated activities (see, for example, Tallbear 2013).

The question of how we might most productively harmonise epistemic and reparative approaches has preoccupied RRRN members from the outset. Neale and Kowal observe that there has been a noticeable reluctance on the part of non-Indigenous scholars and museum curators to "touch on the hybridity of Indigenous worlds, often presenting Indigenous knowledge as a discrete category in the familiar terms of positive ethnological discourse" (Neale/Kowal 2020, 406). This is

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6   For an investigation of collecting processes by private collectors, see Friederike Schmidt: *Retracing the Mobile Object,* pp. 63–72 in this volume.

certainly true of some epistemic decolonisation initiatives, including, for example, a recent project by the Australian Institute of Aboriginal and Torres Strait Islander Studies to seek the return of sacred or profound cultural importance from overseas museums, which were in many instances collected during the long 19th century, to present-day communities. It is unclear whether any consideration was given in this project to the changes in self and communal identity occurring under settler colonialism, and its implications for the return of cultural property – an issue critically reflected upon, for example, by museum curator and anthropologist Philip BATTY (2006). Likewise, as I have argued elsewhere, the loss of Indigenous control of the management of repatriation of Ancestral Remains, in the years immediately following the disestablishment of Australia's Aboriginal and Torres Commission in 2005, saw mainstream government agencies fail to take into account the contemporary social and political dynamics of communities wanting to secure the return and reburial of their ancestors (TURNBULL 2020; see also LAMBERT-PENNINGTON 2007).

In the current Australian context, reluctance on the part of non-Indigenous scholars and museum professionals to address the hybridity of present-day Indigeneity is understandable. Since the 1970s, the political aspirations of Indigenous Australians have been underpinned by self-representation in terms of essentialist, pan-Indigenous solidarity. In the case of scholars and museum professionals engaged in repatriation and restitution ventures, one suspects that reticence to engage in discussion of the diversity of Indigeneity is due to concern lest doing so inadvertently provide ammunition to scholars, museum curators and social commentators who oppose the return of Ancestral Remains and items of great cultural significance on grounds which in effective reassert the explanatory and ethical superiority of Western ontological and epistemic traditions (an influential illustration of this is JENKINS 2016). Reluctance to draw attention to the relationality of Indigeneity is also understandable given the climate of political conservatism prevailing in Australia, which frequently prompt reactionary commentaries in popular media to the effect that the hybridity of contemporary Indigeneity has been so pronounced as to erase any meaningful connections with lands lost to colonial ambitions.

However, reluctance to address the relationality of Indigeneity also has its risks. Not the least is the danger of complacency about the representation of Aboriginal people and Torres Strait Islanders in colonialist terms of whether or not they are 'traditional' that are still very much in evidence in the making of government policies directly affecting Indigenous peoples and, notoriously, Australian federal and state laws in respect of land ownership (MERLAN 2006). As Neale and Kowal point out, in connection with changes in the presentation of Aboriginal and Torres Strait Islander cultures in Australian museums over the past 40 or so years, ignoring the complexity and heterogeneity of contemporary experiences since British invasion might privilege as truly Indigenous in non-Indigenous eyes only those Indigenous communities or families that, by dint of historical fortunes, are able to demonstrate continuities in cultural practices in connection with ancestral lands, as opposed to

those whose experiences under colonialism have rendered them unable to easily demonstrate connections with the precolonial past (Neale/Kowal 2020).

Because of long experience of the social complexities of repatriation, RRRN members have been alert to the diversity of contemporary Indigeneity. Interactions within the network have reflected collective aimed to foster understanding of the historical experiences of its three main Indigenous community partners, the Kimberley Aboriginal Law and Culture Centre (KALACC)[7], the Ngarrindjeri Regional Authority (NRA)[8], and Gur A Baradharaw Kod Torres Strait Sea and Land Council[9]. It could be fairly said that between them they exemplify the diversity of contemporary Indigeneity. They acknowledge that experiences of settler colonialism has wrought changes in customary law and culture, but each have stressed that, where possible, adaptation to change has been consistent with the interpretation of traditional beliefs and practices.

In respect of the points of connection and incommensurability between epistemic and reparative approaches to decolonisation that Neale and Kowal (2020) highlight, RRRN members would agree that there is nothing to be gained by abandoning the epistemic approaches to decolonisation in postcolonial scholarship and museology because of their past implication in colonialism. Rather, the consensus within the network has been to develop pragmatic solutions, often blending reparative and epistemic approaches to decolonisation. This is reflected, for example, in recognising that, for our community partners, the remains of individuals acquired colonial era scientists are entities possessing all of the traits of living persons. The belief is that until they are laid to rest in the right place in the traditional country of their ancestors, with appropriate ceremonies and rituals, they will be in a state of torment. Moreover, the country of their burial is seen as a living entity; and the plundering of burial places that was the prime means by which the remains of these men, women and children were acquired by museums and other scientific institutions, is believed to have caused environmental degradation and suffering of the country that gave them life and to which they must return. As the late Tom Treverrow, Elder of the Ngarrindjeri people, observed when reburying the bones of his ancestors returned from the Anatomy Department of the University of Edinburgh,

> all those Old People and the people we got here, [they are] all our family. We know where they were taken from, illegally taken from their burial grounds: their resting places and we know that they are our ancestors, we are connected to them ... We know that their spirit has been at unrest. We believe that the

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7 Kimberley Aboriginal Law and Culture Centre (KALACC), https://kalacc.org/ (accessed 12/7/2021).

8 Ngarrindjeri Regional Authority (NRA), https://www.ngarrindjeri-culture.org/contact (accessed 12/7/2021).

9 Gur A Baradharaw Kod Torres Strait Sea and Land Council, https://aiatsis.gov.au/publication/117041 (accessed 12/7/2021).

things that happen around us – our lands and waters – is all connected. It's part of it, and what's happening here is part of the healing process, when we bring our Old People home. (Hemming/Wilson 2010, 183)

Non-Indigenous members of the network may personally see the remains in question in purely material terms as organic structures devoid of life; but they have come to appreciate how and why repatriation is so important for Indigenous network members. This in turn has highlighted for non-Indigenous RRRN members the degree to which Western sciences have been grounded in a physical, determinist view of nature, which in its modern forms have ruled out natural processes having any inherent meaning or ultimate purpose. Within this envisaging of reality, the self appears as no longer defined by intimate relations to other living and inanimate entities within local contexts of place and time. As network member, Edward Halealoha Ayau, a Native Hawaiian scholar and longtime repatriation campaigner, has observed, the repatriation of Hawaiian Ancestors heightens consciousness of Hawaiian values of *'ohona* (family), *mālama* (care), *kuleana* (responsibility) and *kūpale* (protection), which while local in origin, speak to universal human concerns (Halealoha Ayau 2020).

What has, at times, proved more challenging for network members has been reconciling perspectives on why scientists of the 19th and early 20th centuries sought to acquire the bodily remains of Indigenous Australian and other Indigenous peoples. Given the enormity of the outrage committed by the removal of Old People from the care of their ancestral country, Indigenous members of RRRN have been understandably quick to claim that anatomists and anthropologists who participated in or encouraged the plundering of the dead did so with the conscious intention of scientifically justifying Indigenous dispossession and subjugation. They have also charged scientists with having bought and sold the remains of their Ancestors for personal profit.

Often these claims involved the projection of contemporary ethical concerns onto the past, so as to deduce value judgements from facts, which in their disciplinary training, non-Indigenous network members have been taught to see as an implosive epistemological blend in scientific reasoning. However, discussing the motivations of scientists implicated in the plundering of the Indigenous dead offered by network members have been productive. Indeed, it has provided the basis for a new research project – entitled *Profit and Loss*.[10] Research by RRRN members has so documented the acquisition of Ancestral Remains by gift and donation, tracing how they were obtained through professional relationships, mutual scientific

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10   *Profit and Loss: The Commercial Trade in Indigenous Human Remains,* Research project by Fforde/Nayak/Tapsell, https://app.dimensions.ai/details/grant/grant.8676566 (accessed 29/10/2020).

interests, and in the hope of strengthening ties of patronage and intellectual reputations (FFORDE 2004; TURNBULL 2017).

What has not been explored in contextual depth is the presence of commerce and commodity exchange in comparative anatomical and anthropological collecting of human remains during the 19th and early 20th centuries. Moreover, in doing so, the project will aim to consider what might be learnt of contemporary relevance by investigating the conduct of factual reasoning and making of value judgements in the investigation of Indigenous Australian Ancestral Remains.

Building a Repatriation Knowledge Base

Turning from discussion of RRRN's aspirations in respect of decolonising Western traditions of knowledge making, the chapter now turns to explain how the network has sought to create a knowledge base to assist Indigenous Australian communities in repatriation processes. As previously mentioned, the repatriation of these Ancestral Remains from overseas scientific institutions requires in-depth historical research to determine their origins and (ideally) identity as far as surviving documentation allows. It is critically important for those to whom they are returned have as much information as possible of relevance in deciding where and how they will be reburied, or cared for in a resting place on ancestral country. When collection records indicate only that Ancestral Remains are from Australia or one of its states or territories, and are likely to stay in the care of a museum, there is still as need for research that might uncover further information – as was recently the case in respect of a Yidinji Elder whose remains were acquired by Bavaria's Ethnological Museum (now the Five Continents Museum) in 1889. A search of museum records revealed nothing more than that these Ancestral Remains were from the north of the state of Queensland; but investigation of Australian newspapers, records of the Queensland Museum and an old map in the collections of Queensland's Department Mines and Energy, allowed Yidinji Elders to confirm the identity and original burial place of their Ancestor (APPEL/FOURMIL/TURNBULL 2018).

RRRN has sought to include within the knowledge base a wealth of facsimiles and transcripts of diverse source materials held by Australian and overseas museums, libraries, government archives and other institutions relating to the theft and scientific uses of Ancestral Remains. Much of this material was already obtained by several RRRN members over the course of what is now near the last 40 years. Some sources were 'born digital'. Others have been digitally reproduced from handwritten records of archival investigations by RRRN. Others are recordings of events orally passed down between generations within Indigenous communities relating to the plundering of Ancestral Remains and related artefacts of a sacred or culturally important nature. The archive has been created employing techniques and standards in informatics developed by digital archivists and

libraries in collaboration with information scientists since the late 1990s. This has been done to put the information in the archive into a contextual framework that is best suited to assisting Aboriginal Australians and Torres Strait Islanders, as well as provenance researchers and museum professionals with whom they may be working on repatriation related matters – to know the historical circumstances in which Ancestral Remains were acquired, and what happened to them after they came into the possession of museums or other scientific institutions. Importantly, while the RRRN knowledge base may not provide information disclosing from where, when and how Ancestral Remains were acquired, it has, in a number of instances to date, drawn attention to avenues for further research that have enabled the community from which Ancestral Remains came to be identified.

The decision was taken early in the history of RRRN to create its digital knowledge base using the Online Heritage Resource Manager (OHRM), a data curation tool created and progressively refined over the past 20 years by Gavan McCarthy and staff of the eResearch Scholarship Centre of the University of Melbourne (Fig. 1).[11]

The OHRM uses Microsoft Access and bespoke Visual Basic code to create data using two international archival standards developed by the International Council on Archives (ICA).[12] The OHRM modifies the print function of Microsoft Access to output data in HTML web pages, and as XML records in standard international schemas, such as the Encoded Archival Context Description (EAC-CPF) maintained by the Berlin State Library (Staatsbibliothek zu Berlin).[13] The OHRM thus has two important features. Firstly, it can take advantage of the power of a relational database like MS Access to create relations between entities such as people, persons, places and events, and then reproduce these relations in the OHRM's HTML output.

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11   Further information about the OHRM can be found at https://www.academia.edu/877140/ Engineering_utility_a_visionary_role_for_encoded_archival_authority_information_in_ managing_virtual_and_physical_resources (accessed 29/10/2020) (by McCarthy 1999; and also (McCarthy/Smith/Villiers 2020, 637–653). Regrettably, the eResearch Scholarship Centre has recently been dis-established by the University of Melbourne. No credible explanation has been given by those responsible for its closure in the light of its significant contributions to informatics in archival science and digital humanities scholarship since its establishment in 2007. The decision has caused RRRN and other Australian researchers whose digital resources have been developed and maintained by the Centre serious problems in terms of future development. RRRN is currently in the process of moving its knowledge base to the Australian National University. The migration should not, however, disrupt access to its contents.

12   ISAAR (CPF): International Standard Archival Authority Record for Corporate Bodies, Persons and Families, Second Edition, https://www.ica.org/en/isaar-cpf-international-standard-archival-authority-record-corporate-bodies-persons-and-families-2nd (accessed 29/10/2020); ISAD(G): General International Standard Archival Description, Second Edition 9, https://www.ica.org/en/isadg-general-international-standard-archival-description-second-edition (accessed 29/10/2020).

13   Encoded Archival Context for Corporate Bodies, Persons, and Families – EAC-CPF, https://eac.staatsbibliothek-berlin.de (accessed 29/10/2020).
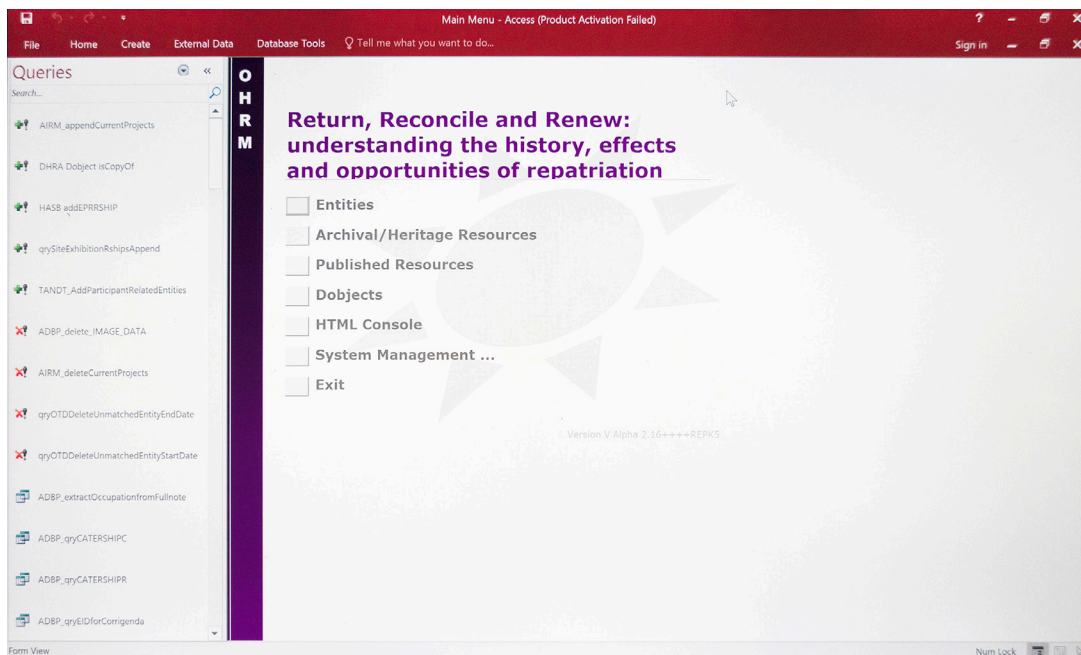
Fig. 1: OHRM: generates static HTML to build rich web resources that meaningfully express relationships between people, places, events and various other kinds of entities.

Secondly, data within the OHRM is exportable in open structured formats allowing its long-term curation and reuse in future platforms. To date there has been experimentation with the RO-Crate approach to packaging up OHRM content and associated metadata.[14]

The OHRM separates the creation and curation of data from its output in HTML (or XML should this be required) (Fig. 2).

This has the advantage that the HTML output sits as static files within a public_html directory. This differs from most knowledge bases created by scholars in the digital humanities in that information is not called from a Structured Query Language (SQL) type database using scripts in written on Python or a comparable programming language (Fig. 3).

OHRM created files are thus not only speedily served, but also can be confidently cited by other web resources. Links to and between the HTML files in question will not break. Even if they are physically moved elsewhere users can access them by a simple redirect file. Also, the files can rich metadata records in their headers that ensure the information they provide has a high visibility in searches by commercial and scholarly search engines.

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14 On the Research Object Crate (RO-Crate) framework, see http://www.researchobject.org/ ro-crate/ (accessed 30/10/2020).
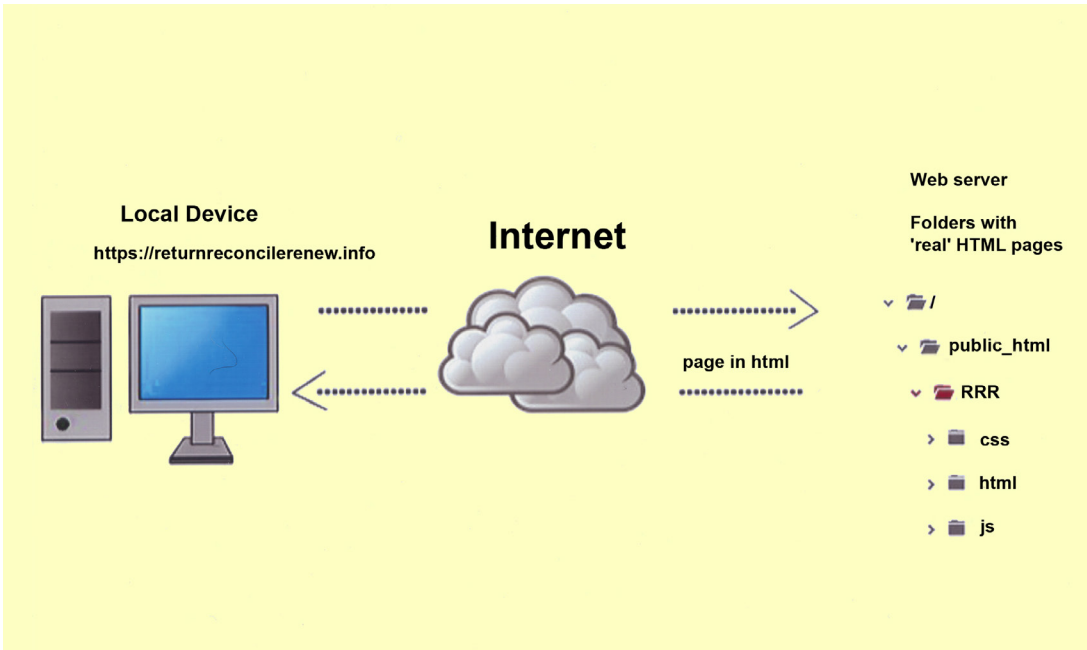
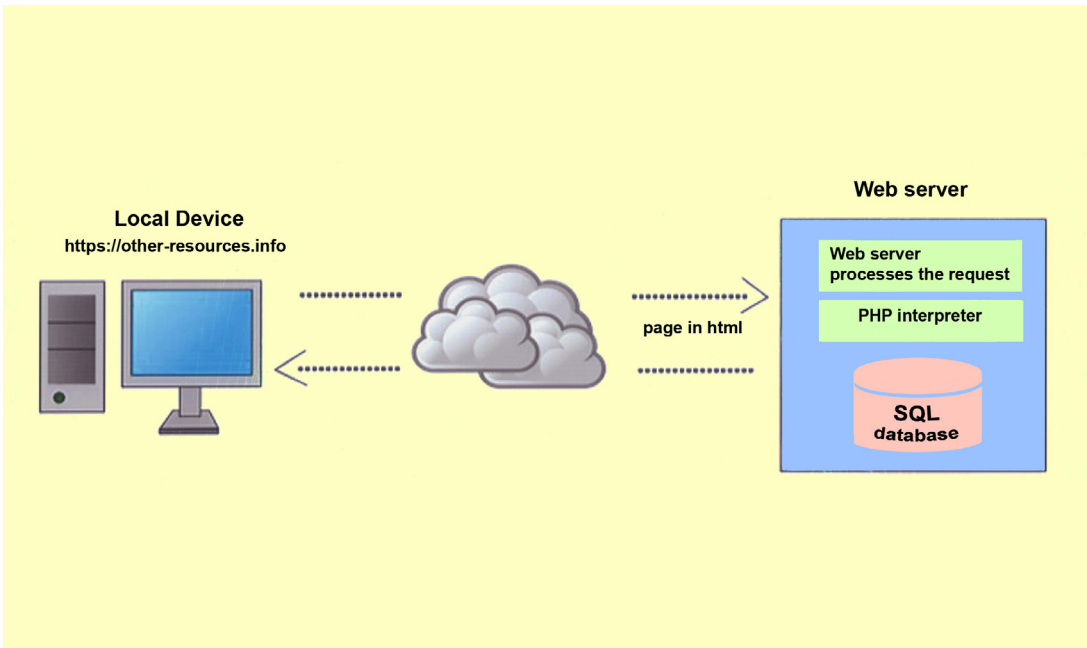**Fig. 2:** OHRM framework for serving static HTML files in RRRN Knowledge.

Fig. 3: Typical Server-Side Dynamic Web Resource.

In these respects, the informatics of OHRM are similar to elements of the JAM Stack approach to web development that has emerged over the past three to four years.[15] JAM Stack web resources similarly entail the creation of prerendered pages which can be served directly to users without using dynamic servers. Where they differ from earlier static websites – which proved harder to maintain than dynamic content publishing solutions, such as Wordpress, for example, – is in the combined use of JavaScript, application programming interfaces (APIs) and static content files. In its most effective form, JAM Stack web resources are made up of files with simple markup that is transformed into HTML using a static site generator such as Hugo, Jekyll or Gatsby (see Shaleynikov 2019),[16] which are hosted on GitHub or GitLab and accessed by users via Netify,[17] or other companies offering hosting services that enable the serving of content to users across geographically distributed networks. It is also possible to serve content files created by a static site generator on a local computer by uploading them to a simple static website. But what is lost in using this approach is the ease and speed with which new marked up files can be uploaded and the entire site re-rendered in a matter of seconds to incorporate new content and whatever links to information in other files it might contain, as well as rebuilding site indexes and files associated with the site's search engine.

There are no immediate plans to move from using the OHRM to a fully JAM Stack approach in the further development of the RRRN knowledge base, but doing so has its attractions. Firstly, the OHRM relies on Microsoft Access and Visual Basic code. This software will be around for some time yet, but as with all proprietary software, there is the risk that its future development may adversely affect the OHRM's functionality. Secondly, employing a JAM Stack framework would allow the OHRM to overcome one of its long-term shortcomings, which is the inability for RRRN members to directly add or edit content, as would be possible in a database back-ended web resource built on an open source content management system such as Drupal, Joomla or Wordpress. This would also simplify the process of RRRN's current Indigenous partner organisations offering their interpretations to historical sources. On the other hand, even if a JAM stack framework were employed, it is likely that the preference would be to continue have RRRN members in one offline location add or edit information for the knowledge base. This has the advantage of ensuring that new or revised content complies with the standards for information management that are among the greatest strengths of the OHRM. Also, as will shortly be discussed, a significant proportion of the information within the

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15 See https://jamstack.org/ (accessed 29/10/2020); also Schockwellenreiter 2017, *"Worknote: Was ist ein JAMstack?"*.

16 See Shaleynikov 2019, *"DZone, Static Site Generators Overview: Gatsby vs. Hugo vs. Jekyll"*.

17 See https://www.netlify.com/ (accessed 29/10/2020); also t3n, *Was ist eigentlich Github?*, https://t3n.de/news/eigentlich-github-472886/ (accessed 30/10/2020); Wikipedia (s.d.), "GitLab".
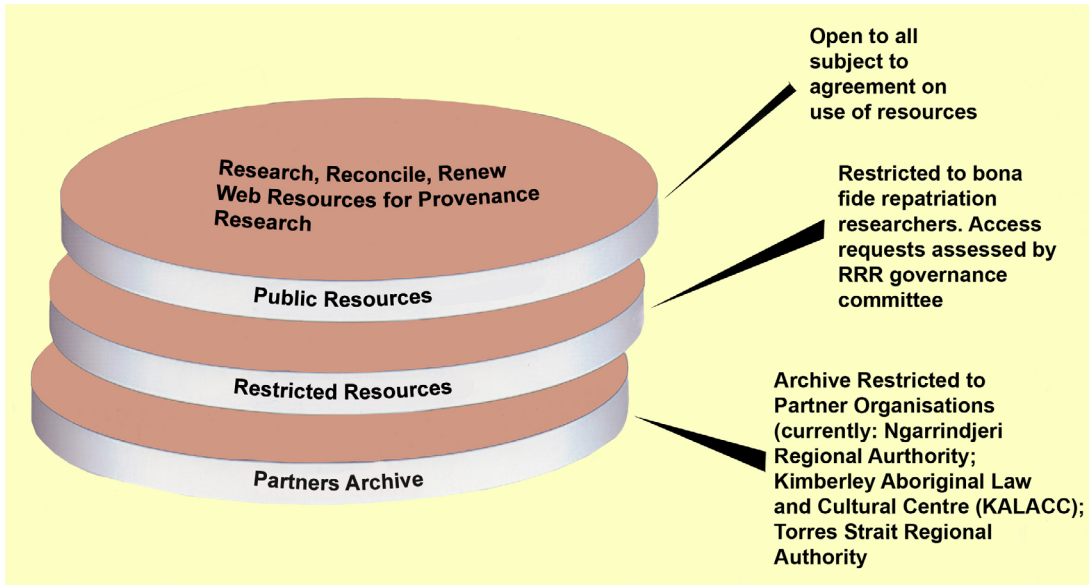
Fig. 4: RRRN OHRM entities.

knowledge base has been judged to be culturally sensitive, and is best kept locally and not accessible via the Internet.

Currently the RRRN knowledge base contains around 2500 separate files that provide information about historical people, places, organisations, and other entities, the great majority of which relate to the acquisition and scientific uses of the Ancestral Remains of Australian Aboriginal people and Torres Strait (Fig. 4).

Together they comprise a complex web of knowledge in which around 13,000 relations have been drawn between information on entities in individual files. Due to the employment of informatics standards within the OHRM, users can make their own investigative paths through this wealth of interrelated information with relative ease, and able to understand how and why entities are related. Also, the use of informatics standards has assisted efforts by RRRN members to describe the relations between entities in ways that render explicit the historical implication of the Western scientific interests in Ancestral Remains in settler colonialism.

An important aspect of building the RRRN knowledge base has been acknowledging that many of the sources it now contains, or will in the future, contain information about things that are regarded as culturally sensitive, and which should be known only to those who are recognised by the relevant persons as able to do so. In many instances, the information in question relates to traditional beliefs and practices, often in respect of death and burial, but also to do with other important aspects of the lives of men and women. In many instances, sacred or secret practices may no longer be observed, but the free circulation of information about them is distressing and considered offensive. In other instances, the information in

Archival Resources	Burial Sites	Digital Objects
Events	Explainers	Historic People
Indigenous Peoples	Legislation	Organisations
Places	Policies	Programs
Project People	Projects	Published Resources
Ancestral Remains	Collections	Cultural Objects

Fig. 5: Entities in the RRRN knowledge base.

question may relates to traumatic historical events or to places of spiritual significance in Ancestral lands. One fear expressed by Indigenous RRRN members has been that public circulation of information pin-pointing the location of traditional burial places might result in their desecration and new theft of remains.

In response to these sensitivities, the RRRN knowledge base actually comprises three related resources (Fig. 5).

The first is a public website with information serving the dual purpose of enhancing public understanding the history of scientific interest in the bodily remains of Indigenous peoples, while providing initial sources of value to Indigenous communities, representative organisations and collaborating researchers wanting to find out whether the remains of their Ancestors came to be in the possession of overseas scientific institutions. The second is a restricted area, and likely to be available at that contains sensitive information of value to communities wanting to determine whether there are remains of their Ancestors held in overseas museums or other scientific institutions. The aim here is to provide the basis of detailed research into the provenance of remains. Access will be granted on application to a governing board to appropriate community members, researchers working on behalf of communities and others who are otherwise judged to have bona fide interests in the information contained in this closed resource. Finally, there is a private resource within the knowledge base that contains detailed, sensitive information supporting the efforts of RRRN's three current Indigenous community partners in ongoing repatriation activities. Much of this information consists of the findings of research relating to the remains of particular individuals, which has sought to

discover the circumstances in which they were acquired, what subsequently happened to them and also any other associated information.

Like most other digital initiatives in history and heritage research, the next phases in the development of the RRRN knowledge base depend on success in fierce competition for project funding from government agencies and private philanthropic foundations – an unsatisfactory situation that is likely to become more so due to the economic impact of the COVID-19 pandemic. However, project funding has recently been won to investigate the history of sales and exchanges of the remains of Australian and other Indigenous peoples, and this will see the participation in RRRN of data scientists and the development of techniques for analyzing the wealth of information concerning the acquisition and uses of these Ancestral Remains in the conceptual evolution of comparative anatomy, anthropology and cognate disciplines in metropolitan European and colonial contexts since the late 18th century. This research may well be useful to communities wanting to determine whether Ancestors rest in scientific collections outside of Australia. Also, our aspirations in respect of the development of the knowledge base are to explore network graph visualisation of the current and future entities within the OHRM.

Repatriation related research is a complex and challenging activity. It comprises various different yet over interconnected threads of meaning and knowledge-making and practical action in support of Indigenous obligations to repatriate the Ancestral dead. Indeed, Indigenous RRRN members commonly liken repatriation research to weaving in explaining how its various different elements interrelate. Members of the network have become accustomed to thinking about engaging in decolonisation in ways that weave together various differently situated perspectives on the implication of Western sciences in colonial ambitions gained by their commitment to repatriation. Repatriation highlights our shared humanity, and while it brings to light often disturbing insights into how the Western sciences served, in obvious and also in numerous subtle ways, to diminish the humanity of Australian and other Indigenous peoples, the hope of the RRRN is that initiatives such as the development of its repatriation knowledge base, will practically assist the return of Ancestral Remains to the case of their descendant communities, but in doing so will encourage dialogue and negotiation between Indigenous and non-Indigenous peoples in understanding this difficult history and acting to restore and replenish what colonialism took from our common humanity.

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PAUL LONGLEY ARTHUR & ISABEL SMITH

Digital Representations of Slavery in Australia
Navigating Heritage, Identity and Power

The digital transformation of museums and heritage has created diverse new opportunities for expressions of slavery heritage and slavery memory. Beyond traditional physical exhibition spaces, the history and legacies of slavery are being explored through apps, audio tours, immersive digital installations, interactive documentaries, video narratives, and more. COVID-19 has created further demand and appetite for the digitisation of exhibition spaces. Liverpool's International Slavery Museum is one of many museums to offer virtual tours of its galleries, allowing audiences to explore the museum space from their own homes (NATIONAL MUSEUMS LIVERPOOL 2021a).

As part of a team developing an online exhibition about the legacies of slavery in Australia, we are exploring the possibilities of these digital interpretations within the context of Australia's difficult and traumatic – though often unacknowledged – slavery pasts. Digital modes offer opportunities for new voices, narratives, and interpretive styles. However, they also intersect with colonial and racial frameworks that still underpin histories, heritage, and museology. This paper considers some of the questions and choices for curators developing a contemporary exhibition on slavery. Following a discussion of the proliferation of "slavery memory" since the latter 20th century, and the context of Australia's own slavery heritage, memory and identity that have grown out of British colonisation, the article examines a selection of exhibitions and especially digital representations of slavery. Paying particular attention to representations of historical and modern slavery in Australia, as well as global representations of transatlantic slavery, the paper explores tensions and considerations around narrative, framing, authorial voice and ownership, and the ways these interact with digital modes of storytelling.

The "Slavery Memory" Boom

Slavery pasts have often been ignored and silenced by dominant discourses of nations and communities. In her extensive work examining representations of transatlantic slavery across a vast array of spaces such as monuments and memorials, festivals, dance, oral history traditions, religious practices, and photographs, Ana Lucia Araújo argues that "in most European, African, and American societies, the traces of more than three centuries of the slave trade and slavery remained concealed in the public space" (ARAÚJO 2012, 2). She attributes much of this to the threat

that "slavery memories" would pose to the descendants of "perpetrators" and established relations of power in these societies (Araújo 2012, 3). However, Araújo identifies a shift in the second half of the 20th century toward broader public discussion and recognition of slavery memory. She cites global political and social events including the decolonising of African countries, the civil rights movement and popularisation of "slave narratives" in the US, and intensifying reflections on the past in Europe following the Second World War and the atrocities of the Holocaust (Araújo 2012, 2–4). In his work on the impacts of the First World War, prominent historian Jay Winter asserted that much of the world was going through a "memory boom" (Winter 2001). At the same time, nations were cultivating public sites of slavery memory. West African countries began initiatives to preserve slave-trade castles and fortresses in the 1960s, and from the 1970s monuments to those who resisted and fought slavery appeared in Africa and the Caribbean (Araújo 2012, 9). In 1994 the United Nations Educational, Scientific and Cultural Organization (UNESCO) launched "The Slave Route Project: Resistance, Liberty, Heritage", aimed at better understanding the ongoing global consequences of slavery and outlining guides for sites of slavery memory such as memorials (UNESCO 2020). In the 1990s and 2000s, exhibitions on slavery proliferated across Europe, the Americas, and the Caribbean, including the International Slavery Museum in Liverpool (Araújo 2012).

Today, many communities are looking back on slavery pasts with increasingly critical lenses. With the rise of the Black Lives Matter movement, dominant discourses and monuments favouring slave owners and colonists have been interrogated and literally dismantled (Stiem 2018). A growing number of nations are examining their own involvement and responsibility in transatlantic slavery, no longer framed within the plantation context of the United States but extended across the many axes of global trade routes and beneficiaries.

In academia there is particular interest in questions around legacies and reparation. In a recent article for *The Conversation*, Michael McEachrane asked when European nations would recognise and address the structural legacies of slavery, focusing on the case study of Sweden and its economic benefits and racial frameworks inherited from colonialism (McEachrane 2021). For just over ten years, the Centre for the Study of the Legacies of British Slavery at University College London (UCL) has been exploring the foundations and legacies of slavery in contemporary British culture through the lives of British slavers and, more recently, enslaved people in the Caribbean. The centre's chair, Catherine Hall, is particularly interested in the potential for "reparatory history", not only through addressing the trauma and loss for the enslaved and their descendants, but by exposing historical narratives on empire and race, and frameworks of racial thinking and racial logics that construct "otherness", that are still defining British cultures and racisms today (Hall 2018).

Australia's Slavery Heritage

In Australia, various forms of slavery have been operating since British colonisation in 1788. Many of its British colonies were built and established through convict labour, and within a generation British Australians established slavery practices across several major industries. From the late 1800s, Aboriginal men, women, and children worked on sheep and cattle stations as pastoral and domestic workers, where they were given rations or little to no pay. Many were mistreated, physically and sexually abused, and forced to work under the threat of violence (Anthony/Gray 2020). Aboriginal people were also kidnapped to work as "trackers" or "guides" on colonial expeditions. Shino Konishi gives the example of the expeditions of David Wynford Carnegie in the 1890s, in which Carnegie captured 14 men and women and used punitive measures to have them lead him to water (Konishi 2019). As Konishi and others have outlined, after being established as a "free" colony without convict labour, colonists soon discovered that Western Australia's Swan River Colony required cheap or free labour, and Aboriginal workers became integral (Konishi 2019, 30). Nyikina Mangala Aboriginal Elder John Darraga Watson, imagining the experiences of his great-grandfather's generation in the Kimberley region of Western Australia (WA), reflects,

> When I come to this place, I think about how these wild kartiya [white people] treated our people, tried to make slaves out of them, steal our women from our husbands, sometimes kill the man to get her. They were really rough old kartiya, make life really bad for our people in those early days. Took the land off those old people and made slaves out of them (Watson 2012, 67).

The 1946–1949 Pilbara strike in WA and 1966 Wave Hill walk-off in the Northern Territory were key moments led and organised by Aboriginal workers in which the conditions on stations were challenged. Victoria Haskins's and Anne Scrimgeour's examination of the Pilbara strike highlights the role and impact of female Aboriginal domestic workers, whose actions have often been overlooked in favour of male pastoral workers (Haskins/Scrimgeour 2015).

Slavery was also commonplace in Australia's pearling and sugar industries. In his extensive archival research into the history of the Kimberley, Chris Owen draws on police and colonial administrative records to detail the violence of WA's policing and criminal justice system, and slavery practices in the pastoral and pearling industries (Owen 2016). Labouring on the pearling luggers in Australia's northwest, many Indigenous people as well as people from Southeast Asia were captured and forced into the brutal and often lethal work of pearl diving. Divers were at the risk of the bends and shark attacks, and Indigenous workers could be stranded on islands between seasons, preventing them from returning to their homelands (Konishi 2019, 31). Australian South Sea Islander Emelda Davis details the practice

of "blackbirding" in Queensland – also commonplace in the pearling industry – in which people from the South Sea Islands were kidnapped from their homelands to work under terrible conditions in the sugar cane fields (Davis 2017). Davis's grandfather Moses Topay Enares was coerced onto a ship and taken from the beach off the island of Tanna, Vanuatu, to Queensland when he was 12 years old. Davis explains, "We identify as Sugar Slaves" and rejects the term "indentured labour", which she contends is "a weak word that does not express the real truth of the physical and cultural theft of human beings". Our paper accordingly refers simply to "slavery".

Slave labour was not limited to adults. Shirleene Rose Robinson has documented the thousands of Aboriginal children forced to work in Queensland from 1842 to 1945, in particular girls in domestic work and boys in pastoral work on stations, as well as in other dangerous industries, including pearling. Robinson argues that "the youthfulness of these workers made them particularly susceptible to exploitation" (Robinson 2003). Penelope Hetherington has outlined the exploitation of both Aboriginal and European child labour in Western Australia during the first two decades after colonisation (Hetherington 2002).

While many Aboriginal people, migrants, people of colour, and other minorities have experienced the realities of slavery for generations, Australia's slavery heritage has been receiving wider attention only recently. Davis's article is one example of a growing recognition in online research and journalism. *The Conversation* has run several feature series into the Black Lives Matter movement, the process of decolonising, and recently the legacies of slavery in Australia (to which our research team has contributed) (Watego 2017; Auerbach/Trisos/Katti 2021; Lydon/Laidlaw 2021). The issue of Aboriginal workers' stolen wages has gained increasing public exposure since the early 2000s in Queensland and New South Wales. In Western Australia, a class action was launched against the state government to recoup and compensate wages (positively, this moved into mediation in mid-2021) (Prendergast/Hudson/Varischetti 2020).

However, slavery is still largely excluded from many Australian narratives and identities. Amid the Black Lives Matter protests, Prime Minister Scott Morrison stated in a radio interview, "It was a pretty brutal place, but there was no slavery in Australia" (Morrison 2020). Morrison's comments, though hurtful and inaccurate, prompted widespread discussion about the country's slavery heritage (Gay 2020). However, they also speak to the erasure of slavery in many white expressions of Australian history and identity. Slavery is often framed as something that happens in another place, another country. This distancing can operate through geographical, racial, and visual framing such as the common associations of slavery with images of people of colour in the majority world.[1] Ironically, this is prevalent in campaigns against modern slavery. Groups such as Walk Free, though more

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1 Shahidul Alam (2008, 89) argues for the use of "the majority world" rather than terms such as "Third World" or "Developing World", as this "challenges the West's rhetoric of

recently emphasising that modern slavery occurs in Australia, overwhelmingly display images of people of colour in other nations. They also rarely draw connections between modern slavery in Australia and the slave labour that laid the country's colonial foundations (Walk Free (s.d.)). Distancing also operates through temporal framing by historical accounts that locate slavery as something deep in history, without demonstrating its ongoing legacies ("the past is a foreign country: they do things differently there") (Hartley 1953, 1). As explored here, social history exhibitions about slavery can inadvertently practise this temporal distancing.

Slavery memory in Australia is further complicated by disparate and unconsolidated strands of study and thought. For many researchers, social policy-makers, and cultural commentators, the definition of "slavery" is not agreed upon, sitting among a host of other terms including indentured, coerced, forced, and bonded labour. Enslaved people and their descendants may also be reluctant to use the term, possibly due to the institutionalisation and normalisation of slave labour practices, social pressures, fear, or as Araújo points to, stigma (Araújo 2012, 3). Despite a growing number of excellent investigations into slavery practices, no field appears to be dedicated to Aboriginal slavery studies or Australian slavery history. In museums few major exhibitions have addressed the country's slavery heritage, though there have been a handful of investigations, particularly into the Queensland sugar industry. There have also been some exhibits on modern slavery, but these representations do not tend to make explicit connections to Australia's slavery past.

Background to the Exhibition

This paper refers to an Australian Research Council-funded project[2] and planned exhibition that follow on from extensive work conducted by UCL's Centre for the Study of the Legacies of British Slavery, which has its roots in the Legacies of British Slave-ownership (LBS) project that began in 2009 (Legacies of British Slavery – UCL Department of History 2021). Tracing the nearly £20 million in compensation money that was paid out by the British Government to British slavers following the abolition of slavery in 1833, the LBS project locates individuals who benefited financially from the slave trade, and through biographical research reveals connections and relations of power between individuals and families to dig into Britain's complex legacies of slavery across commercial, cultural, historical, imperial, physical, and political dimensions. The current project builds on this work by focusing on the movement from the 1830s onwards of capital, people, and culture from

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democracy" and emphasises that those "whose decisions affect majority of the world's peoples – represent a tiny fraction of humankind".

2 Western Australian Legacies of British Slavery, Australian Research Council Discovery Project DP200100094). See https://australian-legacies-slavery.org/ (accessed 11/06/2024).

slave-owning Britain to Australia, and in particular newly colonised Western Australia, illustrating what lead Chief Investigator Jane Lydon terms a "larger imperial shift from slavery to settler colonisation" (Lʏᴅᴏɴ 2022). Much of the research to date is biographical, investigating the lives of individual slavers and colonists and drawing connections between them and their businesses, politics, families, and the British Empire, while also beginning to explore the complex ways these relationships and their legacies play out in Australia today. In conjunction with this work, we are developing an online exhibition that will interpret and build upon research findings to create a public-facing output of the project. Though the exhibition is tied to the research, it has scope to incorporate and present additional research and perspectives on the legacies of slavery.

Framing the Narrative

Perhaps the first and most central question for curators and exhibition developers is: What is the story? That is, what is the exhibition about; what is the overarching narrative and the patchwork of supporting narratives? How can we tell the story of slavery in Australia? What are the key narratives, themes, and messages? Should we organise stories according to time, place, or certain themes such as types of legacies (for instance, the LBS project's commercial, cultural, historical, imperial, physical, and political legacies) (Lᴇɢᴀᴄɪᴇꜱ ᴏꜰ Bʀɪᴛɪꜱʜ Sʟᴀᴠᴇʀʏ – UCL Dᴇᴘᴀʀᴛᴍᴇɴᴛ ᴏꜰ Hɪꜱᴛᴏʀʏ 2021)? Similarly, how might we frame these stories? Within what geographical and temporal contexts could we situate them? Should we locate slavery within the local context of Western Australia and its colonial foundations, broader Australia, the British Empire, or the global slave trade? Do we locate it within a historical moment in time, or bring it all the way up to the present day?[3]

In most digital (and physical) exhibitions in Australia, the story of slavery has been framed through discrete historical chapters, or under the theme of modern slavery. In 2021, Anti-Slavery Australia launched their interactive art installation *Human Mart*. This comprises a physical exhibition space ostensibly and ironically presented as a supermarket, as well as a website displaying a selection of the supermarket's "products". After clicking on "Shop now", online visitors can explore products including "Unsavoury Treatment", priced at three dollars – the story of "Solanda", who married an Australian man who became physically and verbally abusive, and trafficked Solanda and her son to Thailand (Aɴᴛɪ-Sʟᴀᴠᴇʀʏ Aᴜꜱᴛʀᴀʟɪᴀ 2021). While this exhibition explores some of the complex and diverse experiences, practices, and economies of modern slavery in Australia, it does not explicitly

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3   For another critical assessment of procedures of exhibition, see Kimberley Cᴏᴜʟᴛᴇʀ: *Mediating Ecologies*, pp. 91–101 in this volume.

investigate the colonial slavery roots or structures of racism underlying contemporary Australian cultures.

Other digital displays have concentrated on historical narratives of slavery. These have been particularly focused on local case studies such as the sugar industry in Queensland, and to a lesser extent the pearling industry in Western Australia (GAPPS 2019; NATIONAL MUSEUM OF AUSTRALIA 2018; WESTERN AUSTRALIAN MUSEUM 2015). When it comes to the legacies issue in these historical exhibits, this is generally not treated as a primary theme for exploration but rather as a concluding moment in a chronology of slave labour. The Australian National Maritime Museum's 2019 blog post by curator Stephen Gapps, "Blackbirding: Australia's Slave Trade?", ends by noting the ongoing contributions and impacts of Australia's South Sea Island community to Australian life and culture (GAPPS 2019). Gapps refers to the community's roles in the construction of significant buildings, and the eventual recognition by Queensland of Australian South Sea Islanders as a distinct community that have contributed to the economy and broader culture. Similarly, the National Museum of Australia's 2018 online content for *Island Labourers*, part of its *Defining Moments* timeline, ends with two sentences describing the recognition of South Sea Islanders "as a distinct ethnic and cultural Australian group" and acknowledgement of "discrimination and injustice experienced by the community throughout their history in Australia" (NATIONAL MUSEUM OF AUSTRALIA 2018). Looking at the pearling industry in Australia and particularly in the northwest, the Western Australian Museum's 2015 exhibition *Lustre: Pearling and Australia* (the text panels of which are now displayed online), features a section titled "Indenture" that details the terrible conditions for Southeast Asian and Indigenous people forced into pearl diving. Largely covering the historical period around the late 19th and 20th centuries, the text concludes by stating, "The pearl-culture industry continued to employ indentured workers until the 1980s" (WESTERN AUSTRALIAN MUSEUM 2015). While these representations nod to the ongoing social, political, and economic impacts of Australia's slavery history, it is not their primary concern to explore these impacts further or to make explicit connections with ongoing labour practices or racial frameworks in Australia. Rather, their focus is to explore a slave trade operating in Australia during a specific historical period.

This is relevant in a global context, where museums have increasingly been exploring connections between slavery pasts and the present day. In his analysis of abolition bicentenary commemorations in the United Kingdom in 2007, Geoffrey Cubitt noted that exhibitions were dedicating considerable attention to the impacts of the slave trade's legacies upon British social and economic development, and the question of "unfinished business" (CUBITT 2012, 168). Liverpool's International Slavery Museum (ISM) has been particularly explicit in exploring not only Britain's deep-seated and ongoing social and economic benefits that the slave trade provided, but the continuing frameworks of race underpinning contemporary culture. In 2007 the ISM named one of its spaces after Anthony Walker, the British college

student of Jamaican descent who was murdered in a racially motivated attack in 2005, drawing direct connections between Britain's slavery past and contemporary racism (BENJAMIN 2012, 190). Similarly, one of the central displays in its *Legacies* gallery is a Ku Klux Klan outfit. This not only frames slavery within a broader context in a temporal sense, but also in terms of its global geographical and sociopolitical contexts.

One digital representation in Australia that grounds the historical narrative in contemporary contexts is *Malga Gurlbarl* (*Hard Secret*), by Badimaya First Nation woman and painter Julie Dowling. Exhibited as a digital show on her website (and previously as a physical show in Germany in 2017), *Malga Gurlbarl (Hard Secret)* presents a series of portraits depicting First Nations people who, following colonisation, were enslaved and forced into work as domestic servants, pastoral workers, pearl divers and trackers. In accompanying text, Dowling explains that she created these paintings "to emphasize the global case for compensation for slavery, stolen wages, and cultural dispossession in an international arena for First Nation people here" (DOWLING 2017), expressly connecting Australia's slavery past to its ongoing structural racisms and violence. Dowling's words prompt us to reflect on how the story of Australia's slavery heritage might be framed not only to local but global communities.

Voice and Ownership

Underlying questions around narrative and framing are deeper and more urgent questions around voice and ownership. *Whose* stories are to be included and prioritised in representing the histories and legacies of slavery in Australia? Furthermore, who is narrating and curating these stories? While *Human Mart* tells the personal stories of individuals who have been enslaved, their voices mediated through curators, Dowling's work tells the story of slavery through the personal narratives of the enslaved, through her own position as a descendant. Her work reinhabits those whose lives and experiences have been omitted or silenced by institutions, archives, and white historical discourses. She explains,

> I wanted to paint these First Nation people because they are "unknown" individuals whose spirit lives on only in the drawers of museums and antique collectors. I am claiming these images and re-interpreting or translating them for my family and myself as Indigenous people today (DOWLING 2017).

Digital formats offer new opportunities for these reimaginings, giving first-person voice and agency to enslaved individuals. The 2019 interactive documentary, *People Not Property: Stories of Slavery in the Colonial North*, features high-quality short films depicting experiences of enslaved people, as well as contemporary artworks

and poetry (Historic Hudson Valley 2019). These digital interpretations offer new ways of imagining lived experiences of slavery through intimate, first-person narratives and multilayered storytelling.[4]

Our project, however, stems largely from research into those who owned and profited from slavery – the slavers rather than the enslaved. In her essay on reparatory history, Hall suggests that critical analysis of the slavers' lives is certainly valuable in helping us deconstruct the racial thinking and racial logics that underpinned the slave trade and British colonialism and that, crucially, continue to inform contemporary attitudes. Hall refers to Toni Morrison's work, *Playing in the Dark*, in which Morrison critiques influential white American authors such as Willa Cather and Ernest Hemingway. Morrison explains that she is seeking to "avert the critical gaze from the racial object to the racial subject", and exploring

> the impact of notions of racial hierarchy, racial exclusion, and racial vulnerability and availability on nonblacks who held, resisted, explored, or altered those notions. The scholarship that looks into the mind, imagination, and behavior of slaves is valuable. But equally valuable is a serious intellectual effort to see what racial ideology does to the mind, imagination, and behavior of masters.[5]

Digital technologies and methods offer new opportunities for interrogation of the workings of these "masters" and relations of power. In parallel with our research into the legacies of slavery in Australia, we have been involved in trialling mapping software by submitting biographical data on slavers and colonists for a national digital humanities infrastructure project.[6] This opens new avenues for analysing the movements of these people and mapping out slavery networks in Australia – for example, revealing frequent colonist routes between Mauritius and Western Australia. It also raises familiar problems relating to the colonial frameworks underlying maps and data. Data are not simply unearthed but created, and they represent relations of power at the times they were collected, while they've been maintained, and as they are drawn upon today; colonial maps and data often write out the "other", and contain deep prejudices and euphemisms regarding the experiences of the enslaved. We are trying to read between the lines of these data,

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4   For the employment of graphical models for the narrating and visualisation of interactions between historical persons, events, and institutions, see Aaron Pattee: *Graph Databases for the Organisation and Analysis of Digital Heritage*, pp. 123–138 and Victoria Herche: *Mediating Traumatic Memory*, pp. 139–153 in this volume; and for another immersive experience of heritage, see Romany Reagan: *Unlocking Heritage Stories*, pp. 73–89 in this volume.

5   Toni Morrison 1993 [1992], *Playing in the Dark: Whiteness and the Literary Imagination*, Cambridge, MA 1993, 11–12, as cited in Hall 2018, 11.

6   Time-Layered Culture Map of Australia. See https://www.tlcmap.org/ (accessed 11/06/2024).

identifying the silences and interrogating the prejudices to explore the racial log-ics and colonial paradigms that are still defining Australian politics, cultures, and identities today.

Even so, we are faced with the question of whether these interrogations alone suffice to inform and guide our exhibition. In 2021, the Centre for the Study of the Legacies of British Slavery announced that it was it was "moving in the direction of more focused research on the lives of enslaved people in the Caribbean", and no longer operating under its previous name, the Centre for Legacies of British *Slave-ownership*[7] (Legacies of British Slavery – UCL Department of History 2021). The logo of the centre also changed, from a historical cartoon showing a Whig politician sneaking £20 million out of John Bull's pocket, to a design created by Stephanie Channer, a Jamaican graphic designer.

As white curators and researchers on this project, and hence direct or indirect beneficiaries of slavery in Australia, looking to the lives of the enslaved raises seri-ous questions around ownership and agency. In her analysis of the development of content for the *London, Sugar and Slavery* gallery at the Museum of London, Leanne Munroe explains that

> one male curator felt as though his lived experience as a white, middle-class curator would make it inappropriate for him to discuss some issues, especially concerning the racist legacies of slavery (Munroe 2016, 126).

As Stuart Hall asks, "Who should control the power to represent?", and "Who has the authority to represent the culture of others?" (Hall 2005, 28). Who are the custodians of the stories of slavery in Australia, and who is authorised to present them? In his analysis of the UK's 1807 commemorations, Cubitt refers to interviews conducted by researcher Ross Wilson with museum staff, and explains that many curators struggled to engage "with a painful history in which others had not just a fierce emotional investment, but a claim of ownership" (Cubitt 2012, 166). This speaks not only to issues around custodianship but working with trauma.

Within the context of public and digital exhibitions, there are also uncomfort-able questions around the consumption of traumatic pasts. In *Slavery, Empathy, and Pornography*, Marcus Wood analyses British slavery heritage and discourse to argue that representations of the enslaved may aestheticise and exploit the suf-fering of others (Wood 2002). Scrutinising a vast array of primary materials rang-ing from Jane Austen and Charlotte Bronte to street publications, Wood suggests that writers and audiences may derive affective and even sexual pleasure from enslaved black bodies. These problems are particularly important to bear in mind regarding audience contributions, an increasingly popular approach in digital dis-plays. Especially through online platforms, many museums encourage audience

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7   Our emphasis.

reflections and responses to stories and images relating to slavery. The ISM, for example, produces a wide range of digital content open for discussion via its social media channels, such as exhibition previews, interviews with staff and profiles on activists, as well as historical re-creations. In one digital interactive display, *Ellen Craft's Freedom Journey*, a video shows an actor depicting Ellen Craft, an enslaved woman who escaped slavery in the US South. The ISM asks audiences to engage in creative activities such as drawing "a picture of one item that you would take with you on a long journey" and sharing these on social media using museum hashtags (National Museums Liverpool 2021b). Such interactive displays promote valuable discussion and engagement with slavery pasts and contemporary cultures and politics. However, how are they to be moderated? Are these everyone's stories to share in? Are some stories too personal or too painful to be opened up to all? Who decides which stories may invite shared reflections, and which stories may not?

New Forms of Heritage and "Community Engagement"

Some spaces are being run and moderated entirely by those who have direct stakes and claims in slavery pasts. The Descendants of Enslaved Communities at the University of Virginia was established in 2020 by the descendants of enslaved and free black people who built the university. Independent from the university, the organisation declares its "mission is researching the free and enslaved community, reclaiming the narrative, and honoring the legacies of the enslaved and free black communities and their descendants at UVA. We are committed to achieving restorative justice" (Descendants of Enslaved Communities at UVA (s.d.)). The descendants have a particularly strong digital heritage presence, sharing a great deal of their research insights and personal experiences through video narratives on YouTube and other social media, and in online journalism (Descendants of Enslaved Communities at UVA 2021).

The Slavery, Memory and Orality in Northern Ghana Archive, a digital repository created by Dr. Emmanuel Saboro from the University of Cape Coast in Ghana in collaboration with Brown University, offers another example of digital slavery heritage projects built with communities. Saboro has created and compiled materials including contemporary photographs of slave forts and significant sites such as burial grounds of enslaved people, as well as documentary films, oral history interviews, and recordings of songs and performances with present-day Bulsa and Kasena men and women of Ghana (Brown Digital Repository, Brown University Library 2021). Saboro explains that these contemporary materials help in understanding the history of enslavement, and the traumas of capture and captivity (Saboro 2017).

In Australia, "Keeping Places" have been established as alternative sites to institutional museums. These community-based spaces are created by Aboriginal

people in local areas to present, celebrate, and continue Indigenous culture and arts. Keeping Places feature artworks, repatriated artefacts, and temporary exhibitions; conduct education and research programs; and provide employment and meeting places for communities (KELLY 2001; AUSTRALIAN MUSEUM ABORIGINAL HERITAGE UNIT 2001). Similarly, arts spaces such as Mowanjum Arts Centre create community-run hubs for the promotion of artists, cultural and historical exhibitions, and the continuation of Aboriginal culture, narratives, and heritage. (MOWANJUM ARTS CENTRE (s.d.)).

Communities are also working with museums. In the Rijksmuseum's 2021 *Slavery*, a physical and online exhibition telling the story of the Netherlands' involvement in the transatlantic slave trade, all narratives about enslaved individuals are voiced by staff and community members with personal connections to these stories – for instance ancestors who worked on the same plantation, or shared bloodlines (RIJKSMUSEUM 2021). More museums are adopting this approach, in which objects and stories are interpreted through the first-person voices of black curators, artists, or communities – rather than the third-person, often objectively and authoritatively framed white curatorial voice. The roles of white curators are shifting from creators and custodians of content to facilitators and mediators of others' stories.

This process of collaboration can be complex. In *Museums, Heritage, and Indigenous Voice: Decolonising Engagement*, Bryony Onciul emphasises the need to recognise community participants' perspectives on engagement, warning of its significant risks, costs and potential disempowerment for communities if done poorly (ONCIUL 2015, 2). In Munroe's study of the *London, Sugar and Slavery* exhibition, she refers to a meeting between curators and community members to sign off on exhibition text:

> One curator described such a meeting when signing off the panel text: We didn't quite understand why the discussion wasn't flowing – you know, the discussion was just [gestures with hands and face as if to say 'tense']. And finally one of the consultative group turned round to say 'Look! We don't like the language! When we read this, what we're reading is the voice of the curator. It's not the voice of the African Caribbean community' (MUNROE 2016, 127).

The text was subsequently completely rewritten two weeks before the deadline. Recently our project team has begun communicating with representatives and contacts of Indigenous communities. Even with good intentions, engagement practices can continue to omit and silence community perspectives, through ongoing racial and colonial frameworks that are invisible to white and privileged practitioners.

Whose Heritage?

Two hundred kilometres north of Broome, Western Australia, pearler Terry Hunter grew up and lives at Cygnet Bay pearl farm. Hunter is a Bardi and Jawi man from the Dampier Peninsula. He is also the great-great-great-grandson of Harry Hunter, one of the most brutal slavers and master pearlers of the region (Collins 2018). When asked in a radio interview about this latter part of his heritage, Hunter reflected that it was "a brutal part of our history, but it is Australia's history. [...] It made me who I am today" (Hunter/Collins 2020). Hunter's words and lived experience speak to the complexity of Australia's slavery histories, legacies and identities.

Hunter might also be understood as a living symbol of what Catherine Hall calls deeply "entangled histories". Hall suggests that working through the past and the legacies of slavery has "to do with trying to understand the ways in which *we are all implicated* in this history, which is a shared history" (Hall 2013). Reparatory history is by its nature complex and filled with pain, but vitally important. She also contends, "Reparatory history must be about more than identifying wrongdoers and seeking redress: it begins with the descendants, with trauma and loss, but the hope is that the work of mourning can be linked to hopes for reconciliation, the repair of relations damaged by historical injustice" (Hall 2018, 12).

Australia's slavery heritage is a complex and charged space, filled with past and ongoing traumas, racisms, and injustices. Working out how to represent our slavery pasts and legacies is complicated by questions over who the custodians of this heritage are, and the deep damages to individuals, communities, and relationships caused by colonisation.

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FRIEDERIKE SCHMIDT

Retracing the Mobile Object

Digitising Biographies of Aboriginal Material Culture

This essay aims to give an overview of the potential benefits of applying mixed-method design to examinations of the processes by which items of Aboriginal material culture were acquired in Australia during the nineteenth and twentieth centuries. When examining the history of European museum collections of Indigenous heritage material, researchers have tended to ask both general and specific questions. Often, they have sought to identify quantitative patterns, asking general questions like *What caused the appropriation of Indigenous Australian artefacts?* Answering quantitative questions requires the use of, ideally, open-access standardised digital data which enables the possibility of reanalysing and reassessing previous results. However, researchers might also want to answer more specific questions, such as *What were the causes of the appropriation of the Dja Dja Wurrung bark etching acquired by John Hunter Kerr in 1854?* This would obviously require the employment of a qualitative approach (Hicks 2010, 26; Willis 2003, 44; Liebermann 2005, 436). The core of the digitisation idea put forward in this essay is the translation of written information from museum databases into numbers. This is achieved through numerical coding of museum database contents. This numerical coding is a necessary step in the generation of a dataset for subsequent statistical analysis.

Both qualitative and quantitative methods have their advantages, which can be realised by applying them jointly. Quantitative investigations can provide insights that allow us to assess competing explanations and identify which avenues of qualitative investigation appear most likely to generate new knowledge of the phenomena that are the subject of investigation. Case studies, for example, can improve the appropriateness of measurement procedures and potential statistically based modelling. In short, combining the two methodological approaches has the potential to generate analytic outcomes that are greater than the sum of their respective modes of inquiry (Liebermann 2005, 436).

This essay starts with a brief overview of the methodological principles of mixed-method design. It then discusses the benefits of using such combined procedures. Subsequently, it identifies possible ways of applying mixed-method design, and finally it outlines a current doctoral project as an example of the implementation of a mixed-method analysis of the appropriation of Aboriginal material heritage.

Mixed-method design

In recent social science and humanities research, it has become more common to combine qualitative and quantitative approaches in causal analysis, with beneficial outcomes. This is largely due to the increasingly interdisciplinary nature of research in the social sciences and humanities, which brings together fields with diverse methodological backgrounds to address complex research problems (Creswell/ Creswell 2017, 203). These combinations of qualitative and quantitative research methods are now commonly referred to as mixed-method research (Creswell/ Creswell 2018, 213–214; Kelle 2007, 282–283).

Generally, four factors need to be taken into consideration when employing a mixed-method approach: i) timing, ii) weighting, iii) mixing and iv) theorisation. Firstly, there is the question of when data should be collected. A researcher can choose between sequential and non-sequential design. In non-sequential design, qualitative and quantitative data collection occur concurrently, whereas in sequential design data collection takes place in several phases, starting with either quantitative or qualitative data (when the data for either qualitative or quantitative analysis is collected depends on the initial intention of the researcher, although it is not always possible to collect data over an extended period of time). Secondly, there is the question of what weight to give to qualitative and quantitative approaches. Generally speaking, within a non-sequential design neither method is given priority and both are equally weighted. In sequential design, however, the method selected for the first phase of data collection is prioritised, and thus the research question determines which approach is given priority. A third factor to consider is the mixing of methods itself: when does it take place, and how does it occur? The first question is usually rather simple to answer: mixing can occur during data collection, analysis or interpretation, or all three stages. The second, however, is more complex, as Creswell explains:

> Mixing means either that the qualitative and quantitative data are actually merged on one end of the continuum, kept separate on the other end of the continuum, or combined in some way between these two extremes (Creswell 2009, 207–208).

In other words, data gathered by these two different methodological approaches needs to be either i) connected, ii) integrated, or iii) embedded. In connected design, qualitative and quantitative data are gathered separately, then conjointly analysed in the final phase of the research. In integrated design, all data (qualitative and quantitative) are collected concurrently and then merged. Embedded design primarily collects one type of data, and uses the other type to provide complementary information.

There is also a further matter to consider: the theoretical framework informing the study. This will obviously determine the types of questions asked, what data will

be collected, how it will be collected, and what the study can be said to have found. And of course theoretical considerations will likely determine degree to which the quantitative and qualitative methods employed are mixed, and the timing of that mixing (Kelle 2007, 285–289; Creswell 2009, 208).

Why apply a mixed-method design?

When researching the appropriation history of the Indigenous material heritage of Australia, two problems can be identified: Firstly, research has been based largely on qualitative methods, even as it made various claims respecting quantitative patterns in the classification of appropriation periods. Secondly, there is the question whether case studies can support quantitative claims anyway? Turning to consider the first problem, we find that to date, there have been different interpretations of the appropriation history of the Indigenous material heritage of Australia. Recent publications argued that the history of appropriation can be somehow divided into phases (Schmidt 2023b).

> […] 'circles of accumulation' had barely formed around Aboriginal objects when they first came to notice in Europe during the first years of the nineteenth century. Those circles became more evident from the 1840s, when it is possible to detect discernible links between collectors and their cabinets, dealers, entrepreneurs and museum ethnographers, in a series of networks far removed from the original sites of acquisition (Jones 2018, 127).

Although Jones uses the term 'phase' in his essay, he does not seem to use it to mean clearly successive phases. The phases he identifies overlap with each other and remain vague. According to Jones, the first phase – from the 1780s to the 1840s – is characterised by trade relations and exchange. Indigenous Australian artefacts appropriated in this phase were rarely placed on public display outside of private collections, and were seen and discussed only by a few interested people, probably in disorganised or eccentric displays based on individual preference (Jones 2018, 129–131). The second phase, from the 1840s to the 1940s, is marked by a growing awareness of the ethnographic value of the objects. This awareness extended to a proliferating ethnographic literature that acknowledged typologies of artefacts and regional styles. Jones suggests that these two early phases were followed by two further, consecutive phases that continue to the present day. The third phase, from the 1890s onwards, is characterised by the rise of the first professional field workers in Australia. Their influence on appropriation practices is detectable in the type and composition of museum collections from the 1890s onwards. There is also a fourth phase in Jones's model of circles of accumulation, which is characterised by shifts in the meaning and significance of artefacts within both the museum

world and the Western world as a whole. The exact dating of this phase remains open. (Jones 2018, 127–129).

Another phase model can be found, which claims similar phases of appropriation practices in Australia. It suggests five periods of appropriation. The first period stretches from the very first Western contact with Indigenous peoples to c. 1880, and is called the period of 'unsystematic collecting'. The second lasted from c. 1880 to c. 1920 and took place largely under the influence of social evolutionary theory. Subsequently, the appropriation activities within the third period, from c. 1920 to c. 1940, could be identified as appropriating under the influence of the 'before it's too late' mindset. The fourth period, from c. 1940 to c. 1980, was the period of research adjunct appropriation. And the fifth period, from c. 1980 until today, is characterised by the dominance of secondary appropriation (Peterson/Allen/Hamby 2008, 8–13). Both phase models are based on qualitative studies, undertake vague quantifications and claim to have identified structural patterns without applying any quantitative methodological approach.

A second problem in characterising the history of appropriation practices of Indigenous Australian material heritage items arises when using specific case studies. The prevailing tendency in publications on Indigenous Australian cultural material has been to focus on the significance of unique objects, the activities and ambitions of individual so-called 'collectors' or institutions, and their roles in a broader historic context. There has thus generally been a latent and unsystematic use of quantification. Terms like 'many', 'few' or 'some', for instance, are used without reflection on whether they might fit the research or not, as they are non-specific and leave much room for interpretation. When it comes to recent comparative research, one can also find phrasing that turns out to be questionable (Schmidt 2023). Examples of such phrasing include: "While most Aurukun sculpture is overtly naturalistic" (Caruana 2012, 185), "[p]erhaps 200 prominent collectors may be identified as responsible for approximately 90 % of these objects" (Jones 2019, 126), or "among about twenty European museums" (Jones 2019, 126).

Neither the first nor the second phase model discusses why the case studies underpinning the respective models were chosen. The first model claims to be based on "some 10,000 Australian ethnographic objects" (Jones 2018, 126), but we are left wondering whether it employed any standardised modes of data collection and analysis in doing so. Likewise, it is unclear what, if any, quantitative data (gathered by standardised data collection) informs the work of authors who have discussed the history of Australian ethnographic collections in material culture in more general terms.

Wherever possible, claims regarding quantitative patterning in cultural history need to be grounded in an appropriate quantitative methodology, which involves standardised data collection and analytical procedures (Deutsche Forschungsgesellschaft, 2022). Additionally, to maximise the intellectual value of the work involved, the data collected should be made freely available in reusable forms, and the

outcomes of analysing it must be presented via publication. Appropriate quantitative investigation also has the advantage of reducing the risk of case studies being arbitrarily selected. It may be, for example, that quantitative data will suggest that certain ordinary and other anomalous case studies (i.e. outliers) may be sources of valuable insights into the phenomenon under investigation (LIEBERMANN 2005, 444).

The challenge in conceptually mapping the history of appropriation practices of Indigenous Australian material heritage, then, is to move beyond identifying what appear to be quantitative patterns based on selective case studies to applying an appropriate mixed-method design along the lines discussed in the remainder of this chapter.

How to apply a mixed-method design?

With the development of quantitative and qualitative methods in social sciences and humanities, and the increase in their perceived legitimacy, mixed-method designs have gained popularity. But while mixed-method research is now accepted as a legitimate methodological approach in the social sciences, in humanities mixed-method designs are rather rare (CRESWELL 2009, 203). In history, for example, digitisation in its various manifestations is advancing, opening up new quantitative research paths. For example, Lev Manovich and his colleagues at the Cultural Analytic Lab have offered for a quantitative analysis of historical changes in visual art for the first time (YAZDANI/CHOW/MANOVICH 2017), and articles from the Cultural Analytic Lab that have implemented a digital approach on topics such as art markets, society and visual culture have been very well received and have broadened art history perspectives. In other words, these publications have shown that a research area once dominated by the qualitative can benefit from the insights gained by quantitative analysis. As research is continuously evolving and developing both theoretically and methodologically, utilising the strengths of both qualitative and quantitative methods is another step forward in evolving and developing research methodology (CRESWELL 2009, 203).

Quantitative analysis is defined as a mode of analysis in which the primary causal conclusions are derived from statistical models that ultimately lead to estimates of the empirical validity of a theoretical model. In turn, qualitative analysis is defined as an analysis mode in which causal conclusions about the primary unit under investigation are derived from qualitative comparisons between cases and/or the tracing of causal chains *within* given cases over time. In such analyses, the relationship between theory and fact is largely captured in narrative form. Combining qualitative and quantitative approaches allows researchers to also combine their advantages, and aims to improve the quality of conceptualisation and measurement, the analysis of rival explanations, and general confidence in the central results of a study (LIEBERMAN 2005, 436).

The promise of mixed-method research designs is that the quantitative and qualitative analyses can inform each other to the extent that the analytical benefit will be greater than the sum of its parts. Not only is the information obtained complementary, each step of the analysis determines the direction in which the next step will be taken. Most importantly, the quantitative analysis provides insights into competing explanations and helps motivate case selection strategies for the qualitative analysis, while the qualitative analysis in turn helps improve the quality of the measurement instruments and model specifications used in the quantitative analysis (LIEBERMAN 2005, 436).

In order to understand the flows and entanglements of local material heritage within global networks, digital data collection is crucial. In his online article *Forschungsdaten in der (digitalen) Geschichtswissenschaft. Warum sie wichtig sind und wir gemeinsame Standards brauchen* ("Research data in (digital) history science, why they are important and why we need common standards", trans. F. Schmidt), Torsten Hiltmann, describes the path from digitised sources to digital methods and discusses problems in defining research data in historical science.[1] He discusses 'analogue' databases, which make their data accessible only via web interfaces and not as data, meaning that in the absence of bulk downloads and application programming interfaces (API) to make them usable for further research, time-intensive workarounds such as web scraping are required. Most museums and galleries' databases exist in exactly this format. It is necessary to make the data contained in many of these databases accessible via detours and thus to make the data storage sustainable. An example for this form of data gathering is the European Museum Collections of Aboriginal Material (EMCAM) dataset which aggregates information on 4,862 indigenous cultural objects from Australia from the 13 largest national collections of EU Member States for subsequent statistical analysis and thus allows for multiple research questions to be examined (SCHMIDT 2023a). As Hiltmann puts it: „Eine Veröffentlichung der […] zugrundeliegenden Daten als wiederverwendbare Forschungsdaten (d. h. als CSV, XML, JSON oder RDF) hätte hier vieles vereinfacht" ("A publication of the […] underlying data as reusable research data (i.e. as CSV, XML, JSON or RDF) would have simplified many things here" trans. F. Schmidt). Finally, sustainable data management leads to more transparency and when combined with the publication of replication files leads to better communication within review boards (HILTMAN 2018).

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1   For the urgency of skills in the treatment of digital data, see Jana KECK: *How Meaningful are Digital Humanities Projects When it Comes to Training Early-Career Scholars in Digital Literacy?*, pp. 175–185 in this volume.

Towards mixed-method analysis of the appropriation of Indigenous Australian material heritage

One application of mixed-method design to the analysis of Indigenous Australian material heritage can be found in SCHMIDT (2023b). By applying a sequential mixed-method design, this PhD project allowed for prioritisation of the quantitative analysis. Thus it allowed the verification of quantitative statements such as claims respecting quantitative patterns in the classification of the appropriation periods for Indigenous objects of Australia. The results could then be evaluated in the light of what we know about prominent individuals involved in the process. The research question *How and why did Indigenous Australian objects end up in European collections?* asked both a) Which quantitative patterns within the history of appropriation practices of Indigenous objects can be identified? and b) What were the individual circumstances under which the Dja Dja Wurrung bark etching appropriated by John Hunter Kerr in 1854 found its way into the collection of the British Museum in London? A sequential mixed-method analysis thus helped the researcher ask questions directed at different levels of aggregation with varying level of detail when analysing their data (SCHMIDT 2023b).

When conducting a mixed-method design that is dependent on historical data, there are certain challenges. For example, when collecting historical cultural data it can be difficult to collect a sample that fulfils the criteria of randomness. When examining historical sources it is therefore relatively unusual to have a classic sampling frame available. It can also be challenging to ensure that each characteristic unit in a statistical core set has a non-zero probability of being selected, and knowing the exact probability of inclusion for each sampling unit is even more difficult. Choosing an appropriate method of data collection is thus key (OCHOA 2017). When examining the history of appropriation practices, it is evident that tradition, contemporary politics and individual interests, as well as economic, business, and social structures, all had influence both on the transmission of knowledge and on written and material contemporary evidence. For example, calls for tenders from public and private institutions such as museums led to the appropriation of certain groups of objects that were in high demand, and Kerr was responding to such a call for tenders when he accumulated Indigenous material for exhibitions in Bendigo, Melbourne, and later Paris in 1854 and 1855. As the selection of units for the sample depends on the research question and thus cannot always be random, a meaningful conditional non-randomised sample is the choice (OCHOA 2017; WILLIS 2003, 44).

Available online databases of ethnographic museum collections in Europe build the basis for the standardised data gathering process. In order to create a dataset for statistical analysis, the information contained in the museums' databases was numerically coded as part of a standardised data collection process. This means that information such as the categories 'object type' (for example 'bark etching' or 'boomerang') and 'material' (for example 'wood' and/or 'bark') was coded

numerically (e.g. 'boomerang' = 4 and 'wood' = 0071) and transferred into a dataset (e.g., an Excel spreadsheet). Likewise, information about the exhibition of the object (i.e. the places, times and types of exhibition) could be coded and included in the dataset. Further Information about the involved persons and institutions was gathered through additional archive and literature research. Thus, the content of the created EMCAM Dataset goes far beyond the contents of the available museum databases. (SCHMIDT 2023b).

The prerequisite for performing a mixed-method analysis is the availability of a quantitative dataset with a sufficient number of observations for statistical analysis. For example, the British Museum in London and the Ethnographic Museum in Stockholm have digital databases that make information about their collection objects available online. Likewise, the collections of a significant number of the other major European museums are also available via the institutions' digital databases.

This publicly accessible information, appropriately processed, can be used for statistical evaluation. Moreover, the dataset created, when published in a sustainable and freely accessible way, can provide the basis for qualitative case selection and theory building. To ensure standardised data collection, however, the sample must be clearly defined. This project's investigation of European museum collections of Indigenous Australian material heritage focuses on the member states of the European Union. The largest state collection of ethnographic objects in each member state was taken into account and the information available in the relevant online database was used for data collection. In this way, the same basic conditions were created for each characteristic (SCHMIDT 2023b).

The project's methodological approach is inspired on a well-established and legitimate sequential mixed-method design (LIEBERMAN 2005, 435–436). A preliminary quantitative analysis can provide information that both guides the execution of the subsequent qualitative analysis and complements its results. The quantitative analysis provides researchers with the ability to make clear baseline estimates of the strength of the relationship between variables of interest, including estimates of how confident we can be in the face of a range of assumptions about probabilities and frequencies relating to these relationships. The quantitative analysis also provides important information about how to proceed to the next stage of analysis, which is formed by the comparative study of selected cases (LIEBERMAN 2005, 439). For example, the examination of written sources such as letters, diaries, official government reports, exhibition catalogues, and contemporary publications, as well as of the objects themselves and interviews with descendants, are crucial sources for an ensuing qualitative analysis. The two parts of the mixed-method design are thus combined in order to inform each other, to the point that the analytic outcome becomes greater than the sum of its parts. Thus the mixed-method design leads to the identification of quantitative patterns within the history of the appropriation of Indigenous Australian material, as well as the identification of individual circumstances which caused the appropriation of an object (SCHMIDT 2023b).

The cases for subsequent qualitative analysis were selected based on the results of the quantitative analysis. The selected appropriators represent the two main dynamics in the history of appropriation of indigenous cultural material, the (proto-)scientific and non-scientific practicies. The previously mentioned Dja Dja Wurrung bark etching was appropriated by the farmer and settler John Hunter Kerr. In the course of an ongoing qualitative analysis, the project will explain which individual circumstances led to its appropriation. In addition, it will clarify why other Indigenous objects such as the baskets and weapons accumulated by Daisy May Bates have been appropriated a (proto-)scientific manner. In addition to aspects concerning the appropriating individual such as their motivation, contemporary political climate and personal networks, the characteristics attached to the object are also decisive (Schmidt 2023b).

Conclusion

This essay has given an overview of the potential benefits of implementing mixed-method design in order to examine the appropriation practices for Indigenous Australian material heritage during the nineteenth and twentieth centuries.

Regarding research into history of appropriation in Australia during the nineteenth and twentieth centuries, two main factors that call for the application of a mixed-method design have been identified: i) the urge to generalise research findings and put them into larger context, and ii) the need to avoid arbitrary case selection. In order to prevent the appearance of arbitrary case selection, one can combine standardised data collection for quantitative analysis with a subsequent qualitative case study. The aim of a qualitative research design might be to assess the value of preferred theories, to lead us to new propositions, or to gain better insights into cases deemed to be of intrinsic interest. Using a mixed-method design provides us with a strong foundation for choosing between these competing goals, and also with the inferential logic associated with case selection strategies (Lieberman 2005, 444). Although there are different ways to combine quantitative analysis with qualitative analysis, applying a sequential mixed-method design allows for the prioritisation of quantitative analysis and therefore the ability to verify quantitative statements (Lieberman 2005, 435–436; Creswell 2009, 206–207). Translating the content of museum databases into numbers is a crucial step in data preparation which enables the creation of a dataset for credible quantitative analysis, and digitisation enables not only the preparation of this data, but also statistical analysis using computer software as has been done for the EMCAM dataset (Schmidt 2023b).

Shifting our focus to the methodological approach reminds us of the importance of implementing not only appropriate methods, but also sustainable data management, and thus of the importance of making data freely available in a reusable

form. Unrestricted access to datasets and replication files provides more transparency within the research field, and also leads to better communication both within the review board and beyond. Furthermore, a comprehensive form of digital accessibility enables external verification of the results, and ultimately enhances their credibility.

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ROMANY REAGAN

Unlocking Heritage Stories

How the Use of Audio Walks as Creative Public Engagement
Expands Access to Site-Based Heritage to a Diverse and
Globalised Audience

Introduction

The aim of this chapter is to present an analysis of both the process and the out-
puts of crafting digital moments of interaction as part of a public engagement plan
within heritage sites. For my case study, I use the four audio walks I created as the
project element of my practice-based PhD thesis, 'Abney Rambles: Performing Her-
itage as an Audio Walking Practice in Abney Park Cemetery', alongside the subse-
quent audio walks I have created since the completion of that project.[1]

Abney Park cemetery is located in the north London community of Stoke New-
ington in the United Kingdom. I created my Abney Rambles series of audio walks
with the aim of facilitating community engagement with Abney Park cemetery by
offering audio walking journeys presented as four different perspectives on the
space. My audio walking practice is presented as one part of the Abney Park Trust's
various community engagement initiatives. Abney Park is not a typical cemetery –
it is both a site housing grief monuments as well as a community space. The park
exists between and within these two definitions. Members of the public who are
not familiar with Abney Park, the complex heritage that it holds, or the year-round
events calendar organised by the Abney Park Trust, might not think of the cemetery
as their local nature reserve and heritage site. I created my audio walks with the
aim to widen public perception of this important community space.

I will begin this chapter with background context on my site of research and
my methodology for researching and creating these audio walks. After completion
of my PhD project, I continued to make four more audio walks in other locations
around London: for the LIFT Theatre Festival, the Museum of the Home,[2] and the
Bloomsbury Festival. These additional four audio walks, alongside the original
four, are included in my demographic data presented towards the end of this chap-
ter. I conclude with my analysis of this case study, reviewing the successes and the

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1   My research methodology is grounded in psychogeography with a focus on a construc-
    tivist view of heritage spaces and stories. Due to the subjective nature of both my re-
    search and audio practice, I will often be presenting a first-person perspective and using
    'I' narration throughout this chapter.
2   'Meditation on Mourning' was recorded in 2018 before the Geffrye Museum rebranded
    as the Museum of the Home. For clarity, I reference its current name.

shortcomings of this kind of audience interaction, in the end hopefully offering a helpful resource for practitioners wishing to engage in digital heritage interactions.

Why Digital?

The short answer to the question "why digital?" is greater audience reach. In addition to creating digital audio experiences, I also lead live-guided tours. When I am leading a tour through a cemetery, I can comfortably lead up to 25 visitors. When leading an urban tour, this comfortability cap drops to 15 visitors. The ability to lead more visitors through a cemetery space is much the same as it would be for any controlled heritage space. Whether a cemetery or a stately home, the environment is fairly predictable, controlled by site management, and usually with few distractions. By contrast, an urban tour has motor traffic and public roads to contend with, as well as other pedestrians and noise distractions, all of which contribute to a reduced ability to convey information to visitors who are more than a few feet away from you. With audio, the potential reach has no set cap of participants.

The other benefits with the audio walk format are that digital visitors can take the walk on their own schedule, have the information right in their ear, and can rewind or pause when necessary. In addition to this, once a walk is recorded, it can continue to offer public engagement opportunities long after the practitioner has moved on to other projects. As an investment, after the initial outlay of time and resources, the audio walk can continue to offer engagement exponentially with no further investment needed. This is in contrast to in-person talks and tours, which require time and resources with every engagement event.

The motivation for my use of technology with my practice was not one of driving distancing intermediaries between visitors and the space of the cemetery, but rather the opposite – an effort towards increasing the numbers of potential visitors to the Abney Park, and increased personal engagement with the space when they get there. Phil Smith has found that many contemporary psychogeographers have been doing their work online, rarely (or sometimes never) visiting the site themselves and working on the ground and within the space for their craft. Whereas, as he notes, the 'romantic occultists', with their love of history, have kept 'true' to the psychogeographic ethos of needing the 'geo' with the 'psycho' (SMITH 2015). This is what I have done with Abney Rambles. Geoff Nicholson laments the distancing that some contemporary technologies place between the walkers and taking a walk (NICHOLSON 2008). This form of mediation appears to take the place of actual interactions in space, as opposed to sitting alongside these interactions. I use technology as a tool with my walking practice, however everything available online is to further the experience of walking within the space of Abney Park cemetery.

One drawback to my method of practice lies within the disembodied audio format, which does not allow for a give and take between myself and visitors. If they

have questions, I am not there to answer them or engage in debate with contrary viewpoints on my readings of the space. In this way, live performance interactions with heritage sites can offer a platform for dialogue and more fruitful relationship building than through an audio format. However, the way in which an audio format succeeds where a live performance cannot is the personal, intimate nature of the experience that is designed to be taken alone. As my audio walks are offered as a solo practice to visitors, they are not at the discretion of a facilitator's calendar and timetable, and the psychological barrier to entry is low, as there is no fear of embarrassment from interactive performers, which could make some visitors shy away from live heritage performances. The audio walks are free to download, so anyone with access to a device that can play audio can take them, so there is no entrance fee. All of these aspects of an independent audio walking practice, I hope, create a comfortable and inclusive method of interacting with heritage space for people who might otherwise feel heritage events are not for them.

Site of Research: Abney Park as a Community Space

Abney Park is a 32-acre nature reserve located in the north London community of Stoke Newington. Founded in 1840, it is one of London's 'Magnificent Seven' Victorian garden cemeteries. As the twentieth-century progressed, Abney Park fell into increasing disrepair, culminating in almost complete ruin due to rampant vandalism in the 1970s. Abney Park has since been sensitively restored back to a stabilised heritage site. The Abney Park Trust celebrates Abney Park's important history, while opening up the park to contemporary uses. As the grounds on which Abney Park cemetery now stand, as well as the surrounding community of Stoke Newington, were firmly established as Dissenter[3], Abney Park cemetery was originally created as non-conformist and non-denominational in keeping with the community whom it would serve. Abney Park is the only cemetery in the Magnificent Seven family of Victorian garden cemeteries to be unconsecrated and non-denominational. The centre chapel in Abney Park is Grade II listed as the oldest non-denominational chapel in Europe. There are no demarcated regions within the cemetery for different faiths, therefore the interred are buried with no separation. While the vast majority of graves in Abney Park are those of non-Anglican Protestants, there are also Jewish, Catholic, Unitarian, and atheist burials all housed within the cemetery. Due to the Dissenter history of the original grounds, the surrounding community, and Abney Park cemetery itself, the burials within Abney Park reflect this diversity and inclusivity, and the Abney Park Trust's community outreach efforts further this inclusive feel and ambition. Taking into account Abney

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3   'Dissenters' are people whose religious beliefs or practises do not conform to the Church of England.

Park's Dissenter ethos, I crafted my audio walks with a secular focus and avoidance of religious explorations.

Abney Park does still occasionally perform new burials, but today the dead can only be interred in plots that were purchased, or inherited, long ago. It is not officially a working cemetery, having closed for purchase of plots for new burial in 1974. Demographic data sourced from a visitor use survey conducted by Hackney Council, who own and care for the property, in 2017 revealed that of the visitors who come to Abney Park, only 9 % reported they were there to visit a grave.[4] This presents a different picture of visitor engagement with the space than one might expect from its designation as a 'cemetery' and should be taken into account when crafting public engagement initiatives.

Research Methodology: Occult Psychogeography and 'Doors of Perception' into 'Borderland Worlds'

My audio walks were created as an invitation to expand perceptions of what a Victorian garden cemetery can mean to visitors on a personal level, and to the community as a public space. Through the course of my time spent in Abney Park, I discovered four layers of heritage that coexist within the space: nature reserve, 'earth mystery', outdoor archive, and mourning heritage. I created the series of Abney Rambles audio walks with the aim of facilitating community engagement with the cemetery by offering audio walking journeys presented as four different perspectives on how to view the space. I found my method of framing these disparate layers in Abney Park through my research into the literary heritage of Stoke Newington. Through this research, I discovered the work of the British Decadence author and avid London walker Arthur Machen, whose short story *N* most informed the method by which I frame my discoveries of layered meanings in Abney Park and conceive of these layers as operating within the same 'space' as one another, but not the same 'place'. Borrowing a conceptual framework from Machen, each layer of heritage that I discovered through my research into Abney Park I conceived of as a 'borderland world', with each audio walk I created positioned as a 'door of perception' to access these various borderland worlds.

Machen's novels and his nonfiction works are comprised of stream-of-consciousness notes on walking within London intermixed with autobiography, Machen writes of a hidden world behind the commonplace world we walk through day to day. The very accessibility of wonder behind and within the commonplace was his recurring area of philosophical study:

4   https://consultation.hackney.gov.uk/parks-green-spaces/abney-park-improvements/results/abneyparkusersurveyreport.pdf (accessed 23/8/2023).

> If we are to see the vision of the Grail, however dimly, it must no longer be
> in some vaulted chamber in a high tower of Carbonnek, over dreadful rocks
> and the foam of a faery sea. For us, the odour of the rarest spiceries must be
> blown in through the Venetian blinds in some grey, forgotten square in Islington
> (Machen 1924, 77–78).

Machen wrote the above in *The London Adventure or the Art of Wandering* in 1924 – eleven years before he would further develop the concept of a hidden 'magical' world in the ordinary suburb of Stoke Newington in his story *N*. After reading *N*, I began to investigate the space of Abney Park as a series of otherworldly, coexisting borderlands, with each layer of meaning within the cemetery sitting right on top of and next to each other, identifiable with a simple shift in perception, opening a 'door of perception' to these other layers of meaning. My audio walking practice is an endeavour to engender in the listening walker a prepared eye with which to see hidden worlds and to open different doors of perception. With regards to these hidden worlds existing in the commonplace, it is the very seeming 'normality' of Stoke Newington that lends Machen's *N* its secret garden aspect. To discover hidden layers in an ordinary suburb suggests that magical worlds are not the sole purview of Gothic towers or enchanted forests – that 'magick'[5] could be everywhere.

I have created my audio walking practice to be an embodied experience of a selection of layered meanings within Abney Park, which are reflective of the tapestry-like nature of interwoven spatial and temporal layers within the cemetery space. My audio walks are not put forward as 'heritage walks' because they are creative interpretations, not a recorded history. The type of engagement I offer is a constructivist rather than a positivist heritage experience (Copeland 2006).

The starting point for selecting which 'borderland worlds' I wished to interrogate in my walking practice began with walking through the cemetery and noting what different aspects were important definitions of the space – what differentiated Abney Park cemetery from its surrounding streets or other nearby parks? Three distinct aspects of the cemetery were initially apparent: the diverse ecosystem of the woodland makes up its nature reserve; the information on the gravestones creates an outdoor archive; and the existence of buried bodies, gravestones, and centre chapel all provide evidence of a heritage of mourning. With these three distinct aspects of Abney Park in mind, I began my research, which then revealed other aspects of Abney Park that could not be uncovered by a casual visit to the cemetery: that of its literary heritage through its location in Stoke Newington, and that the northern boundary of the cemetery follows the course of a buried river, the Hackney Brook.

My methodology for crafting my audio walking practice is rooted in psychogeography. Through my research into the buried Hackney Brook river, Iain Sinclair's

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5 Magick spelled with a 'k' is a term used to differentiate occult concepts from performance magic.

investigations into London's buried rivers, and literary allusions to a mysterious 'otherworldly' aspect to Stoke Newington, my psychogeographical research led me to a literary heritage which links Stoke Newington and North London back through Arthur Machen, William Blake, and Thomas De Quincey. Stoke Newington's earth mystery/occult description by Iain Sinclair and Geoff Nicholson (themselves referencing Arthur Machen and Edgar Allan Poe) informed how I would structure these walks – as 'borderland worlds'. It is through this psychogeographical research into this literary heritage that my audio walking practice became grounded in occult psychogeography (Coverley 2008; Nicholson 2013; Sinclair 2013; Smith 2010).

Occult psychogeography, as an area of study, grew out of a literary analysis of the ley-lines and hidden patterns of a reimagined mysticism – which is a very different ideological heritage than that of the anti-capitalist political interventions of the Situationist International brand of urban psychogeography. The occult method of psychogeographic practice is an internal process of discovery and analysis of space, rather than an external movement towards social change. The patterns studied and the worlds behind our everyday world that are explored are hidden, rather than the overt social ubiquity of oppressive pro-consumerist images ('spectacles') of capitalist culture (McDonough 2009; Stracey 2014).

Occult psychogeography is personal in its analysis, and the artistic works it pays homage to can border on madness (or a flirtation with the appearance of madness). Perhaps it was the manifestations of drug use, in the case of Thomas De Quincey in his *Confessions of an English Opium-Eater*, and solitary wanderings, as with Arthur Machen, that created a fracture of perception and the feeling of existing in a liminal space between two worlds that defines their walking practices. Situationist psychogeography is first predicated on its communal participation, whereas occult psychogeography is predicated on a solitary practice.

Space, Place, and Time

With my audio walks, I guide the listening walker through the various aspects that comprise the whole of Abney Park cemetery through an exploration of the many temporal and spatial layers that make up its unique diversity. Researching multiple meanings within space, I became interested in Tim Cresswell's theories of layers of memory, and how this might be applied to the ways in which life and death are sedimented in the cemetery and can be explored through moments of pause. Yi-Fu Tuan's theories on space and symbolisation offered an analysis of the symbolic complexities that illuminate the ways in which Abney Park carries symbolic meanings for mourners and community groups alike (Cresswell 2004; Tuan 1977).

Time features prominently throughout my walking practice. The concept of temporality is a recurring theme that I revisit with each layer of meaning that I investigate with my audio walks. A Victorian cemetery with current alternative uses

creates an experience that at once contains traces of the past and is also constantly moving towards the future. In this context, the anachronistic space of Abney Park is rooted in its time capsule nature in the midst of modern life. The invitation here is to widen our perception of the meaning of a particular place. Rather than restricting observations to the physical and tangible, the imagination is invited to engage in viewing the timeline of experience that Abney Park cemetery embodies: a date-stamped museum of grief, which doubles as a public community space. Cemetery spaces are socially produced places, where meanings are negotiated through social action. To interpret the symbols within the cemetery space, we need to understand it as a special place, separate from the ordinary or domestic sphere.

The walks I have crafted through Abney Park offer doors into possible borderland worlds, each weaving together a possible trajectory within the space and forming a narrative based on a nexus of throwntogetherness offered by specific points along the walk. The concepts of symbolisation, layers of memory, 'contemporaneous multiple becomings' (MASSEY 2005), and anachronistic space form the foundation on which I have built my walks. Woven together, each of these concepts has contributed to building a depth of understanding regarding the tapestry of perceptual possibilities within a cemetery space. With the disembodied audio format, I aim for the listening walker to experience a fragmentation of temporal awareness. Listening to a voice already from the past (whether that be a remove of weeks, or years) brings to the fore thoughts of the cemetery at once moving forward and backward through time. Audio journeys through the past, that are explored in the midst of present-day sights alongside anachronistic gravestones, are an artistic culmination of Abney Park's multiple becoming – the full richness of which I have endeavoured to offer the listening walker as they move through the space.

The Audio Walks

Before beginning my research into Abney Park cemetery, I did not know there was the buried Hackney Brook river along its north boundary. I had been a frequent visitor to Abney Park for four years, however I had never seen any indication of the Hackney Brook's existence. This important feature of its formation is not advertised to visitors. There are no signs or posted information that there is a buried river there. It is a completely ignored and forgotten feature. This discovery of the buried Hackney Brook forming the north boundary of Abney Park brought my literary uncanny investigations of Stoke Newington full circle into the space of the cemetery itself.

Taking inspiration from Iain Sinclair's walking practice methodology for crafting his literary explorations of space, I began walking in Abney Park looking for layers of meaning to be found there. Discovering that a buried river forms the north boundary of the cemetery, and reading Iain Sinclair's earth mystery provocations

that this subverted waterway could be infusing the neighbourhood of Stoke Newington with thwarted energies, inspired me to write *Woodland Magick*, which takes a visitor to Abney Park through a door of perception into this Machenesque borderland world of unseen forces creating a sense of unease. This unease is borne of darkness: literal in the sense of subterranean, but figurative in terms of theme.

Learning about the hidden rivers of London fascinated me. I began to wonder about the Hackney Brook, what it looked like underground, I began to anthropomorphise its struggle and unfair treatment – from a beautiful river flowing in the open air, at times called 'bucolic', inspiring Isaac Watts to write his hymns upon its banks and city workers to escape the crowded city centre to build villas overlooking it – to then be buried 'alive' and turned into a sewer. I was filled with a rather strange level of sadness and empathy for a river so unappreciated and ruined. This emotional response towards the buried Hackney Brook, and descriptions of an otherworldly Stoke Newington by Poe, Machen, and Sinclair, coupled with my research into animistic folklore, led me to create a dark animistic folktale about the Hackney Brook river, which is the story told in *Woodland Magick*.[6] Exploration of possibilities within nonhuman agency and mindfulness led me to research animism for its possible artistic applications within my practice. This audio walk is my endeavour to give an imagined voice to the buried river, and offer new perspectives on the space of Abney Park cemetery as a place that was partially built over it. The Hackney Brook is where my study of occult literary heritage meets my site of practice.

My second audio walk that focuses on Abney Park as a nature reserve is *Woodland Networks.* While on the surface this audio walk appears to be a more traditional nature walk than *Woodland Magick, Woodland Networks* still guides the listening walker through a door of perception to see this 'hidden' borderland world. Although, as I explore in this audio walk, the agency of the natural world is not hidden at all, to those who would but see. Each nonhuman actant within Abney Park cemetery is living a hidden life that, through closer human observation, flowers into view. By way of visiting selected veteran trees mapped throughout the cemetery, *Woodland Networks* introduces underground mycorrhizal fungal networks, deadwood habitats, a history of fires, and various interactions between trees, stones, and humans in Abney Park as an invitation to reconceive mindfulness and agency within nature. Together, *Woodland Networks* and *Woodland Magick* offer visitors to Abney Park two different ways to approach and appreciate the intricate nonhuman ecosystem that is Abney Park as a nature reserve.

The motivation for writing *Thoughts on Mourning* came from what I first experience when I enter Abney Park. While the nature reserve is the most prominent physical feature encountered, my attention is first drawn to its gravestones. They offer clues into its history as a Victorian garden cemetery and the history of mourning

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6   After completion of my thesis, I have since expanded the short story I wrote for Woodland Magick into a full-length play titled 'Borderland'.

rituals that have taken place within its gates. My aim with *Thoughts on Mourning* was to introduce the ethos behind the structured practices of Victorian mourning to listening walkers by guiding them through the Victorian garden cemetery as an experience of a cultural site that embodies this Victorian concept of 'beauty in loss'. This audio walk is intended to explore the respect and care that went into creating Abney Park's monuments and its importance as a repository for cultural memory. The door of perception that *Thoughts on Mourning* opens for visitors is into the borderland world of Abney Park's Victorian garden cemetery beginnings. The audio walk addresses difficult death themes in the space of a garden cemetery to emphasise the Victorian approach to the fear of death – creating a peaceful space for remembrance through the longevity of stone and beauty of gardens.

My audio walk *Love, Wrath, Death, Lions* offers visitors to Abney Park cemetery one story that aims to animate the outdoor archive of the space. This audio walk shares the tumultuous love story of Frank and Susannah Bostock, by way of actor portrayal in the form of an audio play, ending at the couple's white marble sleeping lion headstone. In her analysis on the use of archives as a resource for piecing together the possible narratives of people who lived long ago, Carolyn Steedman gives a warning regarding what she terms 'the seductions of the archive', and the 'entrancing stories' that they contain, which do the work of the seducer. An entrancing story crafted by the researcher's imagination, from snippets found within an archive, is quite a different thing from the historical analysis that inspires it (STEEDMAN 2001). It is easy to be swept up in crafting an emotional, or at least meaningful, story from the information that is found. Viewed in that light, the audio walk that I have crafted from the archives is a product of this seduction, which is the seduction to flesh out the Bostocks' narrative from the frustratingly spare accounts available in the archive. The documents I had to work with (the ships logs of dates and names of trips to New York City; birth and death records; census reports; and the stark listing of grievances of physical abuse accounted by Susannah in her petition for judicial separation) all left me with many gaps to fill in order to craft a coherent narrative for my audio walk. Imagination is a key ingredient in both the crafting, and the experiencing, of my audio walks; and the interaction of imagination with the archive is what I have endeavoured to navigate with *Love, Wrath, Death, Lions* in particular. Crafting a narrative out of the archive is an act of imagination. Herein lies the difficult negotiation between the archive and the researcher; especially a researcher for whom the research becomes a creative project – here Steedman's reference to 'process' taking precedence over 'stuff' is most apparent. Most of the work of crafting *Love, Wrath, Death, Lions* was undertaken when the archive work was completed. The ideation and imagining become the bulk of the project.

There is a difference between writing 'historical fiction' and 'history writing'. This difference is highlighted by historian Arlette Farge, who asserts that the idea that a novelist (or, in my case, a performed audio story writer) resurrects the archive is actually a mistaken assumption. Farge describes this work (i.e., working

with archives to craft characters from people who actually lived, and working from details of their lives that have been actually recorded) as inevitably, despite the collection of all of these 'facts', a work of fiction (FARGE 2013). When researching people's lives, there is a burden felt to do them justice, to tell their story fairly, even if it is indeed a 'story', and not 'history writing'. The names, dates, steamer passage ledgers, and census records are 'history', but that is not what I wished to capture for *Love, Wrath, Death, Lions*. I did not wish to merely 'write history'. The benefit and beauty of the opportunity presented by the medium of an audio walk, brought to 'life' by way of actor portrayal, lies in its possibility for emotional resonance.

I have crafted all four of my audio walks from disparate emotional worlds, all of which are, inevitably, personal. This infusion of my personal interpretation of facts within an emotional landscape is what transforms the work from a transcript of 'history' into an artistic mediation between the listening walker and the gravestone archive in the cemetery. While I foreground my walk as an historical journey through the complicated love story of the Bostocks, it is, ultimately, as much my creative story as their life story. As Steedman points out, history does not have 'ends'. Researchers can read the snippets of a life, and craft an arc and meaning from these traces, but from the lived point of view of the real historical persons at the time, there is just 'life'. Things happen in succession, but not necessarily in any identifiable plot arc. To tell a story from a selection of facts and events is to sort the available information flotsam into a somewhat artificial construct and impose meaning. The goal of an historical writer is to fill the gaps in the archive, to tell the story of what isn't there. With *Love, Wrath, Death, Lions*, I have crafted an audio journey of a possible history. As the Bostocks were real people who were fairly well known, there came with this particular audio walk a feeling of personal accountability to be as accurate as possible within my artistic interpretation.

Each of my audio walks *Thoughts on Mourning, Woodland Magick,* and *Woodland Networks* dip in and out of historical references, with the majority of the walking experience based on my artistic interpretations of their respective themes within the space of the cemetery and were made with a feeling of autonomy whilst crafting them. For *Love, Wrath, Death, Lions,* I scrupulously researched as much documentation of the lives of the Bostocks that was available to complete their story. Historical record is not an objective representation of the past, but rather a selection of objects that have been preserved for a variety of reasons. Gale and Featherstone echo this assessment in their research, stating that not only is no archive free of either ideology or the fluctuations of economics in its formation and operation, but that archives are also not stable in content (GALE/FEATHERSTONE 2011). Out of these many-layered mediations between a researcher and the original 'truth' of a story that the researcher struggles to uncover, the resulting interpretation can be nothing more substantial than that – a possible history. Conquering the 'seduction of the archive' lies in the blank spaces our imagination leaps to fill, and acknowledging these desires. Crafting *Love, Wrath, Death, Lions* was an exercise in navigating

between storytelling and restraint. It is with this audio walk that I manifest most fully Copeland's idea that in our endeavours to become heritage experts, at best we are 'heritage interpreters'.

Heritage Engagement Applications

Visits to heritage sites over the last several decades have involved a more interpretive and interactive way of engaging with the past than simply a didactic single narrative of history. Visits have become less about the *object* and more about the *experience*: an encounter with a past that is brought to life (JACKSON/KIDD 2011). In an effort to engage visitors to Abney Park with the cemetery as a multidimensional community space, I offer my audio walks as a unique embodied experience of the space that invites a diverse reading of Abney Park's layered meanings and history, as opposed to reading it as only a repository of the dead. Through this mode of interaction, the *experience* of the space of the cemetery takes precedence over the *objects* of dead bodies and headstones. In this way, I position myself as a 'heritage interpreter', finding the layered meanings for possible readings of the space and offering my audio walks as stories of both the site of the cemetery in the past, but also as a selection of the meanings that it could hold for the community today and beyond. The choice of which stories to tell, and which meanings to research, crafts a subjective practice that takes a constructivist approach to community engagement. A constructivist approach to heritage interpretation, according to Copeland, simply suggests that we construct our own understandings of the world in which we live. This is positioned in contrast to a positivist approach that provides only one view of complex issues and presumes that there is a fixed place that the visitor must come to know (COPELAND 2006).

My goal has been to share my subjective reading of Abney Park as a selection of possible layers of meaning within a multitude of possible layers, which visitors can discover for themselves once the prompt towards imaginative reading of the cemetery has been provoked. Visitors to Abney Park will hopefully feel empowered to find their own creative readings of the space, once the formal 'cemetery' label has been subverted and 'permission' has been granted to enjoy a creative experience outside of socially scripted cemetery behaviours. From a constructivist perspective, the various layers of heritage I present should form a scaffolding to enable visitors to make their own constructions.

Analysis of Data

After completion of the Abney Rambles audio walk project, I continued to make four more audio walks in other locations around London: in Tower Hamlets Cemetery for the LIFT Theatre Festival; through the Geffrye Almshouse gardens at the

Museum of the Home for London Craft Week; through St George's Gardens for the Bloomsbury Festival 2019; and a walking tour on the history of Spiritualism through Bloomsbury for Bloomsbury Festival 2020.

When I first started my PhD project, I created a Wordpress website where I documented my research, kept a photography blog, and hosted the audio walks all in one place. This was convenient for me, and helpful for the Abney Park Trust, but in hindsight it was not the best way to offer my content to a wider audience outside of direct linkbacks. When I began to create audio walks for other projects, I then discovered SoundCloud in 2019, which is where all of my audio walks are now available to the public for free all in one place.[7]

Because my audio walks were already available to the public for four years before I joined SoundCloud, the following demographic data is not a complete analysis of every listen. I have also received data from the Abney Park Trust that my audio walks page on their website has attracted 306 listens (as of writing). In addition, my audio walks were hosted on creative partners' SoundCloud pages during the Bloomsbury Festival.

The total number of listens for all of my audio walks combined is 1,246.

- 404 listens came from my personal SoundCloud page
- 306 listens came from the Abney Park Trust website
- 459 listens came from Bloomsbury Festival's SoundCloud page
- 77 listens came from Bloomsbury Radio's SoundCloud page

The way that both the SoundCloud platform and the Abney Park Trust website's backend analytics work, they only offer demographic data in aggregate. This means they cannot offer me location demographic data specifically for my audio walks on their pages, they only have this data for their entire page interaction. However, since the only content hosted on my SoundCloud page is my audio walks, all the location demographic data on my own page can offer these insights.

Due to these limitations, I cannot present a full picture here of every moment of engagement, but I am treating the listens that can be analysed as a likely representative sample of the whole. This does bring the data I am able to analyse down from 1,246 to 404, however this is still a large enough sample set for me to draw some working conclusions.

Not surprisingly, the top country for listens is the UK and the top city for listens is London. However, of the total listens, 256 were in the UK and only 49 were in London (Fig. 1).

Only 13 % of listens (53) were in areas of London where the audio walks are located. If we are to believe the accuracy of Soundcloud regional tracking data (which admittedly is a big leap of trust) that shows a very low interaction of the audio

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7   As of writing in 2022, the link to my SoundCloud page is https://soundcloud.com/romany-reagan.
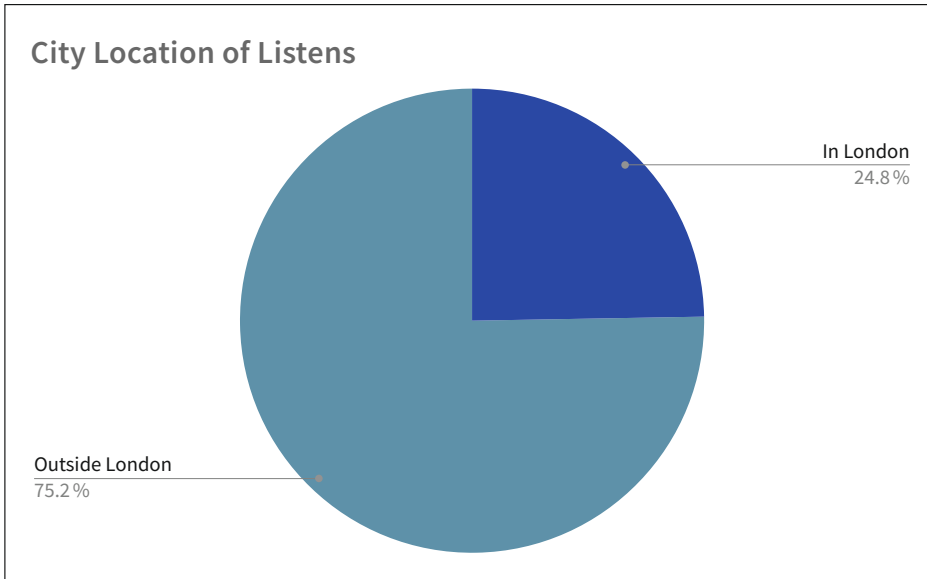
Fig. 1: Percentage of listens by city location.

tracks actually taken in situ. If we choose to doubt the accuracy of specific location data and instead take all listens across London into account as possible walks taken in situ, then that brings the number up to 133, which is still only 24 % of listens. For other cities, 10 % of listens (40) were from other cities within the UK, with the top three being Edinburgh, Nottingham, and Bristol.

As you can see in Fig. 2, the largest country location of listens is the UK, which is as expected, with 63 % of listens (256). The second largest country of listens, probably not surprisingly, is the United States[8]. I have found with the demographic data available for my blog on legends and lore of the British Isles[9], that right behind the UK, the top country reading my research into these legends is the United States. There is a large interest in British history in the United States, so finding that the U.S. was the second-largest demographic group was a continuation of this trend and was not surprising to me. What was surprising was that there was such a large percentage of international listeners at all. These listens can be counted with certainty as not having taken place in situ.

After discovering these rather surprising demographic trends for these audio walk listens, there might be some validity in retitling these projects as 'audio experiences' rather than 'audio walks'. The demographic data bears out that this type

8 70 listeners were from the United States, representing 17 % of the listening audience, with the top three cities being Albany, in New York state; Goleta, in California; and Washington D.C.

9 As of writing in 2022, the link to my blog Blackthorn & Stone is https://blackthornand stone.com/.
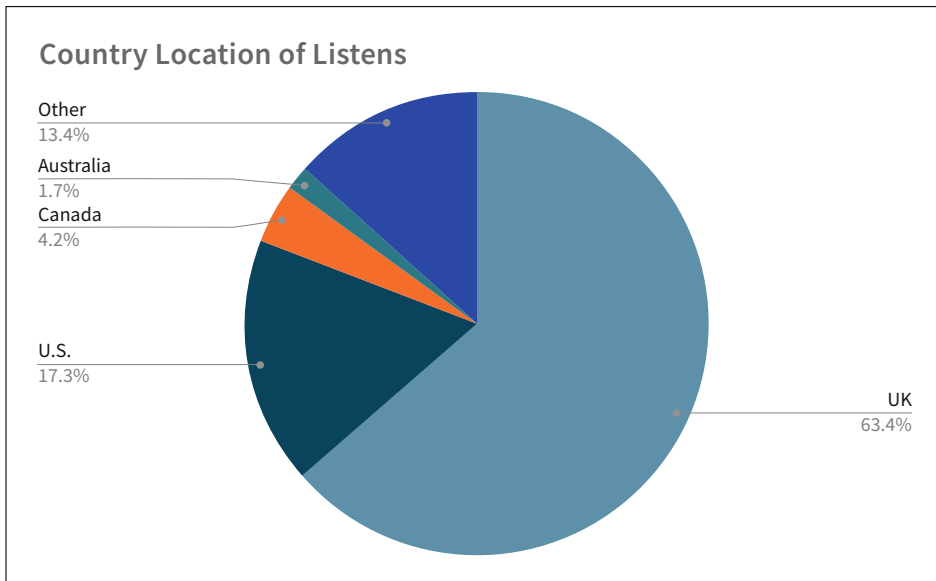
Fig. 2: Percentage of listens by country location.

of public engagement content is not always engaged with by taking the walks as guided within the track, but rather as experiences of the space engaged with elsewhere.[10] It is important not to take this data at face value. One solitary listener in Japan could be a bot, not a person. With this kind of demographic data, it is not possible to view the source and therefore legitimise the data. In an academic context, I can only view this data as showing general trends, not reliable enough to be analysed in a granular way. In spite of this, the overwhelming trend appears to be that listeners engage with this type of content completely differently than I was expecting. I have crafted these experiences with full expectation that listeners will be walking through the space – and this has proven not to be the case.

Case Study Key Takeaways and Conclusion

Throughout this study, I have chosen not to address the impacts of the COVID-19 pandemic. This choice was made to keep focus on the task of digital engagement itself and to not have this study overshadowed by the omnipresence of COVID-19. The motivations for this omission were twofold: first, I felt that any study of COVID-19 and its impacts should be done in-depth or not at all; and second, I have been

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10 Seventy-eight listeners came from all other countries, with the top three being Canada, Australia, and the Netherlands. In total, 25 countries other than the UK engaged with the audio walks.

working with audio public engagement long before – and hopefully long after – the COVID-19 pandemic. I hope the insights that I have shared here will be useful for other practitioners in the years to come, long after COVID-19 recedes from its high-water mark. I did not wish for this study to be in future filed under 'COVID-19 public engagement efforts'. However, the effects of our global pandemic crisis will ripple throughout every sector for years to come; and it would be remiss of me not to mention its impacts on my practice here.

Empirically, interest in my online content soared. I received multiple requests throughout 2020 to offer illustrated online lectures for various initiatives, which normally would have been held in person – or perhaps not commissioned at all. As a practitioner who had already been working in digital engagement for five years before the pandemic, suddenly my work felt vital and useful to a level that it had not achieved previously. Purely looking at the data that I have access to on my SoundCloud, engagement with the audio walks jumped significantly. In 2019, the audio walks received 216 listens. After the COVID-19 pandemic hit the following year in 2020, engagement jumped 275 % to 594 listens. This could be due to a variety of factors. As everyone was kept isolated and at home, not only the listeners but of course myself included, perhaps I dedicated more energy to promoting my work online? Perhaps the audio walk content itself was more appealing to a broader audience than previous work? This sample set is too small and the variables too broad to say for certain whether this is a COVID-19-driven engagement metric. However, when analysing the ongoing impact of a digital engagement project, COVID-19 cannot be ignored as a key shaping factor for how people engage with content across every sector. Having a digital engagement offering should be prioritised by heritage sites and museums going forward. The landscape has altered to such a degree, and for a long enough duration, that this kind of content should not be dropped from programming calendars, even after the world is ready for in-person engagement again.

Other than these COVID-19 factors that have shaped the way that we engage with content, what have I learned through this study? When writing my first audio walks for my thesis, my work was grounded in place in a very specific way. Not only were these walks written to be taken only in situ, but specifically at certain places within my site of research, and with a heavy reliance on the listener being in place to have the visual component to the experience right in front of them.

After my first audio walk that I wrote for the Bloomsbury Festival in 2019, for the first time my work broke out of the rather niche audience demographic of those interested in Abney Park cemetery. Creating pieces of audio engagement for the Bloomsbury Festival offered a platform to share my work with a much wider audience through their large group of community contacts alongside their comprehensive marketing initiatives they implemented to promote the festival. It was from this first contribution in 2019 that I began to get feedback that these walks were being listened to by people at home as well – and sometimes that home was very far away from the site being explored.

The audio walk that received the most positive feedback with listeners report-ing "I felt like I was there" was my *Woodland Networks* audio walk through Abney Park cemetery. This audio walk is the only project that was recorded in situ in the cemetery; so, the crunching of leaves under my feet, birdsong, the odd dog bark, and even my laugh at being surprised by a large rat suddenly in my path, are all captured in this walk. If a listener is at home when experiencing this track, the background sounds will offer them a more immersive on-site type of experience with this method of recording.[11]

It was at this point that I also received several enquiries via social media if I had plans to offer a video component to be presented alongside the audio of these walks. I was intrigued by this idea and saw the curiosity sparked by these audio walks for listeners to engage even further with these heritage sites. However, offer-ing a video component would alter the experience from an audio experience into instead a short film, almost a documentary-style offering; which, while valuable, is a different kind of engagement. If there continues to be interest in a video offering, I will consider what this might add; however this type of project is probably best undertaken as a group effort in collaboration with the given heritage site, to make sure the images captured are respectful to both the space and to any members of the public who perhaps are captured on camera during the course of the project. Video offers a very different production process than audio.

Every audio walk that I have created engages with space in its own unique way. As an artist and audio walk practitioner, I enjoy the control I can wield with offsite recording and editing. However, I also value the feedback and perspective of the joy and visceral engagement that listeners felt from the live recordings and spon-taneous moments captured for the *Woodland Networks* walk. And while this type of content creation is the trickiest for the creator, it offers the audio visitor an ex-perience of the sonic landscape of the space. A good way to begin the research pro-cess for any given project would be to define what the goals of the project should be – engaging visitors who are already onsite, or engaging visitors from afar? Live recording in situ would accomplish the goal of immersing listeners from far afield with the space, while still working within the bounds of the abilities of a solo prac-titioner and within privacy concerns that would come to bear of inadvertently cap-turing passersby that video inherently complicates. Scripting and recording walks at home offers complete control, but these types of walks are best taken when the visitor is onsite and has no need of any added audio atmosphere to 'transport' them there, because they are already onsite.

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11   For other means of immersive experiences, see the discussion of exhibition practices in Paul Longley ARTHUR and Isabel SMITH: *Digital Representation of Slavery in Australia,* pp. 47–62 in this volume or the critical assessment of digital graphic novels in the narra-tion of refugee stories by Victoria HERCHE: *Mediating Traumatic Memory,* pp. 139–153 in this volume.

My working method going forward is to ask these key questions at the beginning of the project: Who is the target visitor? Is this piece of audio engagement for a site-based visitor or a digital visitor? The second action on this path of questioning is to gather feedback after the project has been released. Every heritage site will have different visitor needs and goals, and it is important to keep analysing how visitors are engaging with heritage site initiatives; because how a visitor actually engages with any given public engagement initiative might be quite different than how it was initially programmed and expected. It is through these ongoing conversations and research that we can respond to the needs of both visitors and heritage site managers, and also grow as artists and practitioners.

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Figure Credits

Fig. 1–2   Romany Reagan.

KIMBERLY COULTER

Mediating Ecologies
Cultivating Diplomacy, Destabilising Paradigms

At the invitation of anthropologist Carsten Wergin, I traveled from Munich to speak as a panelist at the June 2016 *Media Ecologies*[1] workshop at the University of Heidelberg. The goal: to discuss how concepts from digital and environmental humanities could "foster a more sustainable engagement with human and other-than-human spheres in a globalized world in crisis". As part of the workshop, participants took a field trip to visit the concurrent exhibition *Reset Modernity!* at the Zentrum für Kunst und Medientechnologie (ZKM) in Karlsruhe.[2] This essay, drawn from two posts published in *Ant Spider Bee*,[3] considers the panelists' efforts to cultivate diplomacy, amplify serendipity, and destabilise paradigms, and reflects on my experience of the exhibition in light of these expressed hopes.

The Media Ecologies Workshop

The aim of the June 2016 *Media Ecologies* workshop at the University of Heidelberg was to discuss how concepts from digital and environmental humanities could "foster a more sustainable engagement with human and other-than-human spheres in a globalized world in crisis".[4] While the crisis is indisputably environmental, its framing in terms of 'ecologies' goes beyond what is commonly regarded as the natural environment. Implicit in this framing is Bruno Latour's relational ontology approach, which encourages the examination of the material and conceptual relationships among human and nonhuman actors/actants, the 'assemblage thinking' or actor-network theory (ANT) that shook up the humanities and social sciences in the 2000s. Ecology, Latour writes, is a "new way to handle all the objects of human

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1   Poster of the *Media Ecologies* workshop, https://www.uni-heidelberg.de/md/iwh/angebot/poster_mediaecologies_web.pdf (accessed 13/9/2023).
2   The exhibition *Reset Modernity!* ran from 16/4/2016–21/8/2016 at the Zentrum für Kunst und Medientechnologie ZKM | Center for Art and Media Karlsruhe. Exhibition homepage, https://zkm.de/en/exhibition/2016/04/globale-reset-modernity (accessed 13/9/2023).
3   An earlier version of this essay appeared in part as *Ant meets ANT: A gathering on 'media ecologies'*, https://www.antspiderbee.net/2016/10/07/ant-meets-ant-a-gathering-on-media-ecologies/ and *Exit counselling for the Modern?*, https://www.antspiderbee.net/2016/10/07/exit-counselling-for-the-modern/, both published in *Ant Spider Bee*, 7/10/2016 (accessed 13/9/2023). Many thanks to Ana Luisa Sánchez Laws for the constructive feedback on this version.
4   Poster for the June 2016 *Media Ecologies* workshop at the University of Heidelberg.

and non-human collective life … Nature is here considered as what assembles all entities into one whole" (LATOUR 2007, 249 incl. fn.).

Media ecologies, it follows, may illuminate not only such relationships, but also the mediated nature of connections, representations, and engagement opportunities. Or as John Durham Peters succinctly puts it, "natural facts are media, and cultural facts have elemental imprint" (PETERS 2015, 48). In any case, the brief is broad. Yet as the diverse panelists reflected on their experiences, the focus congealed further: we shared common ideas about what our projects should achieve. Addressing the event's aim to 'foster sustainable engagement', we described ways we have witnessed digital or environmental humanities succeeding (destabilising paradigms, allaying fears, cultivating diplomacy, and amplifying serendipity) or failing (reinforcing power, fueling anxiety, or stoking resentment) (Fig. 1).

Haidy Geismar, director of the Digital Anthropology program at University College London, drew attention to projects' community engagement and political effects.

Fig. 1: Panelists at the *2016 Media Ecologies* Workshop. Pictured from left to right: Haidy Gaismar, Kimberly Coulter, Werner Krauss, Christophe Leclercq, Donato Ricci, Carsten Wergin.

In one example of a digital archival object, a Maori cloak scanned to resemble a landscape and presented as being of a place – maybe even placelike – found more resonance within its aboriginal community than a common 3D digital simulacrum. Such sensitivity is endangered, she cautioned, when universities focus on technical skills at the expense of critical ones, pointing to a polemical article (ALLINGTON/

BROUILLETTE/GOLUMBIA 2016) alleging that digital humanities hype is being exploited to displace progressive projects. Geismar called for a reclaiming of 'digital anthropology' by academic Anthropology in order to safeguard it against anti-interpretive and uncritical applications.

As a practitioner working to engage both scholars and publics outside academia, I spoke about affordances of digital media to enhance (and complicate) environmental understanding through access, aggregation, and discovery in my projects *Ant Spider Bee*[5] and the *Environment & Society Portal.*[6] The blog, a curated reflection on digital environmental humanities on which I collaborate with Finn Arne Joergensen and Wilko Graf von Hardenberg, we named *Ant Spider Bee* in reference to Francis Bacon's metaphor about ways of 'handling' science:

> The men of experiment are like the ant; they only collect and use; the reasoners resemble spiders, who make cobwebs out of their own substance. But the bee takes a middle course; it gathers its material from the flowers of the garden and of the field, but transforms and digests it by a power of its own. (Francis Bacon, *Novum Organum, 1620*, 288)

Our nod to Bacon is an appeal to the essential human power of reflection in creating and using media. Yet data can 'amplify serendipity' in information acquisition by facilitating unexpected connections: metadata-driven discovery interfaces, such as the *Environment & Society Portal's* map, timeline, and keyword explorer, offer new and potentially surprising paths to content. To illustrate this, and share lessons learned about the importance of usability, I showed early iterations of the Portal's (at the time freshly updated) interactive timeline.[7]

Werner Krauss of CliSAP,[8] the excellence cluster on Integrated Climate System Analysis and Predication at the University of Hamburg, reflected on his work in light of 'diplomacy', understood as the ability of an anthropologist to speak well to someone (i.e., a research subject) about something that really matters to that person (LATOUR 2013). As a participant observer in a world of climate science, he has engaged in diplomacy himself, publishing his discursive exchanges with climate skeptics in the blog he co-edits, *Die Klimazwiebel.*[9]

Together, Christophe Leclercq and Donato Ricci of the SciencesPo Médialab[10] described their co-management and co-design of Latour's ambitious ERC project

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5   Project homepage, https://www.antspiderbee.net/ (accessed 13/9/2023).
6   Project homepage, https://www.environmentandsociety.org/ (accessed 13/9/2023).
7   Timeline of the *Environment & Society Portal*, https://www.environmentandsociety.org/tools/timeline (accessed 13/9/2023).
8   Homepage of the Excellence Cluster CliSAP, https://www.cen.uni-hamburg.de/about-cen/clisap.html (accessed 13/9/2023).
9   Blog homepage, https://klimazwiebel.blogspot.com/ (accessed 13/9/2023).
10   Médialab homepage, https://medialab.sciencespo.fr/ (accessed 13/9/2023).

Inquiry into Modes of Existence[11] (*AIME*). The project developed a protocol to investigate what our mode of existence has been, if not 'Modern'. In augmentation to network-tracing, this protocol follows 'connectors' that "provide those networks with their specific tonalities". Some 200 'co-enquirers' were invited to collaboratively digitally annotate an interim report by Latour and, through comments and marginalia, inquire into discrepancies between Moderns' experiences and their accounts of it.[12] These notes were then analyzed by tracing 'clues, anomalies, and understanding' (RICCI ET AL. 2015). The project fell short, they reflected, in cultivating 'correspondence' with contributors due to lack of clarity regarding contribution and terms of attribution. Contributors did, however, receive invitations to events like the final exhibition *Reset Modernity!*,[13] a parallel project which, perhaps due to its comparatively accessible format and companion field guide, would successfully disorient (COULTER 2016) a broader audience, including the workshop participants.

Environmental destruction is fueled by imperatives of growth, 'progress', and a false nature/society dichotomy – the oft-taken-for-granted tenets of Modernism. The exhibition *Reset Modernity!* at the Zentrum für Kunst und Medientechnologie (ZKM) in Karlsruhe aims to disorient visitors and 'reset' their paradigms of (ecological) observation and representation. Co-curators Bruno Latour, Martin Guinard-Terrin, Donato Ricci, and Christophe Leclercq, all of the SciencesPo Médialab and its digital project *AIME* (*An Inquiry into Modes of Existence*), suggest that our observation sensors require a gentle recalibration:

> Modernity was a way to differentiate past and future, North and South, progress and regress, radical and conservative. However, at a time of deep ecological mutation, such a compass is running in wild circles without offering much bearing anymore. This is why it is time for a reset. Let's pause for a while, follow a procedure and search for different sensors that could allow us to recalibrate our detectors, our instruments, to feel anew where we are and where we might wish to go.[14]

To get recalibrated, *Media Ecologies* workshop participants set out in a bus for Karlsruhe.

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11 Project homepage, https://medialab.sciencespo.fr/en/activities/aime-an-inquiry-into-modes-of-existence/ (accessed 13/9/2023).

12 See *An Inquiry Into Modes of Existence* (http://www.bruno-latour.fr/node/252, accessed 13/9/2023).

13 *Reset Modernity!* Pressemitteilung, https://zkm.de/de/pressemappe/2016/globale-reset-modernity (accessed 13/9/2023).

14 Cited from the exhibition homepage: ZKM Karlsruhe, *GLOBALE: Reset Modernity!*, https://zkm.de/en/exhibition/2016/04/globale-reset-modernity (accessed 13/9/2023).

The Exhibition *Reset Modernity!*

Accessible yet smart, playful yet serious, the *Reset Modernity!* exhibition displays tableaus of natural and social phenomena together with critical analysis of their ecologies – the material and social environments, including their infrastructures, patronage, and discourses.

A *Field Book* orients the exhibition around six procedures designed to denaturalise visitors' Modernist assumptions. The first three, 'relocalizing the global'; 'without [outside] the world or within'; and 'sharing responsibility: farewell to the sublime', are about raising awareness of one's positionality. The visitor is shown how 'scale' is not a reified, inscribed area, but actually a relational and representational concept; visitors are instructed to notice how all views are perspectives requiring a positioned viewer, and that this viewing makes him not just a spectator, but a responsible participant (Fig. 2).

The fourth procedure, 'from disputed lands to territories', included an installation by a collective called Folder, in collaboration with the Italian Glaciological Committee, that revealed the ephemeral nature of the watershed-defined Italy-Austria border.[15]

Fig. 2: The exhibition *Reset Modernity!* (2016) seeks to challenge visitors' (ecological) assumptions about how they represent and perceive the world. Procedure two, 'without [outside] the world or within', deconstructs globes as created within ecosystems of materials and power relations. *Reset Modernity!* ran from 16 April 2016 – 21 August 2016 at the ZKM | Center for Art and Media Karlsruhe.

15 Homepage of the installation, http://www.italianlimes.net/ (accessed 13/9/2023).

Thanks to a cartographic robot arm and data transmitted from the melting glacier, I could set into motion the nearly real-time mapping of the changing boundary. One hears a lot of talk about the 'global', so it is refreshing to see a reminder of territorial boundaries, along with their complex genesis and ephemeral nature (Media 1). In these first four procedures, I felt a surge of reverence for the tenets of my academic training: deconstruction, and the examination of material and conceptual relationships among human and nonhuman. It was a thrill to find the pillars of my intellectual values so beautifully materialised, like the stations of the cross. Hallelujah!

Media 1 (Videostill): printing a map with real-time data, the author engages with the installation Italian Limes (2014) by the collective Folder, as part of the exhibition *Reset Modernity!* (2016), https://www.antspiderbee.net/2016/10/07/exit-counselling-for-the-modern/.

Thus, for me the exhibition only began to feel disorienting when I reached the fifth procedure, 'secular at last!' Through film clips blaming religion as perniciously political, this procedure argues that to be attentive to the earth, we must be *mundane*; it seems to conflate the need to 'resist the violence of iconoclastic passions' with a requirement to be secular. This overlooks not only the homogenisation and violence of imposed secularism, but also the environmental values and practical

engagement of faith communities.[16] As Pope Francis argues in his 2015 encyclical *Laudato si'*:

> Given the complexity of the ecological crisis and its multiple causes, we need to realize that the solutions will not emerge from just one way of interpreting and transforming reality. Respect must also be shown for the various cultural riches of different peoples, their art and poetry, their interior life and spirituality. If we are truly concerned to develop an ecology capable of remedying the damage we have done, no branch of the sciences and no form of wisdom can be left out, and that includes religion and the language particular to it. (Francis 2015, §63).

Francis seems to acknowledge a need for 'diplomacy'. Why not offer a view of religion attentive to the imagined, constructed, and political nature of all communities, including national – or even academic – ones, including the violence latent in all 'group' imperatives?

A sixth procedure, 'innovation not hype', encourages visitors to look behind facades of objectivity to become aware of the complicated material and social projects that yield shiny new technologies. This echoes messages of procedure two, 'without [outside] the world or within', which deconstructs globes as created within ecosystems of materials and power relations. Perhaps the distinction is one of 'new' versus 'old' technologies. Yet to present future technologies as constructed under radically different terms from the technologies of the past, is also to create hype.

A playful presentation of didactic content, the exhibition has been criticised for being closed to unexpected outcomes. Writing for *Seismopolite*, Mylène Ferrand Lointier asked Latour:

> But you also deliberately chose to make a dogmatic exhibition?

> Dogmatic is a positive term for me! Because it is provocative. You give the directions, and after that, people do as they want. This is not dogmatic in the sense of imprisoning, but in the sense where you construct an itinerary [the field book]. …[w]hat is expected of intellectuals, is that they make a coherent proposition, and after that each and every one make their own decisions and actions. Concerning the question of modernity, there are points about which we can say that they are not to accept or refuse, rather they need to be negotiated. In any case, before knowing what needs to be negotiated, the point needs to be made. This is what the version of the AIME project does: one cannot make diplomacy between different worlds, if one has not already defined the world one belongs

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16   See search results for 'religion' in an environmental history context in the *Environment & Society Portal*, https://www.environmentandsociety.org/search?search_api_views_fulltext=religion (accessed 13/9/2023).

to oneself. The problem of the moderns is that they do not know which world they belong to. They have a vision, for explainable reasons, so it is necessary to help them identify which instrument(s) their world is built upon. (FERRAND LOINTIER 2016)

Helping visitors identify the instruments on which their worlds are built is a formidable task. The curators distilled the concepts without jargon or condescension. The exhibition's use of a print and digitally accessible *Field Book* (LATOUR 2016) guides the visitor to 'reset' (in the sense of replacing a dislocated shoulder) her metanarrative about the modern condition (with the assumption that not all that is modern is to be jettisoned). Products of the European Enlightenment, field guides prescribe a way of viewing, possibly narrowing focus at the expense of a larger ecology (MATTERN 2016). Here the medium is cleverly turned upon itself, using Modernity's own toolkit to point out its conceits (Fig. 3).

Yet I'm not sure the exhibition fully achieves its aim.[17] For me, the exhibition felt like a refreshment rather than a recalibration. If it is intended to be a deprogramming of unexamined Modernist paradigms leading to the destruction of the
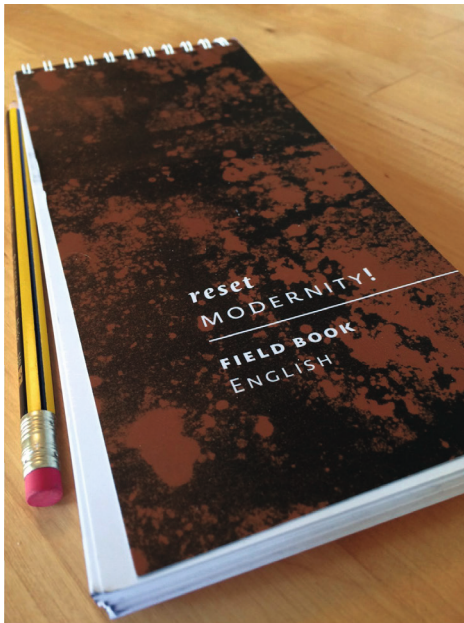

Fig. 3: Latour, Bruno (2016), *Reset Modernity! Field Book*, ed. by Bruno Latour, Martin Guinard-Terrin, Christophe Leclercq, Caroline Jansky and Ulrike Havemann, trans. by Christiansen & Plischke, Karlsruhe (ZKM Publications).

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17 For a discussion of possibilities for digital and online storytelling in exhibitions, see Paul Longley ARTHUR and Isabel SMITH: *Digital Representations of Slavery in Australia,* pp. 47–62 in this volume.

earth, how to command the attention of those in need of recalibration? Of course such an exhibition is not 'exit counseling' – we cannot compel visitors to complete these procedures any more than we can leave our Modern world. But I admire the assemblage of exhibition objects and the brilliant field guide. I expect its visitors will continue to reflect on it for a long time to come.

In a "globalized world in crisis", it is easy to become paralyzed, to blame, to want to build fences to protect what we value. Yet by sharing our successes and failures, and acknowledging the anxieties and efforts that underlie them, we become more mindful of our goals and paths to them. It was a delight to attend the exhibition and participate in the *Media Ecologies* event, and especially to engage with the insightful audience. Remarkably, this was the only occasion I have ever witnessed an audience member respond in improvised song. At the workshop's conclusion, Prof. emer. Fletcher DuBois, reflecting on Francis Bacon's ant[18] and Latour's ANT, calls upon us to "be the bee".

Media 2 (Audiofile)**:** at the *Media Ecologies* event, University of Heidelberg on 2/6/2016, Prof. emer. Fletcher Ranney DuBois, reflecting on Francis Bacon's ant and Latour's ANT, calls on us to "be the bee". Spontaneous song by Prof. emer. Fletcher Ranney DuBois, https://www.antspiderbee.net/2016/10/07/ant-meets-ant-a-gathering-on-media-ecologies/

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18   Francis Bacon, *Novum Organum, 1620*, 288.

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Media Credits

POLLY LOHMANN

Digitising from Scratch
An Example from the Practise of a University Collection

Digitisation is on everyone's lips. "This collection must be digitised": this is the work order almost everyone has had to face after taking on a new curatorial position in a museum or collection in recent years. But what does digitisation imply, and what does it actually mean in terms of the practice of university collections? This article describes the current situation in the Collection of Classical Antiquities at Heidelberg University, and aims to show the challenges surrounding the digitisation of heritage in terms of administration, organisation, and workflow.

Generally speaking, university collections face different challenges than public museums: established as 'study collections', they combine academic teaching, research, and public outreach. In all of these matters, they tend to be provided with either very poor financial and human resources, or none at all. Given these constraints, all possible methods of 'digitising' such collections – from background research to actually photographing or scanning documents and objects/artefacts – require an enormous effort from the individuals involved. This article therefore hopes to sensitise its readers regarding the implications of what we call 'digitisation', and to elucidate specific actions that are required on a greater scale from universities and academic funding agencies, and on national and international levels.

What Does 'Digitising' Even Mean?

"Digitisation is the process of converting information into a digital (i.e. computer-readable) format", says Wikipedia,[1] itself an online encyclopedia and an early example of just such a conversion of printed encyclopedias into digital, and dynamic, formats. Transferring this definition to museums and collections, digitisation encompasses the following comprehensive measures.

– **Digital preservation:** the digital recording of the artefacts themselves ('primary objects') using imaging techniques such as photography, film, 3D scanning, or X-ray computer tomography.[2]

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1 https://en.wikipedia.org/wiki/Digitisation (accessed 28/12/2020).
2 For an example of large-scale 3D-scanning and data derivation, see Aaron PATTEE: *Graph Databases for the Organisation and Analysis of Digital Heritage,* pp. 123–138 in this volume.

– **Digital documentation:** the scanning or photographing of all documents ('secondary objects') relating to artefacts and the history of the collection, e.g. index cards, inventory and acquisition books, correspondence, loan agreements, restoration reports, photos of the collection and artefacts, etc.[3]
– **Digital administration**: the digital recording and compilation of information ('metadata'), often requiring research on the artefacts, including material, genre, dating, provenance, restorations, insurance values, etc., either for the collection's own internal documentation or as freely available data.
– **Digital accessibility and transparency**: the feeding of all this data – documents, image formats, and metadata – into a digital storage system such as a database that will make the information retrievable and systematically searchable at any time, whether it is stored offline and locally or online and publicly available.
– **Digital public engagement**: the representation of the collection and the presentation of its objects online through social media, blogs, digital exhibition formats, etc.[4]

Each of these tasks on its own could easily keep a person busy for a long time, and each of them requires different skills, from specialist knowledge in the field to technical knowledge of recording techniques, experiences with databases and authority files, and public relations work.[5] These requirements are rarely thought of, or even named in detail when curators are asked to 'simply' digitise a collection.

Even for larger institutions, this complex set of tasks is challenging. In university collections it can hardly be managed as part of daily routine operations, as typically only one person is responsible for the collection as curator. In addition to teaching, conducting research, organising events, answering photo requests, managing loans and more, there is usually very little time left for actual collection management.[6] The current generation of curators working in (archaeological) university collections is facing the digitisation process alone: they have mostly 'inherited' collections that have been managed completely analogously and are now expected to make the digital transition on their own. The general desire for 'digitisation' – from the universities, institutes, and colleagues – is coupled with a great deal of

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3   For the usage of index cards in the retracing of migrant routes, see Marijke van Faassen and Rik Hoekstra: *Storytelling, Identity, and Digitising Heritage,* pp. 155–174 in this volume.

4   See the examples of exhibitions using means of digitisation: Kimberley Coulter: *Mediating Ecologies,* pp. 91–101 and Paul Longley Arthur and Isabel Smith: *Digital Representations of Slavery in Australia,* pp. 47–62, both contributions to this volume.

5   On this problem, see, in brief, Lang 2016, 51.

6   Very generally on the current situation of German university collections and their digitisation: Stricker/Weber 2016, 23. On the role and use of university collections, see Seidl 2016. More specifically on archaeological (plaster cast) collections, with an overview of collections at German-speaking universities, see Bauer 2002.

ignorance, because the steps involved in this complex process are unknown to or ignored by the upper levels of the hierarchy.[7] Those entrusted with the actual implementation, on the other hand, are confronted with many organisational and practical hurdles.

It is both unfortunate and counterproductive that awareness of the implications of digitisation is so limited, because this ignorance impedes and slows down the actual digitisation process. It is the reason why no additional academic positions are granted for digitisation projects, and scientific funding opportunities for digitising cultural heritage are rare. In Germany, for example, calls for proposals are mostly limited to proposals which apply digital methods; they do not address the large-scale digital recording of objects which forms the necessary basis for any further projects.[8] Their explicit requirement for explanatory statements about the scientific value of the objects to be digitised suggests that not all objects are considered equally relevant and worthy of being studied. Thus, even if these statements serve to create comparability within the project selection procedure, they downgrade the overall value of historical university collections. Picking out artefacts and defining very specific research questions for future studies means limiting ourselves to studying the same best-known or most frequently published artefacts over and over again, because it is easy to justify digitising what has already been considered worth studying once. Unknown artefacts which have never been researched, on the other hand, are less likely to be chosen for a funding application, both because they require more preliminary work from the applicant and because sponsoring organisations are less likely to fund projects on artefacts which seem less attractive to them. A selection of objects, if required, will therefore follow political guidelines with regard to not only a collection itself, but also both general research trends and trends in the relevant field. Furthermore, digitising only a certain portion of

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7 On the high expectations towards museums and their available object data, see HOHMANN 2016, 64.

8 The German Ministry's funding line "e-heritage", for example, states: "No concepts will be funded that serve [...] the generally necessary digitisation of inventories in the context of fulfilling a basic task specific to an institution." The call also claims that a "prerequisite for funding is that the planned digitisation *forms the basis of subject-specific research*" and demands the "submission of a letter of intent from recognised experts in the field, *describing in detail the scientific interest* and, if applicable, the methods with which research questions can be addressed on the basis of these digitised objects" (e-heritage 2016, transl. by author, https://www.bmbf.de/foerderungen/bekanntmachung-1197.html, accessed 20/12/2020). The same funding line in 2019, with modified terms, states that "A prerequisite for funding such digitisation projects is that the resulting digital copies *form the basis for research*", and that "This funding line is aimed at institutions that are planning a digitisation project for a *precisely defined* number and type of cultural heritage objects and on the basis of a *scientific research interest demonstrated by a letter of intent*" (e-heritage 2019, transl. by author, https://www.bundesanzeiger.de/pub/publication/V7AgA80Y66jMjAXDOxd;wwwsid=E01F47520F51E150CEA2999oDD4E7D67.web06-pub?0, accessed 20/12/2020).

a collection obviously also limits its accessibility, and therefore the development of potential future research questions. After all, how is one supposed to systematically search for relevant research topics and objects in a collection which has only been digitally recorded in part? Funding that is available for digitising only parts of a collection therefore supports an unwelcome hierarchisation or prioritisation of objects, though at least it is a start. The existing calls are reactions to both growing demand and the efforts of the "Coordination Centre for Scientific University Collections in Germany" to support university collections and make them more resilient (in the long run).[9]

These limited funding options and their prerequisites draw attention to one major problem: that digitising is not treated as real scientific work, but as a subordinate task, despite the various skills it requires. Proper digitisation – i.e. digital preservation, recording, documentation, and administration – cannot happen without qualified people trained in the relevant field to research objects, document data, and control data quality. In contrast to the specific skills required, the term 'digitising' is now a commonplace one which is used casually and without awareness of its implications. Yet behind the act itself there are questions regarding the selection of digitising methods and techniques, the sustainable storage of digital data, and the associated costs. Last but not least, digitisation goes hand in hand with legal problems in dealing with image and usage rights, some of which need individual solutions while others have not yet been sufficiently solved – on either national or international levels. The free access to and sharing of data also meets psychological boundaries in a world in which many historical collections have been well-guarded spaces for a long time, with strict control over who had access to them and who was allowed to publish certain information (Stricker/Weber 2016, 24). This mentality still prevails in many institutions.

Why Digitise and How Is it Done?

The Collection of Classical Antiquities at Heidelberg University was officially founded in 1848 as a study collection.[10] It consists of almost 9,000 original ancient Greek, Roman, and Etruscan objects, roughly 1,200 large plaster casts (i.e. copies) of statues, busts, and reliefs, and several thousand small-sized plaster casts of gems, cameos, and coins (Fig. 1a–l). With its long history and widely varied stock, it is one of the most important classical archaeological university collections in Germany. Even today, it offers students of Classical Archaeology the chance to study materials and tool marks, styles and iconographies of originals and copies (casts). The

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9 *"Koordinierungsstelle Wissenschaftliche Universitätssammlungen"*: https://wissenschaft liche-sammlungen.de/en/ (accessed 20/12/2020).

10 On the history of the collection, see Zenzen 2016.

Fig. 1a: Greek vases (lekythoi) in the depository of the collection.
Fig. 1b: Roman oil lamps in the depository of the collection.
Fig. 1c: Ceramic fragments from the Greek island of Thera / Akrotiri.

Fig. 1d: Ancient coloured architectural element.
Fig. 1e: Bronze vessel.
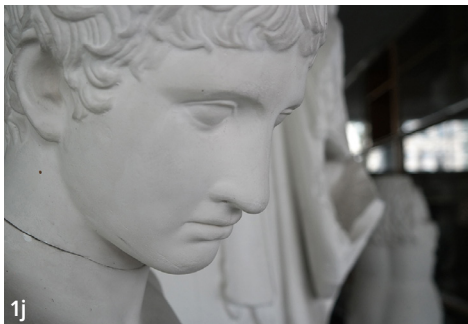**Fig. 1f:** Coloured terracotta figurine.

Fig. 1g: Golden palmette ornament, attached to a piece of wood.
Fig. 1h: Greek inscription on a bronze plate.
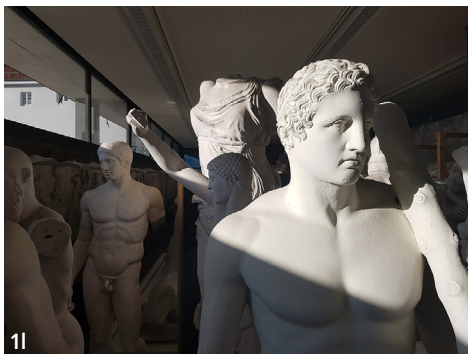**Fig. 1i:** Pieces of ancient floor mosaics.

Fig. 1j: Plastercast of the so-called Doryphoros of Polykleitus.
Fig. 1k: Plaster impressions of ancient gems from the so-called Daktyliotheca of Tommaso Cades.
Fig. 1l: The plaster casts of the collection as currently stored due to the building renovation

collection is also used for practical exercises such as drawing, photographing and 3D-scanning of artefacts, and to design exhibitions together with students. With its broad range, representing 3,000 years of ancient history, it was also open to the public on a regular basis before renovation of the building (which will take several years) began in 2017. Institutionally, the collection is linked to both the Institute of Classical Archaeology and Byzantine Archaeology and to the Heidelberg Center for Cultural Heritage (HCCH).

In the Heidelberg Collection of Classical Antiquities, the digitisation of objects was already considered a necessity from the point of view of everyday work. For a curator starting a new position and needing to get to know a collection from scratch, the analogue system still common in many collections poses a problem.[11] This system usually consists of many drawers full of index cards which contain basic information about the objects (Fig. 2).[12] These cards are invaluable resources, as they often provide the only information available. Ideally, they will have been consistently labelled and updated over decades. In Heidelberg, there are index cards for all large-format plaster casts and for almost half of the original artefacts. For the other half of the original artefacts, however, the index card cabinet provides no information at all. Yet above all – and this is probably the greatest difficulty when making oneself familiar with a collection – the index cards do not contain any information on the storage locations of the objects. How is one supposed to find an object when a colleague asks for photos or details if one does not know its location? This everyday problem has made digital recording of the original objects along with their inventory numbers, basic data and locations indispensable.

Fig. 2: Drawer with index cards of the collection.

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11 On the advantages of digital documentation, in contrast to its reputation as a boring task, see HOHMANN 2016, 63.

12 On the 'classic' analogue documentation systems of collections and museums, see HANSEN 2016, 35. On the positive aspects of index cards, and with critical remarks on the requirements of database systems, see LANG 2016.

Digital Administration: Conducting a Collection Inventory with Students

Since it is impossible for a single curator to record about 9,000 objects, a large inventory of the collection took place in March 2018 in which students of the Institute were allowed participate, thus both getting to know the collection and earning credit points. These 18 students helped to record almost 5,000 objects in an Excel spreadsheet over three days, for a total of 216 working hours (Fig. 3a–c).[13] In addition to object type, storage location, material, and place of origin, all (modern) inscriptions and labels on the objects were also documented. In part, these records contain old inventory numbers from the history of the Collection of Classical Antiquities and thus provide information about the historical systematisation or grouping of objects, and possibly also about the time when the objects were acquired

Fig. 3a–c: Inventory of the collection:
the students Katharina Voll and Isabelle Weiser (3a),
Ela Eser (3b), and curator Polly Lohmann (3c).

13   The fact that recording a whole collection of several thousand objects requires a huge amount of time can also be seen in a project of the Museum of the University of Tübingen (MUT). In addition to our digital inventory, the Tübingen project included the scanning and actual numbering of the objects, 1,400 covers of print magazines (cf. Bierende 2016, 79).

(Fig. 4a–f). Such numbers and place names on the artefacts may also date from the time when they were excavated or sold for the first time, thus providing valuable clues regarding their origin and object biography. Due to the age of the artefacts, many of the labels are now beginning to peel off, and inscriptions are fading. Documenting this information therefore had a high priority. It is possible that a systematic analysis of the inscriptions and labels, in conjunction with a reading of old

Fig. 4a–f: Artefacts carrying different labels and ink inscriptions with inventory numbers, dates, places of origin, and other indications.

inventory books, may also reveal which objects were acquired in groups; however, this is work for a longer-term project on the provenances of the collection items, which, as in many collections, have been documented only partially or not in detail.

The 4,000 remaining original objects were further recorded after the inventory by the collection's student assistants during 2018 and 2019. The basic data was supplemented with information from the index cards and references to research literature. A number of editorial changes were also necessary to align fields and standardise terms and spellings. The Excel spreadsheet compiled now makes it possible to filter in a simple form, for example for object categories, or to discover the locations of objects. For more complicated questions about correct inventory numbers, both old and current numbers can be searched for. The digital inventory will also be needed to monitor the upcoming relocation of the collection to the newly renovated part of the building, which will take place in 2021 with the help of an art logistics company, and update the storage locations. We are still a long way from having our own internal database for all artefacts of the Collection of Classical Antiquities, but the Excel spreadsheet already makes work much easier. It also forms the preliminary stage of and preparation for the online presentation of the collection items in the Heidelberg University Library's image database heidICON. The metadata from the Excel spreadsheet will be included in the database, together with photographs of the artefacts and scans of the index cards.

Digital Preservation and Accessibility: Reproductions and Databases

Fortunately, by 2017 almost all of the 1,200 large-format plaster casts and several hundred original objects of the formerly permanent exhibition in the Collection of Classical Antiquities had been digitally photographed. The newly systematised and organised images were then to be entered into the image database heidICON and thus made available online; this had been agreed on among the curators of the different collections of ancient cultures belonging to the HCCH. On the one hand, this pursues the collaborative strategy of a uniform presentation of the various collections online; on the other hand, heidICON already provides a platform via the Heidelberg University Library, which thus takes over the secure hosting of the data and its maintenance.

For an automated import, the Excel data needed to be 'matched' with the data fields available in heidICON. First, we had to find equivalents to the digital data collected – i.e. the columns of the Excel table such as "material", "place of origin" etc. – in the online image database. This process took several months, during which the demands of the Collection of Classical Antiquities and the requirements of heidICON were discussed with respective colleagues and adjusted (Table 1). While some of heidICON's data entry fields allow flexible contents ("free text fields"), others

Table 1: Matching of date fields of the Collections Excel spreadsheet and heidICON.

Collection of Classical Antiquities, internal Excel file, columns / categories	Public heidICON data fields	Internal heidICON terms
Inventarnummer	Inv.Nr./Signatur	obj_sig
?	Sachbegriff/Objekttyp	obj_sachbegriff
Objekt (Gattung)	Klassifikation	obj_klassifikationen_gnd[].obj_klassifikation_gnd
Objekt (Gattung)	Klassifikation Typ	obj_klassifikationen_gnd[].obj_klassifikation_gnd_typ#_system_object_id
Material (GND)	Material (GND)	obj_materiale[].obj_material
Technik (GND)	Technik (GND)	obj_techniken[].obj_technik
Material und Technik	Material/Technik	obj_material_technik_alt
Fundort (GND)	Fundort (GND)	obj_fundorte_gnd[].obj_fundort_gnd
Entstehungskontext	Entstehungsort (GND)	obj_herstellungsorte[].obj_herstellungsort_gnd
Datierung (Freitext)	Datierung (Freitext)	obj_datierung_freitext
Datierung absolut	Datierung normiert	obj_datierung_norm#from
Datierung absolut	Datierung normiert	obj_datierung_norm#to
Datierung relativ	Epoche/Periode/Phase	obj_epoche_freitext
Kommentarfeld	Objektbeschreibung -Kommentar	obj_kommentar#de-DE
Ansprache	Titel	obj_titel#de-DE
Kurzbeschreibung	Objektbeschreibung	obj_beschreibung#de-DE

require the use of authority files (standard descriptors/vocabulary).[14] Place and object types, for example, therefore had to be adapted using authority files, which constituted another work step. Only in the final step could the revised Excel spreadsheet finally be imported into heidICON and its metadata linked to the photos of the objects, and the scans of the index cards linked to the data records to make the sources of information more transparent.

The first data import included 1,000 original objects, which have been available online since summer 2020 via heidICON[15] (the COVID-19 pandemic forced us to concentrate on the preparation of the heidICON import). These first objects to be made digitally available were well researched and much-published pieces. Their information and photos had already been available, and only needed to be transferred into the right format. The situation is different with the remaining 8,000 original artefacts, for which there is less information available, or none at all, and which still need to be photographed. In addition to the images, a lot of research will need to be done before their importation to heidICON to generate metadata so that reliable information on the objects can appear online. As this would mean years or decades of delay, however, a more sensible option would be to make photographs of the artefacts available in heidICON even if it must be without much additional information. This would at least allow us to rely on 'swarm intelligence' – or in other words, the idea that what we cannot do ourselves, perhaps others can. In absence of metadata, although the objects could not be systematically searched for

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14 On standardisation and databases, see e.g. the contributions of the Museum of the University of Tübingen: LANG 2016, 53–55; HUGUENIN 2016, 67–68; BIERENDE 2016, 81.

15 https://heidicon.ub.uni-heidelberg.de/search?p=357 (accessed 28/12/2020).

by external users, at least scientists from all over the world could (if interested) gain insight to the collection items and possibly come across pieces that relate to their own research by chance. In the long term, this could generate new research results, which would certainly not be the case if the objects remained unknown, hidden away in storage cabinets and inaccessible to the public. Regarding the prioritisation of certain objects as criticised above, this would at least be a compromise solution.

So far, no imaging technique other than digital photography has been applied. 3D scans exist for only a very few objects; they were produced during a seminar in summer 2019 in collaboration with the Interdisciplinary Center for Scientific Computing (IWR) of the University of Heidelberg.[16] Students of both Classical Archaeology and Computer Science were trained to operate a Hexagon/Breuckmann smartSCAN-3D-HE scanner. In groups of two, they generated scans of three different types of objects over the course of the semester: a flat impression of an Aegean seal; a three-dimensional ancient Greek terracotta figurine; and a three-dimensional ancient Greek clay vessel. All three object types presented different kinds of technical challenges, and the aim of the seminar was to discuss the costs and benefits of 3D technology. As the students rightly claimed, the effort and time invested is still relatively high compared to the actual output in the case of the Heidelberg Collection of Classical Antiquities. Despite the fact that 3D scans and models generally offer diverse possibilities in the course of studying and presenting objects, they are thus not feasible when work power is limited and more basic tasks have to be prioritised. In the case of the Collection of Classical Antiquities, therefore, comprehensive scanning of all objects does not make sense, at least for now. 3D scans can, however, contribute to archaeological research questions, for example through automated comparison and matching of ancient moulds and their corresponding vessels regarding sizes, shapes and designs, or, in combination with computer tomography, through the analysis of ancient or modern restorations, to name two examples of existing projects.[17] If a similar project requires 3D scans of objects from the Collection of Classical Antiquities in the future, heidICON would allow for storage of this data as well. It is envisaged that the future permanent exhibition will include a small number of 3D scans, allowing detailed views of surfaces, including tool or colour traces.

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16 Seminar "3D-Scanning", taught by Hubert Mara and Polly Lohmann, summer semester 2019.

17 On the application of 3D scanning techniques and computer tomography on ancient Greek vases and vase painting, see the contributions in the 2013 Corpus Vasorum Antiquorum Österreich Beiheft 1, e.g. MARA/PORTL 2013 (documentation and roll-outs of the painting); FÜRHACKER/KARL 2013 (historical restorations of ceramic vessels); KARL/ JUNGBLUT/ROSC 2013 (technological and archaeometrical analyses of vases).

Fig. 5a: Old photographs of the former exhibition spaces, "archive" of the Institute of Classical Archaeology and Byzantine Archaeology.
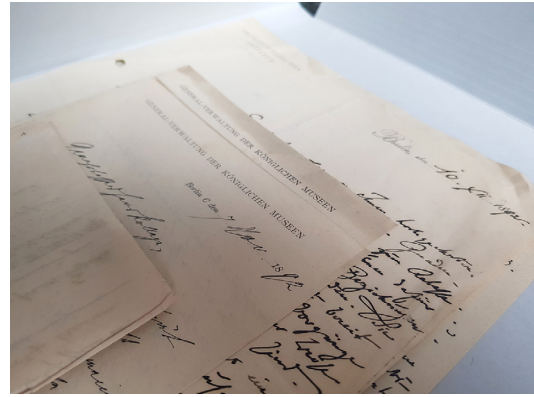

Fig. 5b: 19th century letters, "archive" of the Institute of Classical Archaeology and Byzantine Archaeology.

Digital Documentation of Archival Material and Further Steps

At the same time as they recorded the original objects in Excel, the collection's student assistants also scanned all existing index cards. These were uploaded to heidICON along with the object photographs in order to make all available information transparent. Other documents, such as inventory books, correspondences and old photographs, were viewed, recorded and scanned in 2018 and 2019 for internal use (Fig. 5a–b).

From 2021 onwards, the next steps will be to publish the scanned index cards and photos of the approximately 1,200 large-format plaster casts of the Collection of Classical Antiquities on heidICON. These are already recorded in an internal database, from which the basic data can be exported to Excel, prepared for heidICON with the addition of authority files, and imported into heidICON. However, some strategic decisions will have to be taken first, because here the typical problem regarding copies arises: which information should be provided, that of the copy or that of the original (i.e. the model from which the copy was made)? Should the date of the original (e.g. the Greek classical period) be entered in the main data fields, or the date of the production of the cast (e.g. the 19th century)? Should the material entered be the plaster of the copy or the marble of the original? In other words, should the original or the cast be relevant for future search queries?[18] This raises the question of the value of copies: do we regard them as works in their own right, or as copies whose intrinsic information is unimportant?[19]

[18] On the database solution of the plaster cast collection of the Freie Universität Berlin which links the data sets of the copies (plaster casts) to data sets of the respective originals via "ARACHNE", see REMMY/SCHRÖDER 2012.

[19] On the changing attitudes towards cast collections, see CAIN 1995. On the history of plaster casts of ancient statues, see, among others, BORBEIN 2000; KAMMEL 2001; KLAMM

All these aspects need to be considered and clarified in advance in order to undertake the systematic indexing of any reproductions, e.g. two-dimensional pictorial works such as photographs. They show once again how complex digitisation is as a process, because it is in the first instance a decision process and in the second instance a practical work process. These decisions influence, for example, the accessibility, protection, and sustainability of the data (depending on the host or database system chosen), and the search queries and hit rates (based on the data recorded and criteria chosen for digitisation – aspects which are mostly not 'objective').

In the Collection of Classical Antiquities at Heidelberg University, the digitisation process took two and a half years, from the first digital recording of the original objects to the online presentation of only 1,000 pieces. It can only be guessed how much more time will be needed before another 8,000 original objects and 1,200 large casts can be found via heidICON and thus be accessible to researchers from all over the world.

Digital Public Engagement

While all measures presented in the earlier paragraphs of this article focus on the digital documentation, preservation, and administration of the collection's holdings, additional actions are needed to raise public awareness. In the course of redesigning the future exhibition, a concept for engaging with a broader audience is essential. Although it has a certain core audience, the Collection of Classical Antiquities is not known to the wider local public. As a first step to achieving this audience broadening, social media accounts were created on Instagram (for the collection, in 2019) and Facebook (for the Institute of Classical Archaeology and Byzantine Archaeology, in 2018).[20] For these media, and for specific projects, digital formats other than static images have occasionally been applied. In a practical seminar, for example, students were asked to create short video clips (Erklärvideos) on objects from the collection. They were taught basic video editing and cutting skills using freeware available online.[21] Each of the students was confronted with one or several objects and was free to design the video using techniques such as whiteboard technique, stop motion and animation. The content of each video was also created independently by the students, and focused on either the function of the object, its decoration, or its biography and place of origin. The videos were made available

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2010; STEMMER 1993. With a focus on restauration techniques for plaster casts, see GRAEPLER/RUPPEL 2019.

20   This is possible because there are no legal or ethical boundaries as there would be, for example, for Indigenous artefacts.

21   Seminar "Videos selbstgemacht: Produktion von Erklärvideos zur Antikensammlung", taught by Polly Lohmann, winter semester 2020/2021.

Media 1: Video *Gladiatoren, Götter und andere Lichtbringer: Antike Tonlampen* (Gladiators, Gods and Other Lightbringers: Ancient Clay Lamps), https://www.youtube.com/watch?v=id1WhjF5_no&t=2s (accessed 24/8/2023).

online via YouTube and heidICON and shared via the social media channels of the collection and Institute (Media 1).

Another project, a special exhibition designed together with students, focused on the plaster casts of a Roman victory monument in present-day Romania. The so-called Tropaeum Traiani is today mostly unknown, even though it was of high scholarly interest a hundred years ago for political reasons. In 1918, during the occupation of Romania in the First World War, a large number of plaster casts were made on site and transported to Heidelberg so that copies could be available for research.[22] They raise questions regarding the appropriation of cultural heritage in both ideological and practical terms. The pop-up exhibition "Archaeology and Politics" deals with the prerequisites and history of the casts, their production, and their long journey to Heidelberg.[23] It also highlights the reception history of the Tropaeum Traiani in changing political contexts, both in Romania (for the original monument) and in Heidelberg (for the plaster casts). The exhibition will travel back from Heidelberg to Adamclisi in Romania following the same route by which the casts came, together with the students, and is therefore designed as a small and mobile exhibition consisting of panels ('roll-ups'), touchpads (tablet PCs), and a 3D print of the monument. The students' work for the project included designing a digital program (application) for the tablet PCs. Research information on the original monument, its architecture and excavation history was fed into the application, which was put into practice by Jürgen Süß (Fig. 6). He also created a digital 3D model to be viewed both in the application and as a 3D print. Such projects allow for the use of digital technologies beyond the pure recording of the collection and offer students the opportunity to gain insights into new or alternative forms of exhibition-making.

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22 On the (hi)story of the Heidelberg plaster casts of the *Tropaeum Traiani*, see Lohmann 2020; Lohmann 2021.

23 For the exhibition blog, see https://aup.hypotheses.org/.

Fig. 6: Start screen of the digital application on the Tropaeum Traiani at Adamclisi.

In the course of redesigning the collection, students have been invited to design concepts for digital screens or panels, focusing on individual topic areas of the future permanent exhibition. The students gather content and create mock-ups for interactive applications or static screens, and discuss their ideas with all participants in one-day events ('retreats') at the end of each semester. The digital elements are still in progress. They constitute one step in the making of the new exhibition, which is being developed over several years, with students committing themselves for two or three – sometimes even more – semesters to contribute to the future permanent exhibition.

Developing different forms of digital representation of heritage, whether for online or on-site interactions, requires theoretical and practical engagement both with the artefacts themselves and with science communication. During the COVID-19 pandemic, since 2020, such digital representations have turned into a central matter of museum and collection work as a way of virtually keeping in touch with the public. However, the production of digital content requires financial resources, which have to be acquired from third parties because the regular university budget is very limited. Due to COVID, the urgent need for digital accessibility and public engagement with collections and museums has become obvious. University collections, which are especially underequipped in these terms, were forced to take their first steps into digital public engagement. On the other hand, the public awareness of the value of cultural institutions beyond their digital appearance has also increased during the COVID-19 pandemic. Museums and collections have reappeared in people's minds as material places, missed once they had to close for weeks and months. In that sense, digitising cannot replace material objects and places, but it can accompany and support them.

Acknowledgements

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AARON PATTEE

Graph Databases for the Organisation and Analysis of Digital Heritage

Introduction

The purpose of this article is to encourage researchers in the *Digital Humanities* (DH) to make use of Labelled Property Graph Databases (LPGs) in order to organise and curate their datasets. Establishing and curating an organised database for all data flowing into a project is essential for provding an impirical basis for conclusions drawn at the intersection of different datasets. Although the traditional *Relational Database Management Systems* (RDBMS) and *Resource Description Framework* (RDF) Triple Stores also provide stable platforms for organising data, they do not offer the same interoperability, malleability, and efficiency required for many DH projects as property LPGs do. Such projects are built upon an ever-tilting lever in which the humanities-based and computer science-based analyses are constantly encountering one another on both the theoretical and practical level – allowing one of the two to easily gain the foreground at the cost of the other. The fulcrum of this balancing act must therefore be adjusted to the two fields of study and provide a base in which the weight of both is stabilised. The image of the lever-system can, of course, be applied to virtually all interdisciplinary studies and their associated methodologies. However, the ever-growing sector of DH projects linking seemingly unrelated disciplines to one another that have rarely interacted so far (Blanke et al. 2017; Mash et al. 2016; Kuczera 2017), is tilling new fields of cooperation. This requires the development and application of innovative tools to cultivate their common ground. With regard to databases, it is precisely the fulcrum's ability to adjust to the questions posed by different disciplines that exemplifies a malleable platform. It must be underlined that such databases are an efficient way for conducting research not simply due to the speed with which the data are imported or queried, but also because they facilitate the manner in which data can be indexed and maintained during the development or adaption of the data structure (Robinson/Webber/Eifrem 2015, 102).

The construction of a database incorporating undigitised historical data in addition to 3D data can be a time-consuming and labor-intensive process. However, the benefits of a well-curated database outweigh the perceived disadvantages. As data is gathered and the database grows, it becomes more capable of finding trends and connections between data that are not immediately obvious or even hidden. A malleable data structure allows researchers in the humanities and computer sciences to find patterns or test new connections without fear of losing data or the

foreboding risk of putting in hours of work for little change. It can be shared and explored as a team and changes are easily adapted. This paper discusses the key advantages of property LPGs, when compared to their counterparts, focusing upon how to structure a database from the perspective of a humanities researcher, with a recent dissertation serving as the case study. The development of such a database and, more importantly, drawing new conclusions from the data, requires interdisciplinarity and communication, though an adventurous spirit is never harmful in the process.

Databases and Digital Humanities

Whether in the *Digital Humanities* (DH), natural sciences, or any other field, all projects accumulate data from research that require a method in which to mediate and store the data.[1] Ideally, this method also includes a retrieval system in order to locate data that have been saved. However, not all databases are equal in this manner, and some are better suited for certain tasks than others. The two types of databases discussed in this paper are *Relational Database Management Systems* (RDBMS) and *Labelled Property Graph Databases (LPGs)*. The difference between the two may not be immediately obvious. Although one includes graphs and the other does not, they are often discussed as similar methods for data solutions (TOMASI 2018, 11). When examined more closely, LPGs offer a wider range of applications and are more easily managed, making them better suited for DH projects. This will be discussed in the remaining sections of the paper. Both types of databases store data and can be paired with retrieval systems, can host large amounts of data, and can be used as foundations for software and websites equipped with intuitive interfaces (WINBERG/ZUBAC 2019). Despite these similarities in application, the underlying structures warrant a closer look, with a specific emphasis upon which database type is most conducive to interdisciplinary communication. In many cases, DH projects consist of a team of researchers from different fields, each bearing the standard of their respective disciplines. More often than not, the spectre of discord hovers above the teams as researchers from the humanities and computer sciences have different investigative approaches, disparate glossaries of terms, and expertise in disciplines that rarely come into contact with one another – not to mention the diversity of analytical methods and procedures within the humanities which are anything but a monolith. Thus, clear and open communication is vital, buttressed by a database system that does not entirely exclude the

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1 For the creation of a knowledge base that interweaves a broad variety of data on Indigenous communities, locations, and items in a digital knowledge base, see Paul TURNBULL: *Restoring Dignity*, pp. 29–45 in this volume.

humanities researchers becoming involved in its structure, without a certificate or extensive experience in database development.

The database construction is typically a task rendered unto the computer scientists whilst the researchers from the humanities concern themselves more with the collection and evaluation of the data. With proper communication and financial support, this process can prove successful as it often has (Bol 2018, 7). Nevertheless, a certain requirement for emerging projects and junior researchers in DH is to not only familiarise oneself with new technologies, but to learn how to apply them at a rudimentary level. This is not a call for everyone to learn every topic, theory, or method and obtain an expertise in every field. Instead, it is a call for an improved communication between the researchers by recommending a database system that is more suited for interdisciplinary dialogue. LPGs implement a graphical model for connecting data through the use of *nodes* (entities) and *edges* (relationships) (Robinson/Webber/Eifrem 2015, 25). Although it is a relatively new technology, some of the best interactive visualisations for this sort of model were produced in the Middle Ages. The 13th-century genealogy of *Kuenringer* family tree in the *Stifterbuch des Klosters Zwettl (*Schubert *2018, 247)* and the 14th-century *Genealogical Roll of the Kings of England (ibid., 63),* as well as a host of other medieval genealogies, make use of nodes and edges to portray lineages featuring names, relations, and even portraits. Conceptualising ideas as graphs rather than purely as lists, allows one to visualise the development of the database much in the same way that sociograms allow one to visualise social networks. GDBs do precisely this, while attaching more levels of complexity.

Why Opt for a Graphical Model?

A graphical model combines efficiency with malleability by grouping data into nodes and edges. The graphical model allows for new connections to be made between previous data without altering the previous data lists, more akin to how humans interact when meeting new people who perhaps have mutual friends or associates. In essence, the graphical model establishes a digital sociogram that can be modified and adapted as the project expands. Thus, graphical models make use of methods that are already familiar to researchers in the humanities. The visualisation components of a graph, however, provide a simpler way of seeing the structure of the data.

Although the graphical model unites both mind-sets from the humanities and from computer science, not all graph databases (GDBs) operate in quite the same way. A key example is found in the difference between RDF triple stores and LPGs. Both RDFs and LPGs implement the graphical model and are directed graphs (Robinson/Webber/Eifrem 2015, 5), meaning that all edges include a distinct direction connecting nodes to one another. These directions are essential for modelling

and querying the connections between data in the database, though only LPGs allow one to query regardless of the direction (ibid., 67). With a RDF triple store, queries rigidly follow the direction of the relationship with defined labels, which means that if two nodes are connected, only the direction of the connection will be followed. In stark contrast, a property graph database can follow relationships between two nodes in either direction, even if a direction is defined. Thus, only one relationship is necessary between two nodes rather than two relationships in order to query in both directions. This substantially reduces the number of relationships between nodes, thereby reducing the data to the most necessary amount. Furthermore, LPGs allow for data to be stored as properties of the relationships – something a RDF cannot. These edge-properties make a tremendous difference in the size of the data structure, because data can be stored in a variety of combinations, reducing the overall number of edges necessary to model nuances in the connections between nodes. This important aspect is second only to the significance of choosing a graphical model, as it demarcates a key difference between the two types of GDBs. Fig. 1 represents an example from the CITADEL doctoral project. It shows the modelling of a father-son relationship for which the type of relation and the certainty of the relation were easily modelled and visualised.
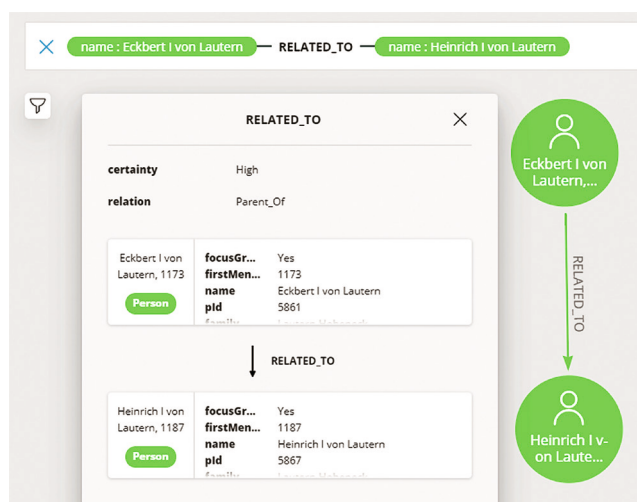
Fig. 1: An example of a relationship with an ascribed property, visualised in Neo4j Bloom.

Which Graphical Model is Suited to my Project?

Selecting a specific graphical model depends, of course, upon the nature of the inquiry in addition to which mid-ranged questions arise during the development of the project. Mid-ranged questions are the analyses that arise as the project develops (HARDESTY/LITTLE 2009, 69–70), constituting a crucial aspect of the overall project and one of the most important areas for communication between researchers.

These questions are the driving force behind the development of a data structure as more elements are taken into account that were either unkown or unclear at the project's inception. Mid-ranged questions often take into account various aspects from different disciplines, necessitating interdisciplinary dialogue. For example, the discussion of modelling a person's social standing in the High Middle Ages requires a discussion between Historians and Sociologists.

Approaching a topic from only one angle, will almost certainly leave out important insights garnered from other scientific perspectives. Inherent to the development of these questions, is the addition of more data. This category of investigation can necessitate a restructuring of the database and can happen at almost any time during a project's development. As projects begin large, become narrower, and again swell shortly before they are succinctly summarised for a final time. Adapting a data structure to sudden changes or adding new amounts of information previously unknown is common and essential. If the goal were to digitise a library collection or archive, an RDF triple store would be as well suited as a property graph database (Kaaij 2019).

If the objective is to embark upon a project that does not have an immediately known final result, such as an archaeological, architectural, geo-spatial, or historical investigation, then a LPG is better suited (Kuczera/Wübbena/Kollatz 2019). The reason for this has to do with the key difference between the two graphically-based databases: LPGs incorporate properties into nodes *as well as* edges. Distributing data across both core components creates a more flexible database that benefits both types of researchers. After selecting a LPG, the next step is to begin the process of organising the data in order to move it into the database.

When compiling data from various text resources such as geographical data or information derived from 3D models, the first challenge is to be able to control the sheer amount of data formats flooding into the project. Seeking a universal system for organising and simultaneously visualising all of the data of DH projects is the fever dream of most researchers, but it bears more similarities with the Quest for El Dorado, than an attainable result within a realistic timetable. Therefore, a good first step is to identify a data format that can be adapted to virtually any data. None is more befitting to the construction of database than the *Comma Separated Value* (CSV) format. *Microsoft Excel* is well suited for this task as it can export data in a variety of formats.

The following section illustrates this point by outlining the CITADEL project. The project combined historical, architectural, and geo-spatial data that was imported into a single LPG from which queries could be scripted using data from all three inquiries in order to draw new conclusions at their intersections.

Case Study: The CITADEL Dissertation

The overall goal of the CITADEL project was to establish a novel approach using integrated digital methodologies in order to pose new questions about the architectural development of four German castles at the turn of the 13th century. The combination of several methodologies has produced new results rather than focusing on the merits of each methodology individually (PATTEE 2023). The investigation of the sites emphasised the role and the signalling of status using architecture, in which builders sought to indicate (or signal) their access to resources, knowledge, or kin groups by constructing monumental buildings. These buildings – all of which were castellated structures – included architectural elements that were both symbolic and utilitarian, yet unmistakably associated with the reign of the Hohenstaufen dynasty at the turn of the 13th century. However, the scant remains of three of the sites, and the conditions of all four as archaeological ruins, do not leave much to be studied, absent historical context. Although context was key to understanding the sites and their function, the context was mired by the peculiar nature of the historical figures who inhabited and constructed the sites, namely the mysterious *ministeriales* of the High Middle Ages. This elusive group of medieval governmental administrators muddled the line between noble and non-noble, as they were considered to be wholly neither, nor were they wholly respected. Though the latter was the effect of the former, it weighed just as heavily with regard to their perceived position in society (BOSL 1950; BOSL 1975; HECHBERGER 2010; KEUPP 2002). As their numbers waxed and waned throughout the 11th to the 13th centuries – based largely upon the politics of the reigning German Emperors – their enfeoffed castellated homes established them as a political, military, and social force to be reckoned with. The process whereby they achieved social status, attained administrator positions and the favor of the kings was largely affected by their ability to not only excel as administrators of royal palaces and lands, and as famed military leaders in Italy, but also to construct constant reminders of their own importance. These constructions took the form of castles, palaces, and commandries that peppered the landscape of the hilly German Palatinate (KEDDIGKEIT et al. 2007)[2] – as well as many other regions including Swabia, Saxony, and Bavaria. These buildings embodied who they were, which aspirations that had, and how they wished to be seen. The effectivity of the signal depended upon their actual position in society and how outsiders interpreted the architecture of their castles. This portrays a constant feedback loop between status and architecture. As castles atop hills, nestled in valleys, and cresting over glistening lakes were magnified by their extraordinary positions within the landscape, geo-spatial data were a necessity alongside the already abundant historical and architectural data.

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2   Keddigkeit et al. (2007), *Pfälzisches Burgenlexikon Band I: A–E*, Kaiserslautern. This is the first volume of five documenting the castles of the German Palatinate.

Where to Begin When Developing a Database?

Everything began with spreadsheets. From architectural 'Roombooks' to coordinate points of geo-referenced maps, to details of historical individuals and charters, spreadsheets formed the first layer of documentation for the project database. As spreadsheets are easily accessible and essentially universal, they are a practical first tool to employ. They are particularly useful when exported as CSV files, which are compatible with essentially every database software as well as *Geographical Information Systems* (GIS). Although spreadsheets are an excellent first step and may even be a catalyst for new mid-ranged questions, they are not a result in and of themselves. Instead, they constitute the pathway whereby results can later be achieved in a database in which network analyses are conducted. This is accomplished by reaching into data from different investigations to bring forth new interpretations at the intersection of these data. Before such interpretations can be achieved, one must first begin with accumulating the data in a consistent manner.

As the objective of the CITADEL project was to research the castles, the sites themselves composed the primary source of information and the first order of business (Grossmann 2010, 44). In order to capture their condition in the most precise manner, both *Terrestrial Laser Scans* (TLS) and *Structure from Motion* (SfM) photogrammetry were employed for the generation of 3D models that were precisely measured and included high-resolution image textures. These provided the foundation for the architectural analyses that consisted of a traditional stone-by-stone construction research, albeit without having to conduct hand-drawn architectural illustrations. These detailed investigations were annotated on what were essentially orthophotos of each wall of each castle, in which building phases, ornamentation, and architectural elements were documented. The results were then recorded in a large *Excel* spreadsheet that organised the information according to their location, various building phases, and building types, as well as the construction elements, substances, and components. These terms each represented a node-group, or set of similar data types that create the nodes of the database. Each node-group received its own properties consisting of unique identification numbers, and in some cases, an amount. The data were based upon their positions within the 'Roombooks' of the sites, which were nothing more than a numerical listing of each wall of each site in an order according to how one walks through the respective site. The spreadsheet was relatively larger consisting of 595 rows and 18 columns in which all of the architectural were recorded. Such accumulations of data represent an authority file. They are only interesting insofar as they can be broken down into more manageable units. Whether at first glance or after repeated glances, a screen of data does not reveal much, despite organising the data into a scheme that relates to the project question. Nevertheless, such files are a vital first step, as they can always be modified and apportioned – though it is important to keep a backup!

The geo-spatial analyses began in a similar manner in which dozens of early modern maps were first geo-referenced – a process in which the spatial content of the maps was implicitly or explicitly directed to positions on the earth's surface (CONOLLY/LAKE 2006, 17) – in order to create diagrams of environmental data such as lakes, rivers, and political territories (PATTEE et al. 2018). These diagrams were vector data consisting of distinct points referencing buildings, or polygons representing areas/lakes. The point data had distinct coordinates that were exported as a CSV, consisting of 786 locations with an average of nine properties including the name, a unique ID, the coordinates, and further details regarding their modern position. This spreadsheet of the location data was also an authority file consisting of data drawn mainly from the historical maps, while also including data from the architectural analyses and, most importantly, from the historical investigation. However, in order to determine why and where the ministeriales built certain architectural elements, it was first necessary to model their social network.

Modelling their network provided an empirical basis in order to reconstruct their position in society leading to more refined interpretations of where their aspirations were to lead. This required a close reading of hundreds of transcribed charters, in addition to dozens of secondary historical sources regarding the castles, the ministeriales, and contemporary events at the turn of the 13th century. The diversity of the charter data consisted of 515 charters sourced from 23 different analogue volumes and 166 charters from the *Regesta Imperii Online* (RI Online) digitised resource.[3] As the online sources accounted for only 24 % of the total amount, it was not possible to introduce an computational reading all of the charters, such as *Optical Character Recognition* (OCR). Furthermore, the application of OCR was out of scope for the project as the objective was to provide context for the overall goal of researching the backgrounds for constructing the castles, and not to devise a method for reading the various forms of texts. These were recorded in a variety of fonts, including several forms of German *Fraktur*; languages, consisting mainly of Middle High German and Latin, in addition to the High German translations; and German dialects, whose modern linguistic derivatives most closely resemble *Pfälzisch* and *Schwäbisch*. The published format of the charters also varied, as some were much more complete in that they included clearly marked witness lists, as well as place names, dates, and transcription numbers. Others were recorded in telegram form, at times providing almost no information regarding the individuals involved in the charters, save their initials. Determining to whom the initials belonged, it was therefore necessary to read the charters on the pages before and after the one in question, a process that sometimes included up to 15 additional close readings of charters not meant for the project corpus. Although this may seem excessive and possibly misallocation of time, it was necessary because a

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3 An additional 22 charters were also collected, but did not have a proper citation and were therefore not used in the analyses.

name that was wrongly interpreted drawn from initials could create a completely altered social network. In order to maintain a highly detailed and accurate model of the social networks, attention had to be paid to even the smallest details. Such instances emphasise the integration of expert knowledge for data curation. It is worth mentioning that not all of the charters were accumulated prior to the initiation of the close readings. Instead, at the time of their inception, the corpus consisted of slightly more than 100 charters – or merely 14 % of the final project text corpus.

The process of parsing the data necessary for the network modelling was rather straight forward at the beginning. It consisted of another large authority file of only the individuals mentioned in the charters and another for the charters themselves. The spreadsheet for the individuals was the largest, consisting of 1590 rows across 16 columns. However, not all of the information in the spreadsheet was used for the properties of the individuals. Instead, an average of five properties were attributed to each person, including a unique ID, the date of their first mention, whether or not they belonged to a family residing in one of the castles (the focus group), their heritage (regarding their familial association with the nobles, ministeriales, or unknown), and various other properties referencing their social positions. The immediate effect of this process was that it resulted in a decent overview of the individuals mentioned and their general position in society. However, there were a number of properties that had to be adapted almost immediately as people tend to move and attain new roles in society over time. As the members of the focus group were almost all ministeriales, modelling their position in the social network of the area was complicated by the fact that they often changed roles and even their names, depending upon where they were commissioned. Furthermore, their roles were actually a conglomerate of two types of positions in society, namely their *status* position referring to more static positions (such as knight), and *administrator* positions referring to more dynamic positions (such as sheriffs); and sometimes they occupied both types at once. Both social positions had direct effects upon their access to resources and more elite social circles along the hierarchical chain of medieval society. Thus, modelling their position in society was the best determinate of understanding their capacity and reasons for constructing buildings in a manner that reflected how they perceived themselves.

The spreadsheet for the charters consisted of 706 rows across eight columns, with properties including a unique ID, the date of the charter, a brief description, the location where the charter was issued, and a reference for the source of the charter. Although the charters themselves were simpler to record, they still contained an intrinsic ambiguity, namely which description to use when at times multiple events took place. This was a core problem at the beginning and was the point of departure for actually implementing a LPG for modelling the network. For instance, charters issued at the royal palaces rarely concerned only one topic and describing such a charter by the first topic discussed – or at random – would result in a

highly inaccurate modelling of the social network at the date of the charter's issue. Some individuals, though mentioned in the same charter, were not affiliated with one another if their topic was altogether different. In short, multiple people were present for multiple reasons and for the sake of scribal brevity, their proceedings were bundled together into a single charter rather than two or more. Modelling these proceedings, while taking into account the individuals and their roles in society, complicated the structure of the CSVs, requiring additional spreadsheets cataloguing the events in the charters. These joined tables together, in the same way that JOIN tables combine spreadsheets in a RDBMS. However, these sorts of tables should be limited as the greater amount of JOIN tables leads to redundancies and complications in the data. Increasing the quantity of these tables can lead to inefficiencies in performance and reduce the malleability of the database (Bruschke/ Wacker 2014, 3).

Labelling and Adapting the Database to New Data

As previously mentioned, all nodes, i.e. the individuals, charters, locations, and building analyses, consisted of a number of properties including unique ID numbers. These were attributed to each node during the development of the project and bore no relevance to the transcription numbers of the charters or any other number drawn from the data. Instead, they were entirely for internal use and allowed data to be connected based upon distinct numbers rather than names. Additionally, the IDs of the node groups were given numbers of the same amount of digits. For example, the Persons node-type (all of the individuals) received a number four digits long, beginning with 5000, whereas the Charters node- type were given a number five digits long beginning with 10.000. The purpose of this system was to not only provide IDs, but also provide quick information regarding what the numbers represented, absent any text. Thus, a four-digit number beginning with five or six, found within a swarm of other IDs, always represented a Person node, and a five-digit number beginning with 10 always represented a Charter node. This labelling system was very effective as it removed the prospect of long computer-generated IDs that only lead to confusion when searching for quick information. Once the core data had been labelled, the process of combining the data in order to construct a network was beyond the capabilities of Excel. This required a LPG, which in this case was Neo4j, as mentioned earlier. A key feature of LPGs such as Neo4j is that they implement a scripting language for connecting data, rather than having to rely upon JOIN tables in order to build connections. The specific scripting language that was used for this project was *Cypher*, which is essentially a pattern-matching language based upon *Structured Query Languages* (SQL), and is the most widely employed within the realm of LPGs (Robinson/Webber/Eifrem 2015, 24–25).

Although learning the basics of Cypher constituted another challenge, it was not so much an obstacle as it was a relief, because it essentially removed the prospect of having to create new JOIN tables. Combining tables is achieved by only a few lines of script that can be implemented in a manner of milliseconds allowing one to visualise the changes immediately thereafter. Furthermore, once the general form of the data was established, future additions such as persons, charters, or locations can be added with scripting in which they are directly connected with the other nodes and edges according to the project schematic. As new data enter the project, they are simply added in by script and are immediately connected to the rest of the data following the graph schematic. This sort of importation could be seen as a disadvantage because the new data are no longer in the original authority file spreadsheet. However, Neo4j and other property GDBs allow one to export CSVs from the database for each node type, thus offering a quick solution to this problem. Additionally, the queries themselves can be viewed as a graph, that is, as nodes and edges, as a table, or as a Cypher script, and all results can be exported in a variety of file formats including CSV and JSON.

Results

The results of the project consisted of 7,719 nodes in 14 node-types, and 14,687 edges in 26 edge-types. These included architectural, historical, and geo-spatial data that were combined in a single graph schematic allowing one to query across multiple data types while taking into account multiple mid-ranged questions. The castles and their building phases can be neatly visualised using the database allowing for quick interpretations as shown in Fig. 2. The final schematic of the project is shown in Fig. 3 in which all node-types and edge-types are depicted.

As mentioned in the first sections of this paper, the ability to balance the interests and analytical approaches of multiple researchers from different disciplines is an essential component in any DH project. As each researcher has their own research emphasis, modelling their mid-ranged questions in a single database is essential. Although the CITADEL project did not represent a project of multiple researchers, as it was a single doctoral project, it did include a host of advisors from the disciplines of Art History, Archaeology, Computer Science, Geoinformatics, and History. All of these advisors raised important questions pertaining to architectural function, site significance, social network analyses, the impact of landscape, and the perception of rank. These mid-ranged questions contributed to the overall graph schematic in which modelling pathways implicitly took each question into account. Thus, the final queries determining who built the sites and why the sites were built combined each analysis. The social network analyses regarding the combination of status and administrator positions as well as the specific appearances of individuals in events sourced from charters, filtered out who would have been
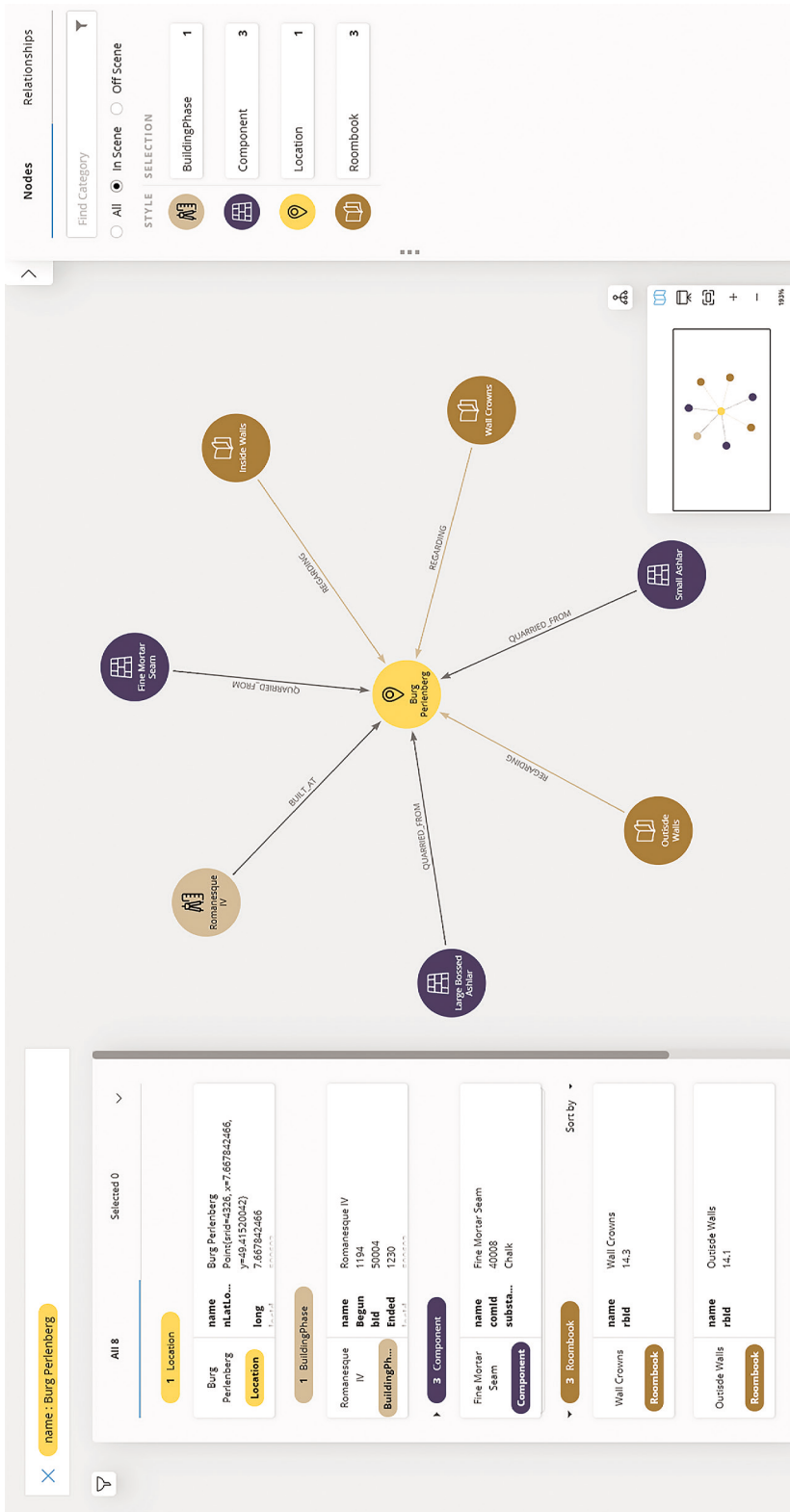
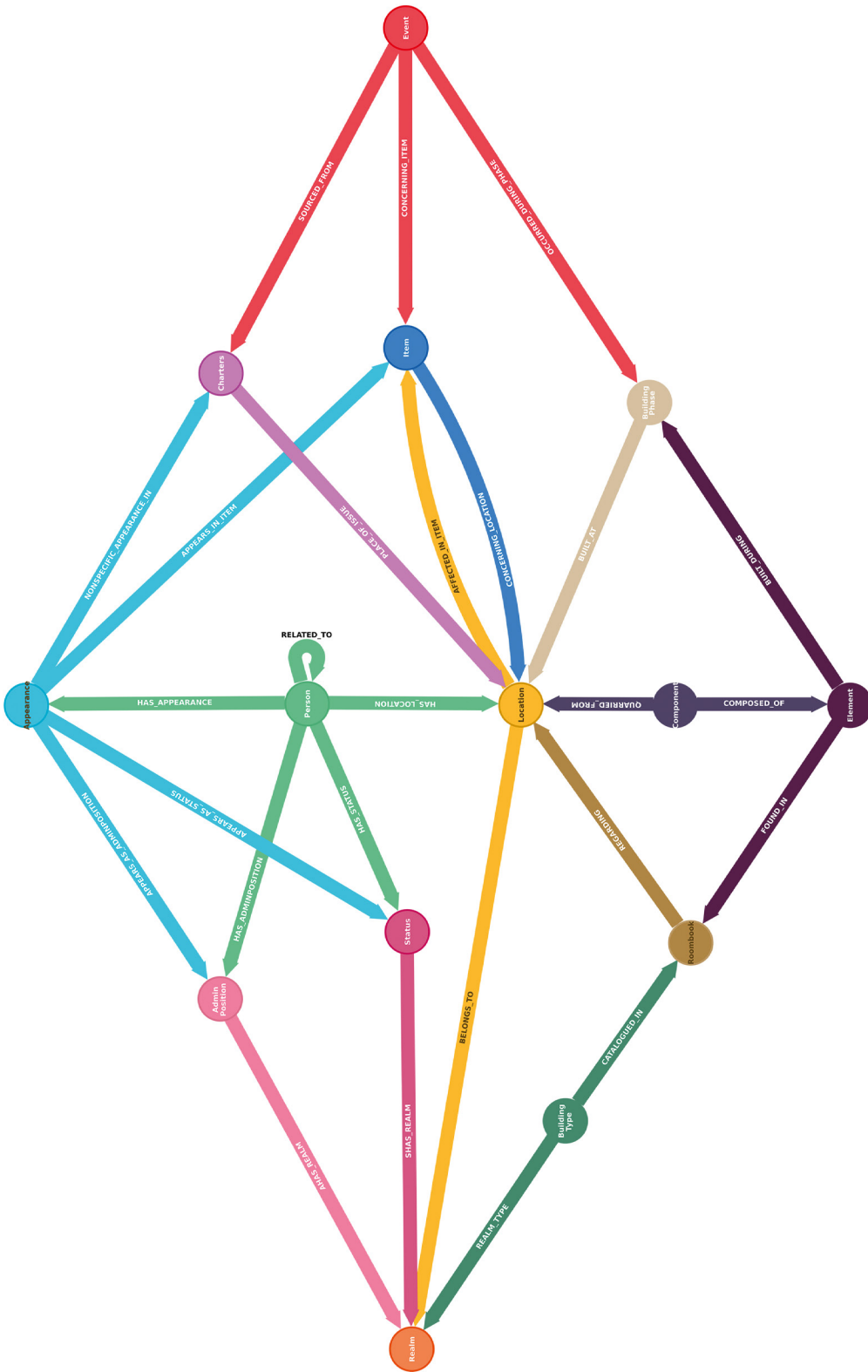**Fig. 2:** Visualisation of Castle Perlenberg's Construction Research.

Fig. 3: Final Graph Schematic of the CITADEL Project.

in a position to gain permission and support for construction projects. The spatial organisation of the data and the locations in which charters were issued, provided information regarding site significance and recurrence, as well as supply points of resources for construction and transportation routes. The overall layout of the castles including the distribution of architectural elements, the use of specific materials, and the building phases identified particular points in time when construction could have occurred. When all three were combined in a single query, the result was a list of potential builders that also revealed an interesting pattern for some of the sites, namely that the builders of Castle Hohenecken, for example, all had the same first name across three generations.

Conclusions

These results were made possible by the application of a LPG, without which the same results would have either not have been possible or would have necessitated a much longer investigation. As it was a single doctoral project, there was a time constraint on the overall length for the production of the research. Nevertheless, the LPG comprised the fruit of a little less than two years. This is perhaps the clearest indication of the time efficiency to be gained when employing such a database. The malleability of the database was also a clear benefit as the graph schematic changed no fewer than 11 times over the course of its development, regularly adapting new information and pathways, as well as reallocating properties along edges. The two fields of Humanities and Computer Science find common ground in this process, where the manifold disciplines of the former meet the modern emphasis upon the latter. As communication is a key determinate in any DH project, it must be underlined that there were a host of advisors and mentors who both expedited and invigorated the development of the database. The use of such a database was uniquely suited to such discussions as the visualisations of the graphical model could be quickly examined and understood by all parties, regardless of their disciplinary background. It would also be remiss to not include a brief description of which further steps can be undertaken having established a LPG. A common application would be as the database for a website or software, or even for a *Conceptual Reference Model* (CRM) such as the CIDOC CRM ontology (Bruschke/Wacker 2014, 3). Furthermore, GDBs (including RDF triple stores) have a unique ability to 'speak' between databases in order to link information from previous databases to one another, or to a new one entirely. The interoperability, malleability, and efficiency of a LPG provides an excellent data solution for DH projects, in which data from various sources, disciplines, and analyses can be combined for well-structured queries and data organisation.

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Figure Credits

Fig. 1–3   Aaron Pattee.

VICTORIA HERCHE

Mediating Traumatic Memory

The Potential of Interactive Digital Migrant Fictions

Introduction: Memories of Migration in a Global Age

Memory and migration are closely intertwined phenomena. Memories travel around the globe due to migration, and they need movement in order to live on. This has effects for both individual and collective memories. In their book *Memory in a Global Age*, Aleida Assmann and Sebastian Conrad argue that under the impact of globalising processes, both the sites of memory and the composition of memory communities have been fundamentally redefined (Assmann/Conrad 2010, 1). Whereas previously the dynamics of collective memory production used to unfold primarily within the bounds of social groups or nation-states, under the impact of global mobility and migratory movements, "[m]emories are carried across national borders and they enter a global arena through all available channels, starting with human carriers" (Assmann/Conrad 2010, 2). Reasons for these dynamics of voluntary and involuntary migratory movements can include "wars and genocide, natural disasters, famine, financial crises and economic decline", which may have the effect of breaking up communities, and disrupting and dislocating cultural traditions and personal memories (Assmann/Conrad 2010, 2). "As migrants carry their heritage, memories and traumas with them, these are transferred and brought into new social constellations and political contexts" (Assmann/Conrad 2010, 2).

In order to embrace this transcultural flow of heritage and memories, Astrid Erll argues in her article "Travelling Memory" that the study of memory should shift from a focus on the 'sites of memory', which are often bounded by territorial frameworks such as regions or nation-states, to the 'travels of memory'. In this way we can appropriately interrogate how memory is produced through circulation, entanglement, networks, and movement. Rather than simply accepting "what social groups may claim as their *roots*: the alleged origins of a cultural memory", she advocates that memory should be studied "through the reconstruction of its *routes*: the paths which certain stories, rituals and images have taken" (Erll 2011, 11; original emphasis). She further points out that "a transcultural perspective also implies questioning those other grids (territorial, social, temporal), which we tend to superimpose upon the complex realities of remembering in culture" (Erll 2011, 8). The transcultural lens allows to see "the many fuzzy edges of national cultures of remembrance, the many shared sites of memory that have emerged through […] cultural exchange; second, the great internal heterogeneity of national culture, its different classes, generations, ethnicities, religious communities, and subcultures",

which "will all generate different, but in many ways interacting frameworks of memory" (ERLL 2010, 311–312).

The 'reconstructions' of travelling memory, which Erll claims are vital for memory to stay alive, may come in many forms.[1] It can thus be asked, "how do memories spread and travel around the world? How are memories changed when they transcend their former habitat and move into the framework of global spectatorship, traffic, and commerce? What role do the new media play in the construction and transmission of memories in a world of growing interconnectedness and intervisuality?" (ASSMANN/CONRAD 2010, 6). Further, how can personal memories undergo a recontextualisation – by processes of fictionalisation and/or digitisation – to engage in the transcultural perspective proposed by Erll and contribute to the constructing of collective memory and public awareness.

The translation of boat migrants' memories into fictional and mediated forms – the main issue to be explored in this chapter – provides a good example with which to foreground the multidirectionality and transcultural perspective of memory. Moreover, the mediation of memory implies a democratic potential, with media operating as memory agents: various narratives that depict the same event sprout and induce multiple voices that spread within a saturated media environment (NEIGER/MEYERS/ZANDBERG 2011, 18). Digitisation and remediation keep memories alive, since repeated representation and circulation over decades and centuries in different media are exactly what create a powerful new 'site of memory' (BRUNOW 2016, 45).

Mediated representations and news coverage of boat migration play a vital role in constructing discourses of the situation of refugees and asylum seekers at large, often in generalising ways. Whether as an image of potential danger and hostile threat or as one of vulnerability, danger, and disaster, the iconic refugee boat evokes ambivalent and emotionally charged associations with notions of transoceanic migration. This potentially shifting positive and negative emotional investment in the image of the boat informs representations of 'boat people' in contemporary media. But what about those individual memories, often traumatic, that are carried with the peoples on these boats? How can the fictionalising of these personal migrant memories open up new possibilities to engage with the traumatic refugee experience? The following section will address how these fictionalised reconstructions of such memories are further transformed by artists into digitised and interactive forms, thereby creating an experience of (intangible) collective memory in order to "synchronize the witnessing of worldwide events for a global spectatorship" (ASSMANN/CONRAD 2010, 4).

In this chapter I compare two contemporary interactive web-based graphic stories, adaptations of Khaled Hosseini's *Sea Prayer* (2018) and Nam Le's *The Boat*

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1   For a problematisation of blank spots in migrant biographies, see Marijke VAN FAASSEN and Rik HOEKSTRA: *Storytelling, Identity, and Digitising Heritage,* pp. 155–174 in this volume.

(2009), to discuss how web-based interactive forms of narration not only bridge the gap between print and digital, but allow for a large spectatorial investment and engagement with global issues such as migration. By making a 'second' translation from novels and short stories into interactive (digital) drawings and webcomics on the internet, the original, personal migrant memories these stories are based on transcend their former frameworks and advocate for the productive global entanglement and public awareness proposed by ASSMANN/CONRAD and ERLL. "Under the impact of the digital as a forceful accelerant, memories themselves have become more mobile, ephemeral and fluid, undergoing constant transformations" (ASSMANN/CONRAD 2010, 4). Assmann and Conrad argue that transformations of local events into global images and platforms (provided by e.g. the world wide web) allow new forms of participation, as the broadening of meaning towards global status has the potential to form a cosmopolitan collective memory around human rights (ASSMANN/CONRAD 2010, 4). Interactive digital fictions explore these possibilities for addressing memory and trauma in a mediated form that produces ethical participation. The digital migrant fiction shifts away from personal trauma and towards a public and political effort to think about collective life stories and shared experiences (IRR 2014, 29). I therefore argue that the translation of such narratives into interactive digital forms provides particularly productive ways to represent the absences and gaps inherent to *traumatic* memories.

Remediated Traumatic Memory in Interactive Migrant Fictions

Trauma is a confrontation with an event that, in its unexpectedness or horror, cannot be placed within the schemes of prior knowledge. The core of trauma is the inability to work through or process traumatic experiences by grieving and to integrate the events into one's own life story. Hence, unlike other memories, traumatic memories are largely inaccessible to conscious recall and control (CARUTH 1996, 151). Trauma is known by its symptoms: phobias, flashbacks, hallucinations, and nightmares. "The flashback or traumatic reenactment conveys, that is, both *the truth of an event*, and *the truth of its incomprehensibility*" (CARUTH 1996, 153; original emphasis). Trauma thus requires integration of an event into one's own knowledge of the past, and the transformation of that event into a narrative memory that allows the story to be verbalised and communicated (CARUTH 1996, 153). Subsequent generations can inherit and display the effects of generational and historical trauma if "not publicly acknowledged and honoured in story" (EPISKENEW 2009, 9). Unprocessed traumas continue to be a burden for subsequent generations, reappearing in dreams, emotions and behaviours. How can the narrative form then represent something which is inaccessible and evades any representation? Caruth argues that "by carrying that impossibility of knowing out of the empirical event itself, trauma opens up and challenges us to a new kind of listening, the witnessing,

precisely, of *impossibility*" (Caruth 1996, 10; original emphasis). Trauma, therefore, demands a mode of representation that textually performs it and its incomprehensibility through, for example, gaps and silences, the repeated breakdown of language, and the collapse of understanding (Schönfelder 2013, 31). Below, I discuss how adaptations of fictional migrant stories into digital formats explore possibilities of how to witness, translate, and visually 'perform' initially inaccessible traumatic migrant memories into representable forms. The artists do not refer to their own memories and experiences, or do so only implicitly; however, they clearly reference the individual migrants these traumatic memories are inspired by.

In 2018, Khaled Hosseini, best known for his bestselling novel *The Kite Runner*, published a short, powerful book, *Sea Prayer*, composed in the form of a letter from a father to his son. The night before a potentially fatal boat journey, a father reflects with his son on their life in Syria before the war – and on their unknown future. Impelled to write this story by the haunting image of young Alan Kurdi, the two-year-old Syrian boy whose body washed up on a beach in Turkey in September 2015, Hosseini hopes to pay tribute to, and dedicates the book to, the thousands of families like Kurdi's who have been forced from home by war and persecution (Hosseini 2018, n.p.). The text is accompanied by haunting watercolour images painted by Dan Williams that take up the majority of the space on each page. Before the publication of the print version, an interactive version of this text was released, which is now accessible via YouTube (Media 1).

This interactive adaptation of Sea Prayer is the first animated virtual reality narrative created using Tilt Brush, a tool for painting in a 3D space with VR. It was commissioned by *The Guardian* and UNHCR, and *The Guardian's* in-house VR team worked in collaboration with the acclaimed VR artist Liz Edwards. The film is narrated by the BAFTA award-winning actor Adeel Akhtar, who takes the role of the father, and is accompanied by a score composed by Sahba Aminikia, an Iranian-American contemporary classical music composer (The Guardian 2017b).[2] It is a 360° clip, which asks its audience to scroll to the right as the story progresses. An already intermedial form, namely the illustrated book by Hosseini, becomes even further mediated by the artistic choices made in the clip. Firstly, the clip adds a soundscape: the voices of the riots and sounds of bombs in Homs, the sounds of the sea, and the incorporated music all have an immediate, surrounding effect while the story unfolds. Colour is another added feature: the darkness of the beach – "impatient for sunrise", as the father muses – is contrasted against the bright colours of the beginning, and thus the search for a new home is bleak and sombre. Most importantly, I would argue, this clip engages with traumatic experiences and addresses, through the narrated memory of the father, the impossibility of remembering 'as it is'. The father speaks to his son of the long summers of his childhood

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2   Performed by the US-based string musicians Kronos Quartet and the musical saw player David Coulter.

Media 1: "Sea Prayer: A 360 Illustrated Film by Award-Winning Novelist Khaled Hosseini" (The Guardian 2017a), see: https://www.youtube.com/watch?v=LKBNEEY-c3s.

in Homs, recalling his grandfather's house, the olive trees in the breeze, his grand-mother's goat, the clanking of her cooking pots. And he remembers vividly, too, the bustling city of Homs before the war, with its crowded lanes, its mosque and Old Town, in the days before the bombs and before they had to flee. "I wish you hadn't been so young", the father says to his son; "I wish you remembered Homs as I do", before the war and city's transformation from a home to a dangerous place of con-flict. But, as the father concludes, "that life, that time, seems like a dream now, even to me, like some long-dissolved rumour" (The Guardian 2017a). The father uses these memories of former happier times to soothe his son before their dangerous sea-travel, but concedes that these "are only words", "a father's trick" in the face of his powerlessness in protecting his son from the unforgiving sea journey.

The drawings of these imagined memories progress as the clip continues and the spectator moves the video to the right. The clip thus foregrounds remember-ing as a *process*. In the opening, we witness how the father constructs a home once known to him, which in its fragmented sketchiness remains a makeshift memory – for the boy one maybe even forgotten entirely. On the other hand, due to the 360° nature of the clip that links the later images of the sea back to the opening, the transformation of Homs and the family's escape remains always connected with this memory of the beginning; as a spectator, one may even return to it or stay with these early images while listening to the text. In this circular 360° representation all the events happening remain connected to the centre of the memories: home.

The digitised graphic novel proves to be a medium which can effectively ex-press the traumatic nature of these imagined memories because of the associa-tion of drawing with intricately connected mental and bodily processes. The use of

drawing, in particular, can forge a connection between the migrant story and trauma's precarious position in between the body and the mental life:

> For the act of drawing foregrounds the relationship between meaning and its material base differently from photography, as the line is a material trace of physical gestures. Drawing highlights the interplay between recording subjectivity as a fully intentional act and as the contingent material effects of contact, a peculiar, partly unconscious relationship between mental processes and embodied actions that was central to the concept of psychic trauma from the start. (ORBÁN 2020, 317)

Variations in technique and texture can also refocus the spectator's attention. The incomplete, unpredictably spreading watercolours in *Sea Prayer* similarly create this heightened awareness of the physicality of image-making: "a graphic narrative can foreground its embodied making, engage tactility through its format and alterations of texture and thereby aid the reader's imaginative investment in a fuller sensory recreation of memories" (ORBÁN 2020, 325). In accordance with Erll's argument that memories must travel in order to stay alive, *Sea Prayer* foregrounds the process of remembering as a way to regain agency over the traumatic events. The narrated and performed memories travel further with everyone who watches this clip, since the spectator engages with the images while they are being drawn and materialising on the white space. The surrounding interactive 360° experience of the characters' escape includes the spectator in the events and makes them reflect on the father's statement that "these are only words", since in fact the clip provides so much more than words.

According to Michael Boatright, graphic novels and graphic representations accompanying stories of migrant journey experiences are a "provocative resource for engaging the complex issues surrounding immigration and immigrant experiences" (BOATRIGHT 2010, 468). They position critical readers "as active participants in the reading process and [invite] them to move beyond passively accepting the text's message to question, examine, or dispute the power relations that exist between readers and authors" (MCLAUGHLIN/DEVOOGD quoted in BOATRIGHT 2010, 470). The *Sea Prayer* further allows for a wider dissemination and an international audience, as the enhanced accessibility of a YouTube clip may activate a larger audience to engage with the global issue of migration.

Representing the Boat in Mediated Migrant Fictions

Digitised and mediated stories such as *Sea Prayer* challenge the audience to reconceptualise the conflicting connotations of refugees fleeing by boat. This applies especially to the context of Australia, where images of boat refugees are

usually designed to encourage the public to feel a sense of invasion and violation: "the images of flotillas of the unwanted, the undesirable, the supposedly hostile" (KENEALLY 2016, 231). Wenche Ommundsen comments on Australia's relationship to boats as follows: "From the First Fleet to the 'children overboard' affair, from the 'dream' or 'ghost' ships observed by indigenous Australians at first encounter to the recent film *Ten Canoes*, boats have haunted the cultural imagination of the island continent" (OMMUNDSEN 2011, 507). Elsewhere, Suvendrini Perera has similarly argued that "This is a country full of boat stories", "[s]ome are commemorated in museums. Some live on in jubilee voyages and lovingly crafted replicas. Others are unspeakable passages to be relived only in dreams" (PERERA 2002, 24). The boat, a highly valued image in the European history of migration at different times and in different contexts, has in the wake of current refugee movements turned into a symbol for anonymous 'boat people' conveniently objectified as 'Others'. The celebration of the boat as a marker of the success stories of explorers and settlers, evident for example in migrant and maritime museums worldwide, turns into an ironic reference to the treatment of migrants and refugees today – from a symbol of the success of the refugee endeavour into a symbol of crisis. Representations of the boat often stand in for the discussion of refugee crises, and function, to quote Olivia Khoo, "as a metonym for the bodies on the boat that are rarely shown, and for multiple personal histories only partially told, eclipsed by the affective force of this overdetermined image" (KHOO 2014, 605).

It is in the context of this increasingly dehumanising and sanitising potential of the cultural preoccupation with refugee boats that I would like to discuss Matt Huynh's webcomic "The Boat". Particularly in the engagement with the Vietnamese refugee experience, which is inevitably linked to the indistinct notion of 'boat people', images of the boat "have haunted the cultural imagination" (OMMUNDSEN 2011, 507) and are emblematic of the experience of migration and resettlement of Asian Australians generally. It is therefore not surprising that contemporary authors and artists have sought to shift the focus from generalising images of boats back to personal stories of the boat refugee.

The original short story "The Boat" by Vietnamese-born Australian writer Nam Le was published in 2009 as part of the collection *The Boat*, which contained seven migrant short stories set in places such as Colombia, New York City, Iowa, Tehran, Hiroshima, and small-town Australia. The story "The Boat" is one of the stories most closely linked to Le's own biography as a boat refugee from Vietnam. It tells the story of sixteen-year-old Mai, who is on a boat headed away from Vietnam in the late 1970s. The boat is filled with Vietnamese refugees – 200 people squashed into a space meant for fifteen, going on two weeks at sea, hit by a storm, racked by thirst and hunger and illness, the quarters below awash in vomit and human waste. The bodies of those who have died are thrown overboard into the shark-infested waters. After days on the boat, Mai realises that she now understands why her father, who spent five years fighting in the war against the Communists and two years in a

re-education camp from which he returned blind, never spoke about his traumatic experiences, never looks 'inward' or 'backwards', as the memories that will stay with Mai when she leaves the boat will likely be horrific ones, too:

> Because beneath the surface was either dread or delirium. As more and more bundles were thrown overboard she taught herself not to look – not to think of the bundles as human – she resisted the impulse to identify which families had been depleted. She seized distraction from the immediate things: the weather, the next swallow of water, the ever-forward draw of time. (Le 2009, 257–258)

This story describes people in moments of extremis, confronted by death, loss, and terror. The traumatic experience as a shock event that overwhelms the victim's cognitive mechanisms is here represented as an experience that is repressed and replaced by immediate observations – a silent and forced 'looking forward' until time, as it says, further "merge[s] with memory, until it seemed as though everything that had ever happened had happened on the boat" (Le 2009, 251).

In 2015, in recognition of the fortieth anniversary of the fall of Saigon and the Vietnamese resettlement in Australia, the Australian broadcaster SBS commissioned a graphic adaptation of Le's short story. Matt Huynh, a visual artist based in New York City, took one year to complete the illustrations that would translate this story into an interactive medium (George 2015). They combine brushwork, animation, text, sound, and archival material, and present an artistic convergence of Japanese Sumi-e ink style illustrations and WebGL animation and interaction (Wei 2016). The interaction version is an approximately 20-minute experience, freely accessibly online. While *Sea Prayer* offers the viewer only limited control, as the text is read out in a particular pace and can only be scrolled into one direction, the webcomic "The Boat" allows for a larger spectatorial investment and decision-making. By scrolling down, the reader decides on the pace of the story (Media 2).[3]

The text remains mostly faithful to the original short story, with only minor cuts and edits; the textual elements, however, fade more into the background as the black-and-white illustrations and the sound design dominate the experience. The story's text is presented in little snippets that slide up over the screen as the viewer scrolls down, or pop up as speech bubbles inserted into the illustrations when characters talk.

The story begins *in medias res* with the boat rocking from side to side in a storm, accompanying the text "a body collides into hers, slammed her against the side of the hatch door. […] She was crammed in by a boatload of human bodies" (Le 2009, 230–231). The perspective zooms in from an outside view of the boat to the girl Mai's

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3   I would like to thank my students in the seminar "Memories of Migration" (2020/21) at the University of Cologne for the inspiring discussions and their thoughtful reactions to the webcomic "The Boat", which have been of great value in the development of this paper.

Media 2: "The Boat", based on the story by Nam Le, adapted by Matt Huynh
(HUYNH 2015), see: https://www.sbs.com.au/theboat/ (accessed 1/3/2021).

perspective inside the boat, thereby transforming the potentially generic outlook indicated by the title "The Boat" to a framework that acknowledges the 'personal' frame of reference. This does not mean that the spectator is put into the position of the refugee, looking through Mai's eyes, but they are put into one that approximates and humanises Mai's individual story. The webcomic thereby refuses the reader an auctorial view or establishing shot overseeing the events that are about to unfold, but puts them right in the middle of it. Jarring motions that jerk the illustration panels to the left and right on the screen while the sound of a thunderstorm roars in the background make the impact of the waves and the storm more immediate to the reader.[4] The constant shaking and rocking of the images and text panels force the reader to move their head from one side to another in order to be able to read the text. The style of drawing is unclean, with rough brush strokes and washy shades creating a distorted and chaotic picture. The lines between different people are blurred; no clear features are distinguishable.

The suddenness of the webcomic's opening chapter, for which the reader is left unprepared, relates to the intrusiveness of trauma. In accordance with Cathy Caruth's understanding of trauma as an event that "is not assimilated or experienced fully at the time" and that cannot be fully "witness[ed]" "as it occurs" (CARUTH 1995, 4; 7), this opening evokes a traumatic experience that emphasises Mai's (and hence the spectator's) inability to gain control over the situation and make sense of it. The sketchy drawings of the bodies, the sudden rocking of the text panels, and

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4 The sound effect's importance is emphasised by the website's instruction to use headphones for a more immediate, hermetically sealed experience.

the agony represented by the sounds "make use of the conjunction or disconnection between words and images to represent the absolute or relative unavailability of an experience to consciousness and narrative memory" (ORBÁN 2020, 319).

The traumatic experience inside the boat during the first chapter, "The Storm", is what triggers Mai's memories of her family in Vietnam and how her journey began. This is the main content in the following chapters. In various moments the rocking of the boat prompts the characters on deck to find themselves adrift in memory, and thus the traumatic memories of the past are always linked to their present traumatic experiences on the boat. Mai's memories are shown in flashbacks; the flashback to the start of her journey in Chapter 2 ("A Good Child") is triggered by a folk song she hears in the present, which reminds her of her mother, who has sent her away to escape war-ridden Vietnam. The linkage to this memory and hence to a new narrative plotline can be seen as a kind of dissociation that Mai experiences. In this case, trauma not only "*disrupts* and *hinders* narration", but also "has a strong tendency to *produce* narration" (SCHÖNFELDER 2013, 33; original emphasis). This oscillation between traumatic experience and traumatic memory is further indicated by fragmentation. The faces on the boat dissolve and overlap with one another; at other times they become fragments themselves when they break down into the parts of the sense organs. This is in line with what Katalin Orbán regards as a characteristic treatment of trauma in graphic fictions: "divisions of form and selves, frozen images, transformation as a representation of the overwhelmed self and drawing as a physical gesture tied to sensory memory" (ORBÁN 2020, 317). The repetition of frozen images of faces in "The Boat" "may be seen as intrusive, belatedly experienced returns of the moment as flashbacks or nightmares that break into consciousness and cannot be placed in a sequence" and these images tied to the overwhelming traumatic event are "frozen moments abstracted from a flow that would have normally proceeded had the subject not been forced to dissociate him- or herself from the event" (ORBÁN 2020, 320). They therefore serve as "a site of the difficulties of satisfactorily recollecting and representing the experience, of the ultimately unverifiable truth of an experience that proved profoundly disorienting, and of establishing the traumatic nature of an unacknowledged experience" (ORBÁN 2020, 321).

At the centre of Mai's flashbacks are memories of her father. She recalls visiting him in hospital for the last time before her refugee journey begins. Once the reader meets the – after two years of re-education camp – blind and traumatised father, the interactive webcomic offers a side story, separated from the main plot and indicated by arrows. It is the reader's choice whether to click those arrows; however, once inside the side story one has to scroll all the way down to the end of it to be able to return to the main story. Inside the side story, the reader learns more about the background of Mai's father, a story he himself is unable to communicate to his daughter in the main thread. In this way, the webcomic pays attention to the way memory and narration can be hindered and disrupted by trauma and foregrounds

the difficulties in mediating and visualising personal memories under traumatic experiences.

The side stories integrate archival black-and-white photos of actual refugees and images of a refugee camp to contextualise Mai's voyage as part of Vietnam's history. This offers the reader two different types of memories. On the one hand, we have Mai's flashback within the main story, which represents an involuntary remembering of her personal traumatic past. The reader has to necessarily pass through those memories in order for the story to continue. On the other hand, there are the voluntary, clearly indicated memories and historical information of the side stories, which create a pause in the flow of the main story. This is a strategy unique to graphic fictions, which have the potential to "spatialize time (shapes, gaps, distances and sequences showing pace, succession, etc.) while also expressing temporal relations verbally, [therefore] can create a uniquely complex sense of contemporaneous or retrospective articulations and integrations of what happened" (Orbán 2020, 319). The side stories are traumatic memories that are literally not integrated into Mai's life story.[5] However, they also appear as side stories with background information meant for the reader only; it is no longer Mai's flashback that the reader follows. They represent, I argue, the silences and gaps of the traumatic events that remain unspoken by the protagonists who have experienced those events themselves. "Certain images of trauma slow down or halt narration, completely replacing or overwhelming words" (Orbán 2020, 320). The incorporated arrows amplify a strategy employed throughout the text: "the closer the narrative comes to a traumatic event it recounts, the more it relies on the relative delay between word and image, rendering the reader a party to misrecognition and retroactive understanding" (Orbán 2020, 320). At the end of Chapter 2 the text says "the street *like a wound* had closed over the space where it [the mother's face and the memory of it] had been" (Huynh 2015; my emphasis). The notion of trauma, literally Greek for 'wound', as an injury inflicted upon the mind is here represented in a mix of mediated memories, with their absences, silences, sometimes bridging and sometimes unrelated movements through Mai's memory. These mediated and digitised responses to the representation of migratory movements by boat make the 'wound' of these experiences more tangible, and might encourage greater imaginative investment and empathy by the spectator.

The webcomic foregrounds the generational effect of the migrating families' experiences of crisis. Mai has been majorly influenced by her father's traumatic years at the re-education camp, in which she lacked a father's role in her life, and is drawn to Quyen and her son Truong, whom she meets on the boat, to protect him

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5   One can also apply a psychoanalytic reading in this context and argue that the reader's scrolling down inside the story is a way to enter a person's unconscious and access repressed memories, a notion that plays an important role in Freud's model to analyse trauma.

from what has happened to her father. She feels empathy for Truong as she sees something in him that reminds her of her traumatised father: "She finally understood, with a deep internal tremor, what it was that had drawn her to the boy all this time. [...] It was his face. The expression on his face was the same expression she had seen on her father's face every day, since he'd returned from re-education. It was a face dead of surprise" (LE 2009, 254). The connection of Mai's father to the little boy Truong foregrounds the fact that no person, no generation, and no age group can be safe from the aftermath of traumatic events, especially when it comes to escaping from and fighting in wars. Moreover, the intimate bond between Mai, Quyen, and Truong is based on their interdependency. This social structure mainly comes into being due to the traumatic situation they are all in, yet it resembles a family structure like the one that Mai has left behind. The story concludes with an aural sensation: the splash of the sea surface when Truong's dead body is thrown overboard. Everyone, including Mai and Quyen, looks away, as the moment is too terrible to witness, "the spray moistening their faces as they look forward, focusing all their sight and thought on that blurry peninsula ahead, that impossible place" (LE 2009, 272). The splashing sound has been included in the webcomic at previous points, implying that Truong's fate is more than singular and individual, but a collective and shared experience. Following this, the webcomic ends with contextualising information on how many people fled Vietnam and how many probably died while doing so. This ending may seem strangely abstract, given the previous narrow focus on Mai's story, but it also reminds the reader that this fate is one among many potentially similar ones.[6] And in the end, Truong's death ultimately withdraws the hope for a renewal of the family Mai has lost. The webcomic therefore underlines the psychological need for a socially safe environment, which Mai is missing in the context of her boat journey, yet also challenges us to regard shared trauma as an instrument with which to form a sense of community and identity.

The artist Matt Huynh himself has commented on the communal aspect and continuous urgency of this story:

> *The Boat* is the most urgent and immediate comic I've ever made – a work of a kind I've never quite seen before and a unique chance to engage an issue so entangled with my own life. It's a work that deals not in metaphor or analogy, not exclusively fiction or history and impossible to segment artist from subject. This resulting work is proof of my life, luck, of a country's compassion for people in the most vulnerable of circumstances over 40 years ago and our urgent, unavoidable connection to today's asylum seekers and refugees." (HUYNH in MACDONALD 2015)

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6   The concluding statistics state the estimated numbers of Vietnamese refugees to Australia in the 1970s. More than the short story by Nam Le, the webcomic therefore contextualises its personal narrative within a larger, particularly Australian political debate.

Conclusion

This chapter started by asking how memories of migration – the intangible heritage of people moving in a globalising world – travel across the seas. Two examples were presented of fictional traumatic journeys that explore the inevitable interconnectedness of the traumatic experiences before and during the journeys. Each protagonist carries the trauma of an old life, of loss and of crisis along with them – memories that are triggered by new traumatic experiences during the journeys. The interactive digitised format, which gives control to and at the same time shocks the reader, reinforces the juxtaposing of memories of the past with current events, and in line with Matt Huynh's statement above, discloses how refugee stories of the past link with those of today's refugees. Consequently, "even when a graphic narrative focuses on traumatic events as hidden, unknown or silenced, its medium often yields a counter-discourse to traumatic absence" (ORBÁN 2020, 319). The unspoken traumatic events of the past are triggered by present events and vice-versa; hence there is no definite absence, but an acknowledgement of the traumatic memory. The graphic fiction transforms "the silence modulated into a partial retrospective voicing and visualization through the interactions of verbal and visual narrative tracks [...and engenders] the integration of a previously unknown or silenced traumatic experience through listening, secondary witnessing, and subtly or thoroughly transforming one's own life in the process" (ORBÁN 2020, 319).

Mediating traumatic migrant stories which are based on personal memories into interactive digital formats is a means of challenging the hegemonic national discourse which sidelines or silences migration. Through their participatory outset, these digital stories are inclusive and globally accessible, while at the same time highlighting that these experiences are not universal but specific.[7] In their fictionalised framework they make use of the 'secondary witnessing' inherent in travelling memory and take part in the construction and dissemination of collective memories on human right issues on a global scale. Moreover, the interactive digital format permits innovative ways of engaging with medial representations of trauma, since "[t]rauma theory continues to evolve through new ways of understanding the process of traumatization and recovery, as our knowledge of the traumatic process inevitably changes with advances in cognitive science, while profound changes in media exposure and use and the shifting dynamics of a global exchange of information shape what counts as trauma and how it can be voiced and acknowledged" (ORBÁN 2020, 326). By exploring the importance of memory and remembering, *Sea Prayer* and *The Boat* shift the focus from oversimplified images of the boat back to personal stories of the individual asylum seeker. The 360° YouTube adaptation of *Sea Prayer* has thereby provided an example of how traumatic migrant memories

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7   For another means of interactive auditive access to memory, see Romany REAGAN: *Unlocking Heritage Stories,* pp. 73–89 in this volume.

and images such as the photograph of the little boy Alan Kurdi undergo a recontextualisation in the form of the fictionalised letter by a father like Kurdi's. The webcomic adaptation of "The Boat" more explicitly links to the author Le's and visual artist Huynh's own memories, yet employs similar means of reinterpretation, adding, omitting, and reformulating a personal migrant experience in order to make a formerly inaccessible traumatic experience virtually tangible. It sets its narrative inside the refugee boat, makes the boat's movements and sounds palpable, and thereby humanises the protagonist's individual refugee experience. While I in no way want to understate the power of the original literary texts, it is particularly in these digitised, interactive forms that notions of memory and trauma are strongly explored and experienced. Since the digital interactive format expects an active, involved spectator, it may also produce an ethical response and engagement with the topic of boat migration at large.

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Media Credits

Media 1   The Guardian 2017a.
Media 2   Huynh 2015.

MARIJKE VAN FAASSEN & RIK HOEKSTRA

Storytelling, Identity, and Digitising Heritage

> But you want a proper story, huh.
> Then I must tell you something about my people and my land.
> *Then* you can see the story, and know it.
> Storyteller *Ten Canoes:* David Gulpilil Ridjiminiraril Dalaithngu

Introduction

At the beginning of the film *Ten Canoes*, over background images of his land, a lush green tropical swamp with low vegetation, the voice of storyteller David Gulpilil says that he is going to tell us his story. David Gulpilil was a Yolŋu actor from Northern Territory Australia and the story is about his people and their way of living. He does not only tell the story; he initiated the film and asked Rolf de Heer, the white Australian film director of European descent, to direct it. The film fits into the efforts of the past decades to make it clear that the story of a country consists of a multitude of stories of people with different ethnic backgrounds (see e.g. CLARK/CAHIR 2013, V–VII; MCKEMMISH 2017, 126).

The idea is that if you want to know people, you should let them tell you their story. The idea of storytelling lies behind many ideas in cultural heritage institutions, such as archives or museums, that are aiming to diversify the image of the past they propagate. This is a consequence of the growing awareness, both in the archival science and in cultural memory studies, that there has been a shift in the public cultivation of shared memory. For a long time the key to collective memory was in static repositories – in the archiving of information such as documents, photographs, or other cultural heritage objects as a product. Nowadays, we are more focused on the act of remembrance as an ongoing and dynamic process. In the words of literary scholar Ann Rigney (2016, 68), we now focus on "the capacity of a particular story to stimulate its own reproduction in a new form: to pro-create".

A similar shift from 'product' to 'process' is seen in archival science, where Frank Upward and the Record Continuum Group, based at Monash University, Australia, in particular elaborate on the dynamics of archival records. In their view, documents or records are not created, used, filed, and finally stored or destroyed in neat consecutive management phases, but continuously reshaped and even recreated in space and time (VAN FAASSEN/OPREL 2020, 257). Upward relates this continuum of records to the value they can have as authoritative resources in terms of evidence or collective memory. In their latest book, the Records Continuum Group even tries to bridge the gap caused by the tendency of archivists to separate their

recordkeeping role from their cultural heritage role by presenting a Cultural Heritage Continuum Model (Upward et al. 2018, 201–203). In this continuum, the storytelling and narrative axis stands out as an important feature that has to be considered in any community 'informatics' project. Both Rigney and Upward point out that the narrative is a 'model' of storytelling applied, or even warranted, by the group in order to turn events into meaningful structures (Rigney 2016, 70; Upward et al. 2018, 202).

With the rise of digital environments, digitising heritage objects and digital storytelling have become new additions to the options of telling stories with heritage (Ivacs 2016, 206; De Souza et al. 2016). In theory, digital platforms are much less confined in terms of space than physical exposition rooms, which should make it possible to involve a much larger variety of cultural heritage objects, documents, and stories than was ever possible before. However, this also raises the issue of choice. There may be fewer limits to what can be shown and connected, but before stories can be told with heritage objects, those objects have to be available, not only physically but also in digitised form. Heritage institutions usually start to think about digitisation from their own, most popular collections, and funding organisations currently seem to follow this collection-oriented approach to financing digitisation, thus reflecting institutional priorities – usually on a national level. Both tendencies carry the risk of using a shallow base for narratives with a large impact and leaving other stories unheard, or as disconnected parts of the whole. Therefore, the question should not only be what to digitise but also how to *contextualise* it.

In this chapter, we explore the ways in which Dutch Australian stories are told. In general, Dutch migrants to Australia have a Western background and are not considered as a traditional minority in the sense of being an underprivileged group. They even view themselves as 'perfect migrants' who assimilated so well into white Australian society that they have become invisible (Peters 2010). This in itself is a powerful narrative, provoked by the propaganda of both governments, which dominates the collective story of Dutch Australian migrants – but under the surface there are many more perspectives and untold stories.[1] We argue that digitising heritage should support a myriad of perspectives because only by making many different voices heard can we begin to understand the past. The stories of different migrant groups may vary, but there are also many shared experiences.[2] The Dutch Australian migrants share with all migrants the condition that their cultural heritage is dispersed over at least two different countries along with their heritage

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[1] See for instance Cote (2010), who explains such 'invisibility' from the perspective of the Indisch Dutch, as the mixed-origin people from the former Netherlands East Indies (now Indonesia) are called. See also Rigney 2016, 69 and Upward et. al, 2018, 202 on dominant or 'forgotten' narratives.

[2] For the narration of migrant stories in digital media, see Victoria Herche: *Mediating Traumatic Memory*, pp. 139–153 in this volume.

institutions and different collective historical consciousnesses and (his)stories (Van Faassen 2014; Arthur et al. 2018).

Currently, the Dutch authorities are aware that worldwide, the Netherlands has left many cultural traces throughout history and taken influences both tangible and intangible back to the Netherlands. In the government's view, preserving this "shared cultural heritage" and making it accessible is in all cases a matter of international cooperation between governments and national archives on a bilateral basis. The general aim of this policy is for cooperation to take place on the basis of equality and reciprocity, and with respect for ownership, in order to stimulate sustainable preservation (in the case of archival collections often via digitisation) and thus facilitate civil participation and the (re)destination of heritage.[3] However, in the case of migrant heritage, which consists of not only policy and personal files of both governments, but also private collections and other material traces and objects in at least two countries, this heritage is utterly scattered, and the government and even archival officials often lack academic 'domain expertise' on the collection provenance, content and methodological issues concerned with linking or contextualising it. For this reason, they sometimes seek collaboration with scholars, as is the case with our project *Migrant: Mobilities and Connection*.

Below, we first elaborate the idea of the 'archival multiverse', a concept highly influenced by records continuum thinking. It provides a tool to analyse where stories that seem to be completely different can meet. We then explain the aim of our project *Migrant* by describing its core archival collection, which consists of a migrant index card system. We argue that a methodology based on a connecting resource (in our case the migrant registration cards) can relate apparently unconnected heritage items, collections, and stories. Following this, we explore the variations in migrant or migrant-related stories by introducing two Australian women with Dutch roots and widely divergent backgrounds as case studies to operationalise the archival multiverse concept. Finally, we propose ways of broadening this multiverse to include the digital realm in such a way that it connects the heritage of many different groups.

Minorities and the Multiverse

Anthropologists and other scholars have started to ask migrants for their stories worldwide, often with the idea that if people lose their stories, they lose their histories and their identities (De Fina/Tseng 2017; Apaydin 2017). Even though the Yolŋu are not migrants, a comparable motivation is behind the film by De Heer and Gulpilil, and in the 'making-of' documentary, it becomes clear that the old ways of

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3 Policy document Rijksoverheid Nederland: Progress of the International Culture Policy 2019 (Voortgang Internationaal Cultuur Beleid 2019).

the Yolŋu had to be 'tentatively brought back alive'. No one still knew how to construct the traditional bark canoes, and the first recreated one had to be based on old research photos taken by anthropologist Donald Thompson (1901–1970).[4]

In a similar vein, digital heritage institutions want a multitude of people from different backgrounds to tell their stories by means of the heritage objects in their collections, such as documents, paintings, photos, and artefacts, to give new meaning to this heritage and stimulate the act of remembrance. Minority groups who are underrepresented in heritage institutions have objected that they cannot tell their stories because the institutions do not contain such objects of memory. Heritage institutions have tried to remedy this situation by reaching out to these groups and by co-creating heritage, mindful of the African proverb that when an old person dies, a library burns (cited by Faulkhead/Thorpe 2017, 2; Faulkhead 2017, 479–516).

Speaking from an archival background, Faulkhead and Thorpe conceptualise a new way of archiving – what they call 'an archival multiverse'. This is messier than the previous "archival universe, dominated by one cultural paradigm" because it brings together different knowledge systems. In the Australian context, it asks for yarning – people from different cultures co-creating heritage and learning and knowing in a mutual process. *Ten Canoes* is a perfect illustration of this yarning. The companion making-of documentary *The Balanda and the Bark Canoes* tells of the cultural differences and physical difficulties the cast and crew had to overcome while shooting. With a lot of talking and yarning, they learned to understand each other, which enabled them to engage together in the storytelling in the film.

All museums and other cultural heritage institutions like archives and libraries do their best to reach out to their audiences by telling stories with the objects in their collections, aiming for a more emotional experience than the objects could achieve without a story context (Henrich, 2013; Detlor/Hupfer/Smith 2018). Storytelling appeals to and draws upon the historical consciousness of the people involved. While most researchers agree that telling stories in one way or another is central to the human condition (De Fina/Tseng 2017), Grever/Adriaansen 2019 have argued that historical consciousness has a collective as well as a personal meaning. Collective historical consciousness is often coloured by Western and national conceptions of history, while personal historical consciousness is also rooted in personal experiences.[5] It is obvious that the collective historical consciousness has a varying but usually pervasive influence on the personal consciousness, as we will demonstrate below (cf. Brown et al. 2016, 439).

The aim of our project *Migrant: Mobilities and Connection* is to address these different types of historical consciousness and to enable storytelling by connecting

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4 Documentary: *The Balanda and the Bark Canoes: The Making of the Ten Canoes.*

5 Dellios 2012, 2015 demonstrates this perfectly in her analysis of 'contested' heritage, such as the migration centre Bonegilla Australia, where stately perceptions 'struggle' with those of the grass roots groups (i.e. the migrants themselves).

dispersed migrant cultural heritage that is digitally available in more than one country. Our point of departure is a registration card system for Dutch emigrants to Australia that was created and maintained by Dutch migration officials in both countries, as the card was the access point for each migrant's selection and application file and was sent with the file to Australia after acceptance for migration. In 2006, the cards were deposited in the National Archives in The Hague (Van Faassen/Oprel 2020; Arthur et al. 2018). They refer to more than fifty thousand migrant units, corresponding to 150,000–180,000 individuals who migrated from the Netherlands to Australia between 1950 and 1992. In terms of content, they form the linchpin between the official migration policies as formulated in The Hague and implemented by the Dutch Emigration Service in Australia and the migrants' personal experiences. They contain formal migration data like birth dates, occupations, marital status, religion, family composition, migration date, and means of transport, and informal data such as assistance with employment, housing, and a host of other social issues from the Dutch emigration service abroad (accommodated by the consulates) that took care of the migrants after they migrated to Australia, at times for more than thirty years after migration.

As the cards contain data about most Dutch Australian migrants, the idea is that they can be linked to most of the other heritage items (documents, objects, archive items, and files) in institutional and private custody that together constitute the cultural heritage of these migrants. As is the case with all migrants, this heritage is dispersed over many archives and museums in the Netherlands and Australia, as well as in those of international organisations such as the Intergovernmental Committee for European Migration (ICEM), today known as the International Organization for Migration (IOM). Linking this dispersed information is only possible using digital methods. There is no established methodology available; we thus use the database of the registration cards as a virtual data backbone to reconstruct both individual and collective lives via the data on the cards and any information available in the dispersed cultural heritage (Arthur et al. 2018, Fig. 3).

In our discussion with other researchers and members of migrant communities, many have mentioned the power of cultural memory items as means of remembrance, not only of the past but also of family members living and dead.[6] For individuals, the heritage items that concern relatives and personal lives are all-important, even if a collection of personal files or indistinct photos are not usually very interesting for either outsiders or heritage institutions. Similarly, individual stories are significant for those concerned and their social circled, but less so for researchers, who cannot digest thousands of different stories and for whom distinct group characteristics are in many ways more telling than individual stories

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[6] We had these discussions at our international 2016 NIAS-Lorentz workshop https://www. lorentzcenter.nl/migrant-re-collections.html (accessed 29/10/2020); cf. Gila/Morales 2016, 11.

which are in most respects very much alike. On the other hand, while policy files may seem impersonal and abstract for many members of the migrant community, they can explain questions about who migrated and why much better than individual stories can. Finally, for most migrants, there is not much data available, as they left few administrative records other than a few official data. Data, stories, and heritage items from the people who shared parts of their experiences, for instance on the migration ships, in the migration camps, or in employment or housing, can help their children or grandchildren fill in at least parts of their stories. This makes connecting and linking all sorts of different heritage items worthwhile. For these reasons, and also for reasons of varying perceptions, migrant stories are very different. Below we explore some of these variations and their dynamics caused by external factors and the lapse of time.

Identity and Belonging

Currently, some 300,000 Australians claim to have a Dutch background. The criteria for having a Dutch background is what people indicated in the Australian census, not a carefully registered fact. This does not make the Dutch background doubtful, but it does raise the question of which people consider themselves to belong to this group. To begin with, let us return to Rolf de Heer, the filmmaker who co-created *Ten Canoes* with David Gulpilil and the Yolŋu actors. He himself is not part of this Aboriginal nation, but of another minority, as his own background is Dutch; he was born in 1951 in the Netherlands and migrated to Australia with his parents in 1959, when he was eight years old.[7] Below we tell the story of two people of Dutch descent, Adriana Zevenbergen and Kathy Kickett. As their backgrounds are entirely different, their stories illustrate two completely opposite accounts of the Dutch in Australia.

Adriana (Adri) Zevenbergen (nee Wageveld) was something of a celebrity. In 1958, she was the hundred thousandth Dutch migrant to Australia. Her story was amply documented, with pictures in the official Dutch and Australian propaganda, 114 of which remain in both Dutch and Australian photo archives. These propaganda pictures told an idealised story and followed her together with "a ship full of photographers and journalists".[8] Though 'originally from Rotterdam', she lived in the village of Abbebroek in the Netherlands, which according to the official

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7 https://recordsearch.naa.gov.au/SearchNRetrieve/Interface/ViewImage.aspx?B=1424110 (accessed 29/10/2020).

8 Documentary Max, https://www.maxvandaag.nl/programmas/tv/vaarwel-nederland/australie/POW_03876992/, 25:43, photo of the Australian journalists waiting to meet her before going from board in Melbourne https://recordsearch.naa.gov.au/SearchNRetrieve/Interface/ViewImage.aspx?B=7649080; images NED-fotoarchief, 0833 + 0834 (accessed 29/10/2020).

captions of the photo had a sixteenth-century church, where women "still wore clogs".[9] Her parents had a grocery shop in Rotterdam where Adriana helped out, while her husband was a "former ship's engineer and skilled fitter" at Pernis refineries.[10] As stated on his immigration file, her husband had previously worked for Shell as an apprentice on the Dutch Caribbean island of Curacao in 1950–52 and had undergone a careful selection procedure for skilled labour migration to Australia in the Netherlands in 1956, where he was admitted under the Netherlands–Australian Migration Agreement that paid for his shipping fare. The family, who made an "excellent" impression on the migration officers, was carefully selected, focusing on Adriana as the hundred thousandth migrant. The aim was to persuade Dutch "housewives", who were considered to be "reluctant" because of homesickness, to emigrate as well.[11] The reportage follows her through her migration voyage aboard the *Johan van Oldenbarnevelt* with a large case inscribed *100,000 migrant* to her brand new home in Australia in Geelong, an "attractive seaport of 90,000 people", near Melbourne.[12] It is worth noting they skipped the migration camps such as Bonegilla where most other Dutch migrants were first sent for accommodation and that Adriana's husband Kees Zevenbergen went on to work at the Shell refineries in Geelong, something that (equally uncharacteristically) must have been arranged in the Netherlands where he did a similar job. Adri Zevenbergen's story is told as an example, but it is not very characteristic for Dutch emigrants. In other words, it was narrated with a propagandistic aim.

Kathy Kickett was portrayed in and interviewed for the exhibition and the book *Vêrlander* by anthropologist and historian Nonja Peters (Snoeijer/Peters 2016). Like Rolf de Heer, Nonja Peters is of Dutch descent and has a keen eye for the plurality of storytelling, and for giving voice to often unheard stories. The book is about descendants of Indigenous groups and Dutch sailors from the time of the VOC – the Dutch East India Company – which was active from 1602 to 1800. Kathy has a mostly Aboriginal background, but inherited much of the Dutch look. She may seem far removed from the Yolŋu people filmed by Rolf de Heer in *Ten Canoes,* but still emphatically considers herself Aboriginal, saying "I don't have to be a full blood to be an Aboriginal", like the other people who were interviewed for *Vêrlander*. However,

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9   National Archives of Australia (NAA): A12111, 1/1958/4/39 barcode 7529953 https://record search.naa.gov.au/SearchNRetrieve/Interface/ViewImage.aspx?B=7529953   (accessed 29/10/2020).

10   NAA: A12111, 1/1958/4/70 barcode 7529984 https://recordsearch.naa.gov.au/SearchNRetrieve/ Interface/ViewImage.aspx?B=7529984 (accessed 29/10/2020); NAA: A12111, 1/1958/4/45, https://recordsearch.naa.gov.au/SearchNRetrieve/Interface/ViewImage.aspx?B=7529959 (accessed 29/10/2020).

11   Migration file of Cornelis (Kees) Zevenbergen at NAA, A2478, Zevenbergen C, barcode 1420972, p. 33 available at http://recordsearch.naa.gov.au/SearchNRetrieve/Interface/ ViewImage.aspx?B=1420972 (accessed 29/10/2020).

12   NAA: A12111, 1/1959/13/22.

Media 1: Video of *Vêrlander.* Exhibition at the Westfries Museum, featuring portraits created by Geert Snoeijer and Nonja Peters (2017), https://vimeo.com/202206059.

she and they all still find it important to know they also have a partial Dutch background (Media 1).

Kathy's portrait is *pars pro toto* for many more individuals of mixed descent. Many of them may not be aware of or interested in their roots from colonial times; they may even be ashamed of and frustrated by them, because having a mixed ancestry usually means being excluded by two dominant groups (ROSEN JACOBSON 2018). In their collective story, the Dutch part is usually left out.

The subject of assimilation is crucial in the subject of identity and belonging – both the official and the subjective side of it. Until the mid-1960s, Australia had an assimilation policy in which migrants were supposed to convert into Australians instead of staying attached to their cultural backgrounds; until 1958 this was coupled with a 'White Australia' policy that discouraged people of colour from migrating to Australia (EVANS 2001; HAWKINS 1989). Only from 1966, at the end of the Menzies administration, did both the White Australia Policy and the forced assimilation policy change into a more multicultural approach, in which minorities were encouraged to maintain and even reinforce their cultural identities. Naturally, these official policies and their changes affected migrants, including Dutch migrants, but just as naturally, these effects were not equally felt by the migrant population.

First, there was a generational effect. First-generation migrants have lived part of their lives in their countries of origin, and it is hard for them to detach completely from it. The generational differences are not very particular for Dutch Australian migrants but do exist in many ethnic groups. We already emphasised part of the 'generation divide' in *Ten Canoes*; in *The Balanda and the Bark Canoes*, this manifests in the part where the elder boss Mingululu walked off the filmset for several

days. It appeared the other actors feared the film was in danger because Mingululu was very traditional, and thought his character's wives could only be played by women who actually were or at least could be his wives according to the complicated kinship rules of the Yolŋu people.[13]

Second-generation (Dutch) migrants in particular often distance themselves from their background. Nonja Peters (2010) called them the in-between generation, and the in-between feeling is common for migrants over the world. Peters writes: "second generation Dutch-Australian migrants' most often expressed response is: 'we're never given a say in the matter'. We were sent into the Australian community with the imperative – *aanpassen*. Assimilation policy reigned supreme at that time, and Dutch parents expected their children's resettlement to be seamless. It was often not so – but most parents were unaware of the challenges that faced their children as their heritage was firmly rooted in the homeland culture – ours was not".[14] Most second-generation migrants do not speak Dutch or consciously keep Dutch traditions alive. Historian Anne Brehler quotes second-generation Dutch Australian migrant Martien: "I think I'm an Ozzie, yeah, I think I'm an Ozzie. I'm also Dutch, but I'm an Ozzie. I'm both. Fifty years I didn't speak a word of Dutch, fifty years I didn't read Dutch, if anyone asked me I was Dutch, I said 'no'. I even got my master's degree under my half name. […] I didn't want to be known as Dutch" (BREHLER 2018, 62).

The image of the Dutch as one of the most favoured Northwest European ethnic groups after British migrants, which resulted first in the adjustment idea and later in confusion, stems from the forced assimilation period. After the forced assimilation policy changed, minority groups started to manifest their cultural identities, but the Dutch perceived themselves as 'invisible migrants', who learned to speak English much better than migrants from other countries. The view of Dutch Australians as an invisible group of migrants was an expression of mixed sentiments of pride and frustration – pride in the sense that the Dutch were the second best Australians after the British, and frustration in the sense that there was no such Dutch identity for Dutch Australians as existed for other groups (PETERS 2010; HORNE 2011, 15–17).

There may not have been whole Dutch neighbourhoods, but in practice, there was a lot of Dutch bonding and cultural activity in Australia. Looking back on his youth, Adri's son Addo Zevenbergen states that his parents' social life from 1958 was mainly with other Dutch.[15] Anne Brehler counted 270 Dutch associations in Australia. There were schools, newspapers, radio stations (some of which are still

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13 For a very balanced analysis of the way Yolŋu people constantly negotiate their (dynamic and multiple) identities and communicate their social structures in a performative way by employing melody, see TONER 2003, esp. pp. 82–83; 86–87; 92.

14 http://projectmigrant.blogspot.com/2017/11/second-generationmigrants-by-nonja.html (accessed 29/10/2020); PETERS 2010; a similar effect in the Moroccan migrant community in the Netherlands in BOURAS 2012.

15 Documentary Max 25:43.

operational) and cultural associations, but most were local social clubs for general socialising and sometimes especially for women, and choirs, soccer clubs, and card-playing societies. In percentages, 29 % were general or cultural, 31 % for leisure and 6 % (entirely) religious (BREHLER 2015).[16] In the 1950s and 1960s, the churches themselves also played a significant role in migrant societies. In the Australian Catholic Church, although the Church itself did not have separate 'Dutch' parishes, Father Maas played an important role for Dutch migrants (OVERBERG 1998). This was different in the case of the Protestant societies, as they sent over Dutch ministers to tend the souls of the migrants.

One such minister was Reverend Cornelis (Cees) Bregman who was a minister at the Dutch Reformed Church. In Australia he was employed by the Presbyterian Church Australia, first in Toronto (NSW) at the Lake Macquarie Charge from 1954 to 1959 and then at the Dutch Charge of Ultimo Sydney (NSW), from 1959 to 1963.[17] He had an active role in keeping the parish together and providing social assistance to his parishioners. The church building of Ultimo was "historic and unique", Rev. Bregman wrote in 1960, but the area of Ultimo was run down and full of slums where old and sickly people lived, and the parish could not survive as the church had fallen into disrepair. Apart from a weekly service the parish provided social and food services for the poor and needy in the neighbourhood. The Dutch Charge of the Presbyterian Church had taken over the care of the church building in 1960 and had spent a considerable sum of money on repairing it, but the work that still needed to be done exceeded the parish's financial possibilities, and he asked for financial help. R. H. Hill, an official of the assimilation section of the Australian Department of Immigration, had been invited to the inauguration, which with 250–300 visitors was attended by a large part of both the English-speaking and Dutch-speaking congregations. Hill was interested in social work and made sure to meet the Dutch social worker Klaas van Huffelen, whose name he misspelled. He told Hill he reached "3,000 adherents", some of them in outlying areas, thus reaching thousands of Dutch migrants arriving in NSW and providing assistance with "assimilation, or personal needs" (Fig. 1).[18]

Of course, the church remained the centre of the congregation and also figured in the farewell party for Rev. Bregman in 1963, which consisted of a church service and an informal entertainment with a cabaret in the Dutch tradition. The cabaret

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16 Due to the Dutch religious segmentation (called pillarisation), cultural and leisure groups most of the time had a religious signature as well.

17 http://resources.huygens.knaw.nl/emigratie/gids/persoon/2744926202; http://resources.huygens.knaw.nl/emigratie/gids/instelling/3363421001; http://resources.huygens.knaw.nl/emigratie/gids/instelling/2904596808; http://resources.huygens.knaw.nl/emigratie/gids/instelling/1139188587; http://resources.huygens.knaw.nl/emigratie/gids/instelling/2904596808 (accessed 29/10/2020). Further background: PRINSEN 2005.

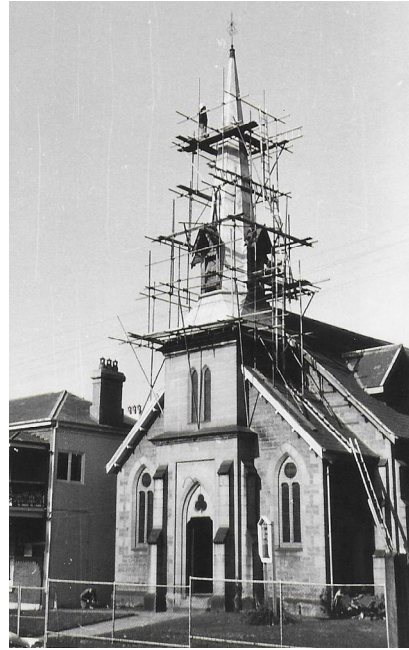18 Letters of Ds Bregman and Mr Hill, Immigration Council in NAA, CA 957 C3939, N1960 (Sydney Reading Room).
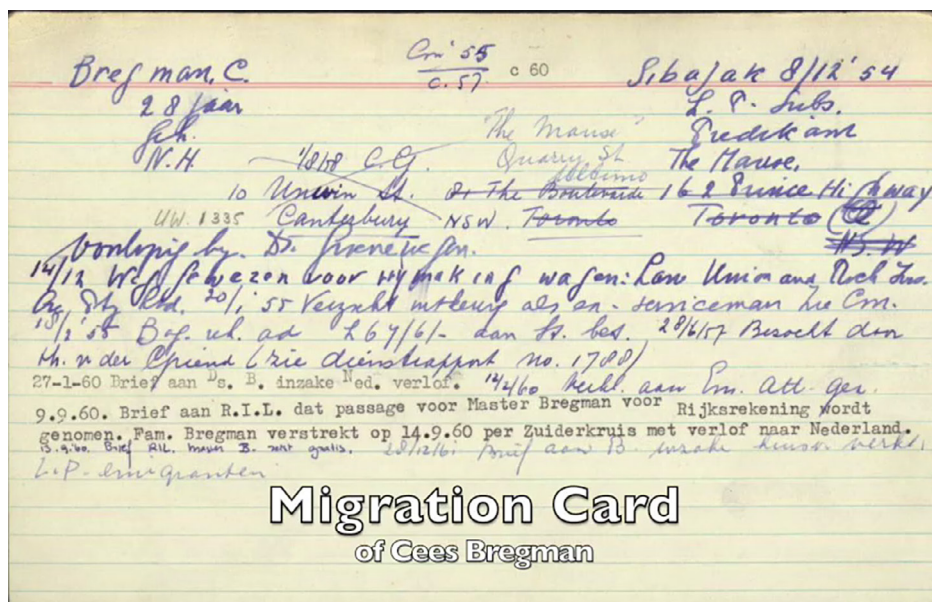
Fig. 1: The Dutch Church in Ultimo.

was performed by Theo and Eef ten Brummelaar, friends of the Bregman family who were prominent in the Dutch migrant community in Sydney, and who had started their Dutch Cabaret a few years earlier in Toronto. The cabaret featuring a song called '*in Sydney staat een kerk*' (in Sydney there's a church) to the tune of the nursery rhyme of '*in Holland staat een huis*' (in Holland there's a house), which would have been known to all Dutch parishioners from their youth, mainly because it featured in the popular 1950s Dutch radio show 'De Familie Doorsnee' (Media 2).[19]

Adri Zevenbergen would most likely have felt at home with the Bregman cabaret – like most other migrants who had recently arrived – but for Kathy Kickett and most of the third and even second generation of Dutch Australians, it would have been incomprehensible and seemed very exotic. Most current Dutch would still recognise the song and some of the other Dutch songs in the show, but definitely not the presumably Australian songs also performed in it. In this sense, the Dutch Australians migrants in the Sydney Dutch Charge parish already had created a mixed cultural position. It would be next to impossible to explain the whole cabaret show for a wider audience, as many of the cultural references have been forgotten or become obsolete, or do not have the same appeal as they did at the time. And while it definitely is cultural heritage, digitising it without such an explanation does not make much sense, as it only appeals to a very small group. This brings us to the issue of what cultural heritage should be digitised and contextualised.

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19 https://www.hoorspelen.eu/producties/hsp-i/in-holland-staat-een-huis.html for example https://www.youtube.com/watch?v=4QQV08FINB4 (accessed 29/10/2020).

Media 2: Audio visual of farewell party Rev. Cees Bregman, https://heidicon.ub.uni-heidelberg.de/#/detail/23817741

Shared Heritage and Storytelling

Theo ten Brummelaar, who presented the cabaret for Rev. Bregman, was important to Dutch culture in Australia, as he started Dutch-language radio in the 1970s and was one of the board members of the Dutch Australian Cultural Centre (DACC). The DACC has a documentation centre and a small Dutch museum in Parramatta, in Sydney, with the goal "1. To preserve the rich history of Dutch contact with, and immigration to Australia; 2. To set up a resource facility for anyone wanting information regarding the Netherlands, its people and their traditions".[20] The current DACC secretary, Klaas Woldring, has been one of its most active members for a long time, with an expressed view that the Dutch contributions to Australia's history started long before the post-World War II migration wave.[21] He is convinced that the heritage materials of the DACC should be digitised and has made a list containing items that would not spring to mind as high priorities for many other heritage professionals. He proposes to digitise, among some other items, a maquette of the centre of Amsterdam, model ships, replicas of maps and Dutch paintings, KLM memorabilia, Dutch military uniforms and folk costumes, St Nicolaas paraphernalia of course, and "a great variety of clogs" and "several types of skates".[22] The items on Woldring's list

20 https://www.facebook.com/the.dutch.australian.cultural.centre (accessed 29/10/2020).
21 http://www.daaag.org/node/klaas-woldring/ (accessed 29/10/2020).
22 Woldring, DACC Shared Heritage Project Proposal, 2019, 4.

are of the nostalgic type for an elderly Dutch migrant, but would never be included in an exposition of a heritage institution or be considered for digitisation in a formal heritage digitisation program, as they contain many non-original items that are available in other collections in which some have already been digitised. Still, they constitute the heritage with which Woldring wants to tell his story, and his story is just as vital to him as the *Ten Canoes* story was to David Gulpilil.

The seventeenth-century maps that are dear to Woldring[23] are also relevant to the story of Kathy Kickett, as they were made by the VOC. In her story, however, because of their colonial connotations they carry a radically different meaning than they do for Woldring. The same applies to the story of Adri Zevenbergens's voyage on board the *Johan van Oldenbarnevelt*. What the public story doesn't tell, but what can be found in the same file as her selection as the ten thousandth migrant to Australia, is that on the same voyage the Dutch government compulsorily returned 37 *Indisch* Dutch who had entered the Netherlands without proper documentation.[24] A picture taken of them on board of the *Johan van Oldenbarnevelt*, kept in the Moluks Historisch Museum, tells an entirely different story to that of Adri Zevenbergens (VAN EIJL 2012, 42). It is clear from these examples that personal and public stories are intertwined.

According to Benedict Anderson, the imagined communities of nations were forged by a narrative that included both shared memories and forgetfulness, in which the shared and canonical is essential to the community's sense of identity (ANDERSON 2006). Anthropologist Anthony Cohen has argued that while shared symbolism (including memories) is indeed crucial to the construction of community and identity, the symbols a community uses in its construction do not have a fixed meaning. While people belong to a community and refer to the shared memories and symbols that make up its narrative, their individual stories coincide only in parts. Rather, the symbols are "the vehicles of interpretation", as "different people oriented to the same phenomenon are likely to differ from each other in certain respects in their interpretations of it". Anderson writes: "because symbols are malleable in this way, they can be made to 'fit' the circumstances of the individual. They can thus provide media through which individuals can experience and express their attachment to a society without compromising their individuality" (COHEN 1985, 20). Cultural heritage items of any form, be they archive items, documents, photos, films, buildings or places, and even the idea of invisibility, can all be symbols that together construct identity and community, and the feeling of belonging to community. But the expression of this idea of belonging can be very different depending on personal experience and preference. We have demonstrated some of this kaleidoscope of stories above.

Our main point has always been that these stories can be complementary and even contradictory, but that only together do they aggregate to tell the whole experience of

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23 DACC Facebook 26 August, 2021.
24 NL-HaNa, 2.16.68, inv.nr. 1400.

Dutch migrants.[25] Digital collections have made this easier than it has ever been, because they make it possible to transcend the borders of collections held by single institutions and connect them with those in other institutions and other countries, and even with collections contributed by individuals. The current practice of storytelling with cultural heritage often does not do that. Either stories are told based on a single collection and migrants are interviewed for their experiences, or people tell their stories based on a few, often nostalgic items from their youths or those of their (grand) parents. While it is important that these stories are told, because they are part of the migrant experience, they do not and cannot add up to tell the story of migrants in general, as this consists of the total of individual and general stories. They also have another consequence, because many people do not have these memorabilia and because there is a need for traditions Dutch Australians can identify with.

This need has been filled by drawing on some of the symbols from the cultural reservoir of collective memory. From a distance, these traditions look a bit strange and often dated. Upon closer inspection, however, they appear to be heavily informed by the official advertising of Holland promotion. Not surprisingly, food is a central part of these traditions. A preliminary study of the advertisements in the Dutch Australian Weekly, a Dutch-language journal appearing from 1951 to 1993, showed that many of them contained food items such as croquettes, stroopwafels (from the Dutch Shop), liquor such as genever (Dutch gin) from the renowned Dutch distillery Bols, and to a lesser degree Dutch-language books and diaries. It also showed that English-language advertisements grew from 2 % in 1970 to 30 % in 1991 (GUO 2019).[26] In the collective traditions of the Dutch Australian migrant community, items like clogs, tulips, and windmills play an important part. In Michael Douma's book on the rituals and invented traditions that helped the Dutch in Michigan in the USA 'stay Dutch', these same items also play an important role (DOUMA 2014). For example, even in the 1950s and 1960s, when most Dutch emigrants left the Netherlands, clogs were not worn in the Netherlands very much any more, but as we already outlined above, one of the Australian captions to the Adri Zevenbergen pictures emphasised that a woman from her Dutch village "still wears clogs" (Fig. 2).

And in those times, in addition to clogs, both windmills and tulips were featured in Holland promotion. In another photo, for example, Adri Zevenbergen is shown at her arrival party in Australia offering a small silver windmill to the wife of Australian migration minister Downer and receiving a bouquet of tulips.[27] This shows

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25 "We propose rather than thinking of community as an *in*tegrating mechanism, it should be regarded instead as an *agg*regating device". COHEN 1985 p. 20.

26 The Dutch Australian Weekly is in Trove: https://trove.nla.gov.au/newspaper/title/1044 (accessed 29/10/2020).

27 https://recordsearch.naa.gov.au/SearchNRetrieve/Interface/ViewImage.aspx?B=7649087 for the silver windmill and https://recordsearch.naa.gov.au/SearchNRetrieve/Interface/ViewImage.aspx?B=7649085 shows the bouquet of 'tulips from a Dutch newspaper in Australia' (accessed 29/10/2020).

Fig. 2: Mrs de Man "still wears clogs".

the influence of a more general story on the collective memory of the Dutch, which is clearly important for the assertion of identity and for 'staying Dutch' but which does not really consist of proper memories, cultural heritage items, or either the collective or personal historical consciousness that Grever and Adriaansen discern.

Members of the migrant community will often tell how moving finding any cultural heritage item like a passport or a migration file from a parent or ancestor in a cultural heritage collection may be. In many cases, however, there are no memorabilia, and while the migrant registration cards contain a wealth of information about some migrants, for many others they include no more than the official data: information was limited on about 80 % of the cards. If the cards were to be consulted in isolation, this would mean the end of the journey to the past. But if the migrant cards are digitally connected to items and information from other collections, it can lead to new perspectives.[28] These include the migrant files at the National Archives Australia (as the cards gave access to the application files, as said above), the Dutch and Australian photo collections, and numerous other collections

28 For a schematic database design, see ARTHUR et al. 2018, Fig. 3, and Media 5. A more comprehensive data model to link the collections / heritage items has been developed by Rik Hoekstra, Huygens Institute as a template for the Dutch and Australian National Archives. It is tested on the parts of the relevant collections digitised by the archives. One of the more difficult issues to solve are the differences of privacy regimes in Europe and Australia.

Fig. 3: Illustration of contextualisation of a migration registration card with a limited number of official data.

in institutions in both Australia and the Netherlands, some of which feature in the examples above.

A last example can illustrate this (see Fig. 3 and Media 2). Most of the migrant cards contain information about which migrant scheme the migrant travelled under – that is, whether migration was subsidised under a migration arrangement between the Dutch and Australian governments. The most important of these was NAMA: the Netherlands–Australian Migration Agreement (1952). Of the migrants we have seen above, both Zevenbergen and De Heer travelled under NAMA, just like more than half (54 %) of the migrants from the migrant cards.[29] In an analysis of the information on the migrant cards, it appeared that the migration scheme was influential on the policy of the Dutch consulates in Australia, which played an important part in assisting the migrants. Two of the main issues for migrants in the 1950s and 1960s were housing and employment, and feedback from the consulates to the authorities in the Netherlands informed their assistance policies. Linking policy documents from the Dutch National Archives to an analysis of the migrant cards shows the traces this left in the assistance the consulates provided. Even for migrants with little information on their cards, these policy files thus provide background about their past.

Another example would be the passenger lists of the ships migrants travelled on. There we can find information about the other people who were aboard those ships, and from there either retrieve information in the migration cards, or learn about the conditions on the ships on which the migrants travelled that are 'hidden' in still other collections.[30]

29 NAA: A2478, DE HEER A, Barcode: 1424110 https://recordsearch.naa.gov.au/SearchNRe trieve/Interface/ViewImage.aspx?B=1424110 (accessed 29/10/2020); NAA, A2478, Zeven-bergen C, p. 1; numbers on basis on a 1 % sample we drew from the cards.

30 A summary of the analysis in python notebooks with links to more detailed analysis in https://github.com/HoekR/MIGRANT/blob/master/results/exploring_data_integration/

Conclusion

Heritage materials are very well suited for storytelling about and by migrants. Some of these have been told, while many will never be, but together they make up a kaleidoscope of stories that complement and repeat and contradict. An inclusive story of the migrant experience, however, consists of an aggregate of migrant stories. The full aggregate will never be told, but the raw material of these stories consists of memories and interpretations of heritage materials. As with stories, this should not be confined to the heritage items of a single collection or those in the collections of a single institution. Migrant heritage is dispersed across many collections in more than one country. The recent development of digital infrastructure and tools has made it possible to connect these on a scale that was never before imaginable.

In this chapter, we have elaborated the case of the Dutch Australian migrants and their stories, and tried to illustrate the diversity of stories and their traces in different collections. These stories are seldom just individual memories, but are shaped by many different influences including propaganda and official policies. Dispersed heritage items are often only properly understood if they are contextualised by heritage objects from collections elsewhere. Using a methodology based on a connecting resource (in our case, migrant registration cards), it becomes possible to relate seemingly different heritage items, collections and stories. And policy consists of stories, too, and often displays connections and tensions that do not show in the stories of individual migrants unless they (especially in migrant cases) have to do with official or implicit inclusion and exclusion. Using context and connections 'beneath the surface' makes it possible to tell parts of the stories of migrants who have not left any distinct traces in the heritage collections.

Our example of Dutch Australian migrants does not stand on its own, as similar collections and connections exist for many migrant communities worldwide. Migrant heritage is by definition dispersed over at least two countries and their institutions, varied as they may be. A step towards restoring the migrant experience is to connect these collections so that they can give each other context. Often, parts of these collections are registration systems that recorded who migrated, which may serve as connecting devices (Van Faassen/Oprel 2020). In this way, a connected digital resource can be created that enables migrants to connect to their complete heritage and aggregate their stories to the kaleidoscope. Only then they can, like David Gulpilil, "tell you something about my people and my land. Then you can see the story, and know it".

notebooks/Profiles.ipynb; information about the events on the cards: https://github.com/HoekR/MIGRANT/blob/master/results/exploring_data_integration/notebooks/events.ipynb (accessed 29/10/2020).

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Media Credits

Fig. 1   Private Collection Bregman.

Fig. 2   Private Collection Bregman.

Fig. 3   Source: NL-HaNA, 2.05.159_1_0003 (https://www.nationaalarchief.nl/onderzoeken/index/nt00335?activeTab=nt&sortering=prs_achternaam&volgorde=asc, accessed 29/10/2020); Editing: the authors.

Media 1   Westfries Museum, Hoorn, Netherlands, hosted at https://vimeo.com/202206059.

Media 2   National Archives of Australia photo collection (NAA: A12111, 1/1958/4/39; item ID 7529953), https://recordsearch.naa.gov.au/SearchNRetrieve/Interface/ViewImage.aspx?B=7529953 (accessed 29/10/2020).

JANA KECK

How Meaningful are Digital Humanities Projects When it Comes to Training Early-Career Scholars in Digital Literacy?

Newspapers spread dramatically throughout the nineteenth century in terms of sheer numbers of papers, their size, and their influence. This created a global culture of rapidly circulating information. Fuelled by falling printing costs, new editorial exchanges, steam-driven transport, and telegraphy, newspapers linked cities and small towns to a global network. These periodicals became the first big data for a mass audience. Large-scale projects digitising historical newspapers run by national and local libraries and commercial companies have grown exponentially in scope, scale and ambition since the 1990s (TERRAS 2010). In recent years, the mass digitisation of these sources has led to new efforts in periodical studies. Technical innovations in both hardware and software have inspired scholars to seek collaborations with institutions that are digitising material and researchers from computer science who have experience in working with, linking and analysing large amounts of data. From 2017 to 2019, I was working as a doctoral researcher in a digital humanities project titled *Oceanic Exchanges: Tracing Global Information Networks in Historic Newspaper Repositories, 1840–1914* (OCEANIC EXCHANGES 2017) that brought together scholars in computational periodicals research from the US, Mexico, Germany, the Netherlands, Finland, and the UK. Large-scale digitised newspaper repositories from Europe to Australia, from public to private institutions, were collected to study how information spread across national and linguistic borders in the nineteenth century.

'Information flow' has historical resonances and contemporary saliency to networked collections of digital materials. The objective of *Oceanic Exchanges* was to figure out how to compare digitised newspapers from different national and local repositories that were created using different digitisation software and that follow distinct metadata guidelines. In order to detect and study media events in the nineteenth century that had a global impact, we needed to develop innovative *data modelling*, *linking* and *text mining* methods. Once we identified these events, we used and merged diverse methods from computer science and the humanities, including *interactive visualisation systems*, *network analysis*, and *close reading* to examine how these events were textualised in different nations and how information that was political, scientific, literary, or religious in nature changed through its travel in time and space. To find solutions to these research questions, scholars from different academic, public, and commercial institutions, and diverse disciplinary, national, and linguistic backgrounds, collaborated to develop innovative computational methods

for the analysis of big humanities data. Interdisciplinary cooperation fostered the development of novel methodological, theoretical, and practical approaches relevant for scholarship in *archival studies*, *transnational history*, *computational linguistics*, and *information visualisation*. The collaborative efforts between experienced and newer-to-their-fields researchers resulted in various project outcomes such as datasets, ontologies, algorithms and implementations, documentation, and articles that focus on questions about media history, as well as technical, political, and ethical challenges of digitisation.[1]

For early-career scholars, doing historical research in the digital age requires training in digital literacy. In this article, I want to illustrate how *Oceanic Exchanges* offered an international and inter- or transdisciplinary training environment for doctoral researchers to prepare them for career paths in and outside of academia in the digital age. This article can be seen as a report, in which I share my own experiences as a doctoral researcher with a background in linguistics and American Studies. I will share examples in producing some of the above-listed project outcomes: from evaluating the interoperability of digital archives to developing an *interactive visualisation system* to analyse the geographical, temporal, and spatial dissemination of news. *Oceanic Exchanges* provided us – and by us, I am referring to doctoral researchers from the humanities and computer sciences – with the opportunity to acquire skills in digital literacy and knowledge about the legal and ethical status of digitisation, and to build networks across disciplines and research institutions. By witnessing the operations of large-scale digital research and digitisation projects, I not only gained experience in project management, but also increased my consciousness of intercultural communication by learning about the different political, economic, and social factors that shape digital humanities work in different locations. By providing examples of my own research tasks, I want to show how *Oceanic Exchanges* turned into a fruitful learning platform for global perspectives on data, code, and tool criticism. These skills seem increasingly relevant in times of the digital transformation of society, the disciplines needed to be able to study large amounts of digitised or born-digital material, and the influence of algorithms in finding information online. Additionally, these collaborations and learned skills have encouraged me to consider other career options in research management, communication, or environments outside of academia. Being mentored on different job opportunities is important in the early-career stage because not every doctoral student will receive a professorship in the future, and not everyone aspires

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1   For a current state of the various project outcomes, see: https://oceanicexchanges.org/outcomes/ (accessed 24/8/2023). Some articles that focus on media history are currently under review or will be published soon. One of the reasons for this "delay" is that we had to make sure that the novel methodological approaches or innovative tools are first published in computational journals in order to support the careers of young scholars, before we can use them for the publication in journal of the humanities disciplines.

to such a position.[2] To make sure that early-career scholars get the necessary education to prepare them for job markets in the digital age, we need to change evaluation and review systems, accept and reward diverse forms of publication within disciplines, and normalise inter- and transdisciplinary scholarship. If these measures do not find wider acceptance and implementation, it will be detrimental especially to the education of up-and-coming scholars (König 2020).

The digital universe is growing very fast, and the amount of information contained in digital representations of historic newspapers as data is exploding. How can early-career scholars receive training in data literacy in the humanities? Working in *Oceanic Exchanges* has shown me that one way of learning how to collect, manage, evaluate, and apply data in a critical manner (Risdale et al. 2015) is to make sure that early-career scholars get directly in touch with institutions that are digitising sources. The project gave me the opportunity to work with institutions from the following public, private, and public-private sectors: Australia's Trove, the British Newspaper Archive, Chronicling America, Europeana Newspapers, the Hemeroteca Nacional Digital de México, the National Library of Finland, the National Library of the Netherlands, the National Library of Wales, Aotearoa New Zealand's Papers Past, and Cengage Publishing, one of the leading commercial custodians of digitised newspapers. Bringing together the digitised newspaper repositories of these different institutions resulted in a collection of more than one hundred million newspaper pages. I received information about which technologies have been used in different nations to digitise heritage; they told me about their own technical, political, or ethical challenges, and what they envision for the future of archival studies in a digital age.

To investigate the different national corpora, to explore both historical content and modern data storage and linkages, we first had to examine the data structure and develop "more nuanced understandings of (digital) archives as both sources and subjects of history" (Hausdewell et al. 2020, 146). Digital humanities projects do not provide quick results by simply pushing on a button. What I had to learn to start with was that one cannot simply use, link, and mine these distinct data repositories to ask historical questions about the press system in the nineteenth century. When these institutions turned analogue sources into digital representations, they used very different digitisation programs and different metadata guidelines. For this purpose, we had to examine which digitisation software each had used, and for which reasons. Additionally, we found out that selection criteria differ among institutions, and range from prioritising the digitisation of the most vulnerable objects to providing a more diverse selection of languages or publication locations and offering content from urban and rural places. We documented these

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2 For a similar advocacy of hands-on training in academic collections, see Polly Lohmann: *Digitising from Scratch*, pp. 103–121 in this volume.

findings in teams.³ Apart from gathering this information for our own research, the purpose was to formulate recommendations for the institutions. Even though this process was extensive and time-consuming, the development of a shared and source-specific ontology for describing the form and content of nineteenth-century newspapers is paramount to the future integration and linking of distinct collections. Bringing together these different findings resulted in an open access guide titled *The Atlas of Digitised Newspapers and Metadata* (Beals et al. 2020). The guide brings together the technical and political histories of the individual databases that will allow other researchers and institutions insights into their digitisation choices, with a deeper look at the language of the digitised newspaper, the variety of newspaper terminologies, and the metadata inherent in these collections. *Oceanic Exchanges* did not aim to create a totalising research infrastructure, but rather to expose the conditions by which researchers can work across collections, helping guide similar projects in the future seeking to bridge national collections.

Creating this guide required intensive dialogue between researchers to discuss the current state of digital archives and above all their future as democratic knowledge infrastructures. As it turns out, only few digitisers have integrated scholarly expertise into their decision-making processes of digitising heritage so far. It seems that they only bring in academic researchers when they themselves have identified them as core users. The Koninklijke Bibliotheck (the National Library of the Netherlands) turned out to be the only institution that has established a committee of experts from periodical research (Koninklijke Bibliotheck 2008). The German Newspaper Portal (*Deutsches Zeitungsportal*) that is currently being developed as a "sub-portal" of the German Digital Library follows the example of developing an infrastructure that will meet the demands of scholars. "The initial impulse – and funding – to develop a national [German] newspaper portal was given by the scholarly community, especially the (Digital) Humanities" (Dinger/Landes 2019). My collaboration in *Oceanic Exchanges* resulted in me being asked to become a member of the German Newspaper Portal's advisory board to provide perspectives as an early-career scholar. As members, we give feedback on questions related to the quantity and quality of the sources: for example, as a scholar, would you rather have access to more newspapers in the digital archive or would you recommend that we prioritise steps in improving the quality of digitised sources such as *Optical Character Recognition (OCR) Post-Correction*. Apart from questions about selection and quality, they ask questions about the interoperability of the interface: if we allow scholars to download sources, which data types should we make available? Should we integrate tools for advances searches and analyses? Such efforts not only allow me to critically reflect on digital practices, but also give me as an early-career

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3 I am especially grateful to Clemens Neudecker from the State Library of Berlin, who taught me about the diverse digitisation programs in Europe and helped me in writing data reports of the German-language sources in *Oceanic Exchanges*.

scholar an active role in shaping how other scholars collaborate, make discoveries, create, communicate, and publish knowledge.

Technical challenges regarding the interoperability of digital archives are not only influenced by digital technologies but often shaped by the demands of the end users. When I examined the findings of the other digital archives, I gained a different picture. According to the majority of the ten data partners, academic researchers are not the primary audience for whom these platforms are being created; "the general public" is (HAUSDEWELL et al. 2020, 151). Some platforms, for instance, trace user behaviour and develop and adapt strategies for information search and retrieval accordingly. For scholars, this implies that the way they can access and search through digital archives is shaped by the work of software developers and archivists as much as it is influenced by the user behaviour of the general public. What happens if scholars do not get in touch with such institutions? Key principles of sustainability go beyond storage and access strategies. A continuous and mutually informing dialogue between institutions that are digitising sources and scholars from different disciplines and positions in their career is of critical importance to discussing how we can and will "move around" in digital archives. Conversations with the other data partners revealed that using digital archives for advanced research remains limited. "Whether in terms of information retrieval possibilities or interface design, providers tended to aim for simplicity" (HAUSDEWELL et al. 2020, 154), and simplicity means that the traditional method of keyword searching "is here to stay for the foreseeable future, since the majority of users have been habituated to this mode of search" (HAUSDEWELL et al. 2020, 155). As it is difficult, time-consuming, and cumbersome, if not impossible, to predict in advance which search terms will best identify documents, queries are typically refined through testing and sampling. Keyword searching requires the scholar to have prior knowledge and possesses the seemingly contradictory weaknesses of finding too few and too many documents. Consequently, there remains no other option to evaluate the digitised material other than simply reading it. While these other digital archives provide big humanities data, they offer no innovative methods of analysing them. "It remains to be seen whether digital archives will continue to support relatively prescribed and limited modes of searching, browsing, and viewing newspapers alongside more advanced functionalities and what divisions will arise out of different funding models" (HAUSDEWELL et al. 2020, 156).

Working on *The Atlas* and being a member of the advisory board of the German Newspaper Portal has shown me that we need to get in touch with these institutions to have a voice in what is being digitised and how we can access and study it online. *The Atlas* aims to form the foundation of a wider mapping of collections beyond its current North Atlantic and Anglophone-Pacific focus. This continuous process is influenced by motivations and decisions about the future inclusion and exclusion of digitised newspapers in digital archives. However, to foster such efforts in the future, other forms of publication, such as guides, need to find their place in

publication lists. Sustainability means meeting our own needs without compromising the ability of future generations to meet their needs. Conversations about digital project sustainability, however, usually address technical aspects such as storage, or data formats and their long-term access. What these conversations often leave out is the social resources needed to guarantee their long-term access and use. A documentation, dataset, a tool, or an interface will only be sustainable when we make sure that we develop it in a way that means it can be used for further projects and by other scholars. The digital humanities are not just a service provider for humanities scholars who want to have a dataset or analyse a digital archive.

The application of digital methods and tools is not only time-consuming, it requires an adaptation of the way we think about scholarly work, project outcomes, and publications in the humanities in the digital age. The media change in the digital age presupposes that we rethink not only how we interpret sources as data, how we search and analyse, but also how we present, publish, and evaluate other forms of research output. These activities also presuppose that we offer early-career scholars training in digital literacy, and not only in digital humanities departments. Such undertakings could range from motivating early-career scholars to contact libraries or archives that are digitising material, promote other forms of research outputs than publication of peer-reviewed articles in humanities journals, such as documentations, datasets or code, articles in computer science journals, and even PhD projects that focus primarily on the histories of digitised archives. Using – that is, learning to understand – existing software is a form of training. Collectively designing and producing new technology is a challenging, but more productive and sustainable process for both the humanities and computer science.

To illustrate why such inter- or transdisciplinary research activities could be productive and meaningful, but has so far become problematic for the careers of early-career scholars, I want to give an example of a tool that I developed with computer scientists from the field of *information visualisation.* Interdisciplinary collaboration brought to the fore the very dilemma of different practical and strategic assumptions about what is considered and valued as an important and relevant project outcome in the humanities versus computer science. The specific challenges we had when it came to tools was to develop a system that would allow scholars in the humanities to study global media events. At the same time, these tools had to be cutting-edge in computer science, because they were primarily being developed by early-career scholars. Developing a novel algorithm in computer science does not necessarily mean that that algorithm will be useful for the analysis of historical questions. One of the tools that I collaboratively developed with computer scientists to systematically explore datasets of media events and study what information spread, how, and how it differed among nations and languages is Lilypads (Franke et al. 2020). Interactive visualisation tools like Lilypads are based on an algorithmic transformation of existing data into an interactive visual representation. To construct this transformation process, we had to discuss together which data

(both textual and numeric) should be visualised to answer such questions about information flow in the nineteenth century. Lilypads presents a novel, integrated interactive visualisation approach that supports brushing, linking, filtering, and drill-down that enable the exchange of ideas, hypotheses, and results with other researchers. The dataset used for Lilypads, as illustrated in Fig. 1, covered sources from different languages, places, and dates.

It included metadata (i.e. structured data such as newspaper title, place or date of publication) and data (i.e. newspaper texts as unstructured data in the form of plain text). It allowed distant and close reading approaches to studying data, with the aim not of replacing textual evidence with graphs, maps, or trees, but of providing numerical, textual, and visual representations of data to uncover and model new sets of evidence that is difficult to discern at the level of the individual newspaper. If users want to read the newspaper article, they can click on one of the news items (list on the left side) and open up a new tab to read the text, and also find a link to the digital archive. When users click on the link, they get redirected to the digital archive where they can examine, for instance, where the news item is embedded in the overall newspaper edition or examine what adjacent articles and images.[4] Linking such tools to other databases is sustainable because it guarantees an effective interplay between different platforms. It also provides scholars with the opportunity to examine data in different contexts and representations, from scanned images of the newspaper page to a data point in time.

Lilypads should be seen as a multifaceted product: it is a prototype, a tool, a method, a non-static dataset, a datasheet, and the result of several people attempting to advance transdisciplinary research. To develop Lilypads, both the early-career scholars from computer science and I received active mentoring by senior scholars from other disciplines. Lilypads is now being used to analyse global media events, with the findings being transformed into articles for journals in the humanities to show how dissemination, disinformation and censorship developed in the nineteenth century. Lilypads was presented at the 11th International Conference on Information Visualization Theory and Applications (2020), published in the conference proceedings, and even awarded "Best Student Paper". According to its reviewers, the integration of scholars from the humanities as co-authors is pivotal for the evaluation of the usefulness of such tools and its sustainability for future work. However, while quality management of cutting-edge research in computer science focuses primarily on algorithms, quality management in the humanities demands the publication of articles in prestigious peer-reviewed articles. Basically, neither disciplines either values or rewards the careful creation and curation of datasets. However, this form of research is a highly intellectual process that has to be reflected and documented on, and it plays a crucial role in determining what data we analyse. Non-printable products such as curated datasets and the well-documented sheets

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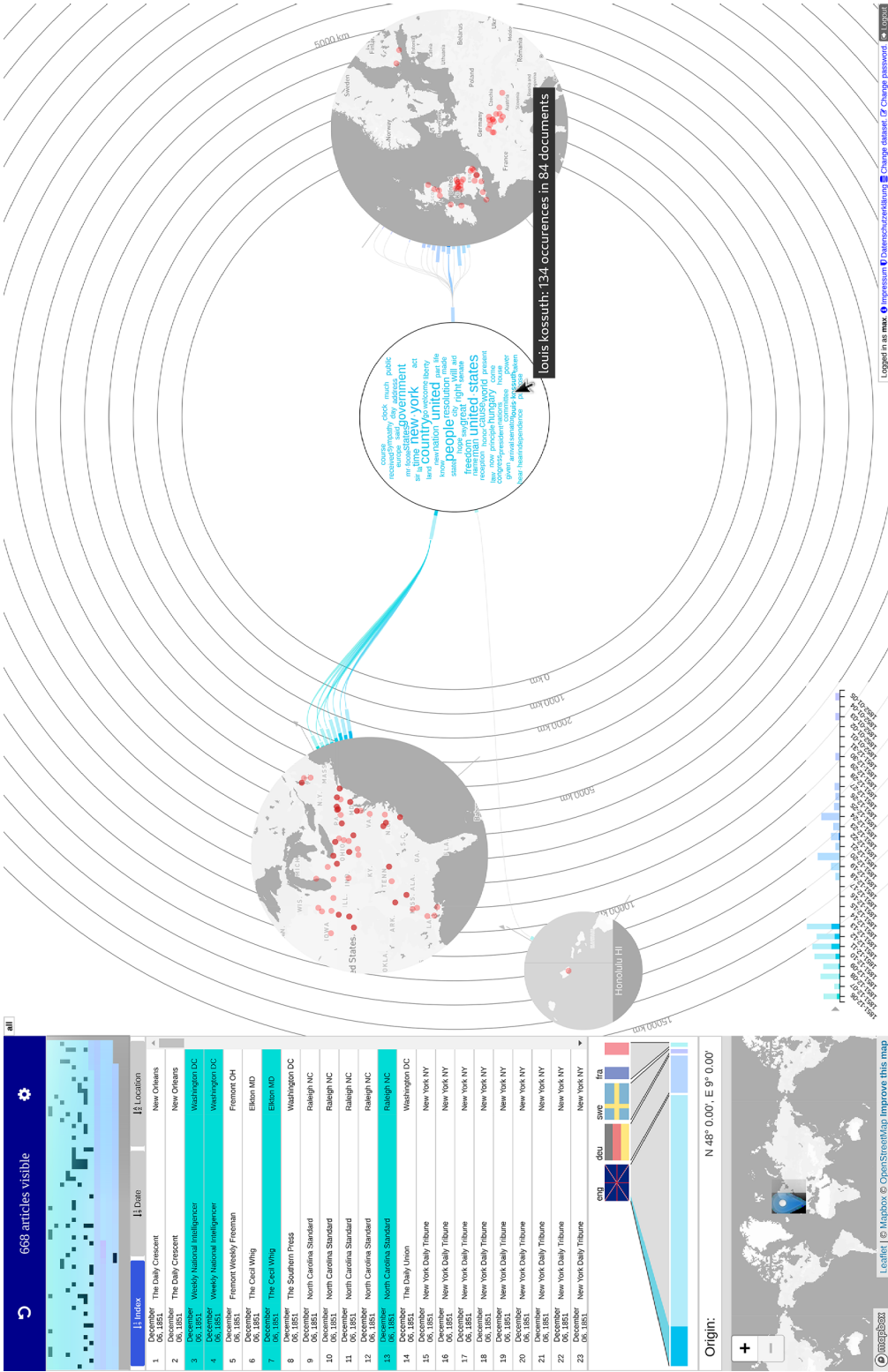4   For a detailed explanation of the interoperability of Lilypads, see Franke et al. (2020).

Fig. 1: The interface of Lilypads. The main view shows the total temporal distribution and a word cloud of frequent words from the visualised documents, alongside the spatial distribution of the documents. The approach breaks up the world map into map insets containing areas of interest, which can be shown with a higher level of detail. On the left side, a document mini-map, document list, and distribution of the documents' languages are shown.

that accompany these datasets have not yet become first-priority outcomes for scholarly communities in computer science or the humanities. Giving little recognition and attention to these forms of publications seems incompatible with the demands of funding institutions that are increasingly asking scholars to make their data publicly available by default, rather than on request. This will even become a mandated requirement from some funding agencies, such as the German Research Foundation (DFG 2020). Such efforts call for innovation, sustainable research data management, and sharing, and simultaneously for the acceptance of curated datasets and publications, models, and tools as genuine accomplishments by all scholarly communities.

There is a tension between innovation and motivation, not just a disinterest. In my opinion, if we learn to better appreciate the careful creation and curation of datasets, we will reduce the risk of creating highly biased ones. If we want to implement these measures, scholars have to be rewarded for creating computational models and publishing them in scientific journals or publishing datasets as much as they are for publishing their methodological use of the tool to study the past. As the data which play a role in digital humanities are themselves multiform and comprised of, among other types, visual, audio, geospatial, temporal, and statistical data, we can even say that by studying the digital humanities, early-career scholars become meta- or transliterate, and thus able to employ their knowledge, competencies, and skills in very diverse social and professional domains. The digitisation of cultural heritage data, along with the creation of born-digitals, the increasing impact of algorithms on the way how we present, analyse and publish knowledge, needs to be integrated into critical debates in the humanities, not only the digital humanities. Likewise, this presupposes an openness and enhanced understanding about digital data, code, and technological infrastructures. Digital source criticism demands that we understand how data have been encoded, indexed, and enriched with metadata. Working in *Oceanic Exchanges* has given me the opportunity to analyse data in teams and produce code, tools, datasets and -sheets. Generating these research products, like establishing guidelines on workflows, applying project management best practices, and evaluating the interoperability of new and existing digital archives, is indispensable in such large-scale projects, but also labour-intensive and time-consuming. While my involvement in these research outputs is being recognised and rewarded by scholarly communities in computer science or archival studies, there are no clear or updated structures for evaluating these non-traditional forms in the humanities. As Dorothea Salo notes, "[t]he present system of humanist scholarly communication relies on print monographs, mostly print journals" (Salo 2020, 221). Digital humanists "shoulder the doubled research burden of writing" monographs and articles next to their non-textual research products because of "books' and articles intelligibility as research products to tenure and promotion committees" (Salo 2020, 222). These arguments reflect wider debates in the digital humanities about considering non-traditional formats. In "Data Beyond Vision," Rebecca Sutton Koeser et al. call upon scholars to ask:

"What would it look like to consider non-textual research outputs as first-order scholarly work?" (SUTTON KOESER et al. 2020).

Adapting to disciplinary changes requires the consideration of non-traditional formats. "Until the humanities consciously break the hegemony and path dependency of print," Salo concludes, "digital humanists will remain alienated from the rest of the humanities, preventing the humanities from adopting open processes such as data sharing and open-access publishing. In turn, this harms the reach and sustainability of the humanities as a whole" (SALO 2020, 215). If the current academic system does not adapt its evaluation criteria and educate its early-career scholars in digital literacy – data, tool, and interface criticism – it will foster the education of a generation that is, on the one hand, unable to critically reflect on and educate students about the massive amount of data that we produce on a daily basis, from mails to social media posts to the influence of algorithms in shaping public opinion. To illustrate where I consider *Oceanic Exchanges* to be sustainable or unsustainable by using humans as resources, I have shared some experiences that I gained through my own activities in the project alongside conceptualising and writing my doctoral thesis, planning workshops, conferences and meetings, and mentoring students. I have exemplified why I consider tasks such as cooperating with digitisers sustainable – because they show scholars work opportunities outside of academia and likewise guarantee that they are taking an active part in building digital archives to guarantee that their interoperability adheres to the needs of academic researchers.

Acknowledgements

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Abstracts

ANA LUISA SÁNCHEZ LAWS
Digital Significance

Abstract Digitisation policies set the frameworks for the work that museums are able to conduct in the field. A comparative analysis of digitisation policy whitepapers from a selection of European countries as well as Australia can help shed light on digitisation areas that are well covered versus those that require more attention. One hypothesis that can explain any imbalances found may be that these imbalances stem from needing to meet prioritisation targets made in other government policies pertaining digitisation policy more broadly. A second hypothesis is that practical matters related to the physical process of digitisation itself may play a large role in hindering progress in some areas while easing it in others, despite the ambitions of policymakers. Sanchez Laws argues in this contribution that before assuming that an imbalance of available digital material in a given area is directly connected to lack of attention to certain groups or topics, it is important to understand the governmental conditions that underpin digitisation.

Keywords Digitisation, Europe, Museums, Practices, Policy

PAUL TURNBULL
Restoring Dignity
The Ethical and Technical Challenges of Creating
Digital Resources for the Repatriation
of Indigenous Australian Ancestral Remains

Abstract Securing the repatriation from Western scientific collections of the bodily remains of their ancestors is of vital importance to Australian First Nations and many other indigenous peoples worldwide. An extraordinary achievement by indigenous peoples, repatriation has been the single most important agent of change in their relationships with museums, universities, and other scientific institutions over the past 40 years. Since 2016, the Research, Reconcile, Renew Network (RRR) has been engaged in creating a digital resource assisting indigenous repatriations efforts with funding from the Australian Research Council and partnering universities. Besides assisting repatriation by providing access to a wealth of historical sources and the findings of research by RRR members, this digital resource is also designed to support research and scholarship exploring the history of scientific collecting and uses of the bodily remains of the ancestors of indigenous peoples. This

essay focuses on RRR's efforts to date to develop solutions to the ethical and technical challenges of creating this resource.

PAUL LONGLEY ARTHUR & ISABEL SMITH
Digital Representations of Slavery in Australia
Navigating Heritage, Identity and Power

Abstract   The digitisation of exhibitions and collections has dramatically expanded access to and forms of cultural heritage, while also raising many questions around the power relations that underlie the production of this heritage. Whose heritage is being digitised, by whom, and for whom is it being recorded and represented? Such questions are especially pronounced in digital museum spaces facing issues of race and empire. Exhibitions on slavery in particular, which have proliferated across the globe since a 'slavery memory' boom in the late twentieth century and intersected with the digitisation of museums, underscore the tensions between contemporary politics, new forms of cultural heritage-making, and the colonial origins and frameworks of museums. This paper reflects upon the development and early conceptual phases of an online exhibition exploring legacies of slavery in Australia. Looking at the complex relationships and responsibilities between individuals, communities and institutions, this paper also explores evolving approaches to community engagement, audience contributions, and the question of the democratisation of content through digital and online storytelling. It considers the ways that selections in voice, medium, space and audience interact with ongoing and complex connections with British culture and heritage, to produce specific representations of slavery and forms of heritage in Australia. These differing forms intersect with and hold significant implications for Australian identities, contemporary politics, and lived realities.

FRIEDERIKE SCHMIDT
Retracing the Mobile Object
Digitising Biographies of Aboriginal Material Culture

Abstract The essay gives an overview about the benefits of applying a mixed method design in order to examine the appropriation practices of Aboriginal objects in Australia during the 19th and 20th century. The methodological combination of a quantitative data collection and a qualitative comparative perspective on

the acquiring process and appropriation of the objects offers a unique view on the entanglements of local cultural material and global collector networks. The examination of written sources such as letters, diaries, official government reports, exhibition catalogues, contemporary publications and the objects themselves can be supplemented with statistical analysis of an online collected dataset in order to inform each other to the extent that the analytic outcome is greater than the sum of the parts. Most notably, the quantitative approach allows insights about competing explanations and helps to reason case selection strategies for the qualitative perspective, whereas these case studies help to advance the quality of measurement procedures and model specifications used within the statistical analysis. The essay addresses questions such as the identification of quantitative patterns within the history of appropriating aboriginal material as well as individual circumstances which caused the appropriation of an object. Moreover, the essay advocates for the importance of publishing replication files in order to lead to more transparency of the intersections of particular sensitive historical events and their (re-) analysis.

ROMANY REAGAN
Unlocking Heritage Stories
How the Use of Audio Walks as Creative Public
Engagement Expands Access to Site-Based
Heritage to a Diverse and Globalised Audience

Abstract For my practice-based PhD project Abney Rambles, I created four audio walks through Abney Park cemetery, which is located in the north London community of Stoke Newington in the United Kingdom. Each audio walk is positioned as an exploration of one layer of heritage within the cemetery. Since completing my PhD, I have expanded my research scope beyond the cemetery to encompass legends and lore from the British Isles, with several London-based research projects resulting in site-based audio walks and museum experiences. As of writing, there are 28 audio experiences in total available to be taken through various sites in London. The Abney Rambles series of audio walks were crafted to be experienced in situ; however, one unexpected result of hosting this ongoing project through an online media platform is that people have been enjoying these audio walks as simply audio experiences – from anywhere in the world. This expanded the visitor reach of these public engagement initiatives beyond what could normally be hoped for in physical visitor footfall. The heritage stories of my sites of research became accessible to a globalised audience in the form of 'digital visitors' – and the implications for this also expand to those potential visitors who have not engaged

with the space previously due to sight or mobility impairment. The aim of this chapter is to present an analysis of both the process and the outputs of crafting digital moments of interaction as part of a public engagement plan within heritage sites, hopefully offering a helpful resource for practitioners wishing to engage in digital heritage interactions.

Keywords Accessibility, Audio, Heritage Walks, London, Memory

KIMBERLY COULTER
Mediating Ecologies
Cultivating Diplomacy, Destabilising Paradigms

Abstract Ecology, Bruno Latour writes, is a "new way to handle all the objects of human and non-human collective life … Nature is here considered as what assembles all entities into one whole." Media ecologies, it follows, may illuminate not only such relationships, but also the mediated nature of connections, representations, and engagement opportunities. The 2016 exhibition "Reset Modernity!" at the Zentrum für Kunst und Medientechnologie (ZKM) in Karlsruhe, which Latour co-curated with Martin Guinard-Terrin, Donato Ricci, and Christophe Leclercq, offered one such opportunity for participants of the Heidelberg "Media Ecologies" workshop. Arguing that environmental destruction is often fueled by tenets of "progress," growth, and the nature/society dichotomy, the exhibition aims to disorient and gently "reset" visitors' paradigms of (ecological) observation and representation. In this essay, I recount the hope expressed by workshop participants that that digital and environmental humanities can destabilize paradigms, allay fears, cultivate diplomacy, and amplify serendipity. I reflect on this in light of our visit to the exhibition "Reset Modernity!".

Keywords Ecology, Environmental Humanities, Exhibitions, Latour, Reset Modernity!

POLLY LOHMANN
Digitising from Scratch
An Example from the Practise of a University Collection

Abstract University collections face different challenges than public museums: established as "study collections", they combine academic teaching, research and public outreach. In all these matters, they are provided with often very poor, or none, financial and human resources. Given these constraints, digitising such collections represents an enormous effort for individual responsibles. This essay pictures the current situation in the Heidelberg collection of Classical antiquities and

plastercasts as an example from the practise. It aims at problematising and questioning what "digitising" may mean and at showing the issues implicated with regard to specific kinds of objects and to selection and access of information.

Keywords Antiquities, Archaeology, Archives, Collections, Digitisation

AARON PATTEE
Graph Databases for the Organisation and Analysis of Digital Heritage

Abstract This paper presents an application of a labelled property graph database management system in order to model and analyse the political and economic network of two ministerialis families of the German Palatinate from the mid 12th century until the late-13th century. The Neo4j-based graph database provides an excellent platform for adding in information extracted from over 700 hundred charters, and dozens of historical texts, allowing one to assign unique properties to the different entities, and explore the interconnectivity between people, places, and events. This is made possible due to the database's emphasis upon modelling relationships and their properties. The opportunity to visualise real interactions between individuals and proceedings, as an interactive network with descriptive properties ascribed to each entity and relationship, brings transparency to the multitude of factors impacting particular historical events. In this capacity, labelled property graph databases prove themselves invaluable as explorative, learning, and analysis tools for understanding the complexities of medieval society. Furthermore, such a database can be applied to a multitude of disciplines or case studies, for which this paper can provide a procedure for developing other projects.

Keywords Archives, Data Management, Digital Humanities, History, Modelling

VICTORIA HERCHE
Mediating Traumatic Memory
The Potential of Interactive Digital Migrant Fictions

Abstract Mediated representations and news coverage of boat migration play a vital role in constructing discourses of the situation of refugees and asylum seekers at large, often in generalising ways. Whether as an image of potential danger and hostile threat or as the image of vulnerability, danger, and crisis, the iconic refugee boat evokes ambivalent and emotionally charged associations with notions of transoceanic migration. This chapter discusses the potential in the recontextualisation of individual migrant memories – by processes of fictionalisation and digitisation – to

provide a transcultural perspective on memory and to contribute to the construction of collective memory and public awareness. By referring to two interactive web-based graphic stories, adaptations of Khaled Hosseini's *Sea Prayer* (2018) and Nam Le's *The Boat* (2009), this chapter discusses the choice of authors and media artists to accompany or adapt fictional migrant stories into interactive and intermedial forms. Hereby I argue that the interactive digital format provides particularly productive ways to represent the absences and gaps inherent to traumatic migrant memories and allows readers/viewers to be active participants in the re-conceptualisation of the representation of boat migration in public discourse and narrative.

Keywords Graphic Novels, Interaction, Memory, Migration, Storytelling

MARIJKE VAN FAASSEN & RIK HOEKSTRA
Storytelling, Identity, and Digitising Heritage

Abstract Heritage is recollections, and recollections are the building blocks for storytelling. A story is told from the perspective of a person, a group of persons or of governments. But all collections, both private and public, have been created through processes of selection, conscious or unconscious, that are often hidden. Even if we connect all available heritage materials, they contain blind spots, and some perspectives will be over-exposed while other remain under-represented. We explore the pitfalls of large-scale digitisation, the perspectives of the institutional and the individual, of governments and marginalised groups.

Keywords Archives, Identity, Memory, Migration, Netherlands

JANA KECK
**How Meaningful are Digital Humanities Projects
When it Comes to Training Early-Career Scholars
in Digital Literacy?**

Abstract In recent years, there has been a growing trend towards international collaborations in Digital Humanities projects, exemplified by initiatives like "Oceanic Exchanges: Tracing Global Information Networks in Historical Newspaper Repositories, 1840–1914" (OcEx). This project united scholars in computational periodicals research from various countries, including the US, Mexico, Germany, the Netherlands, Finland, and the UK, with the aim of examining patterns of information dissemination across national and linguistic boundaries. This article raises a crucial question: how beneficial are these collaborative efforts for equipping early-career scholars with essential digital literacy skills? Within this context, the article emphasises the

significance of digital literacy in the realm of historical research and underscores the pivotal role played by "Oceanic Exchanges" in offering international and interdisciplinary training opportunities. Jana Keck shares her own experiences and concrete project outcomes, placing particular emphasis on the acquisition of digital literacy competencies, a deep understanding of digitisation ethics, and the invaluable connections formed through interdisciplinary networking. Furthermore, the article advocates for a reevaluation of existing evaluation systems, pushing for the recognition of diverse publication formats and the promotion of interdisciplinary scholarship. These changes are seen as essential to adequately prepare scholars for the multifaceted career paths that await them in the digital age.

Notes on Contributors

STEFANIE AFFELDT studied Social Economics at the University of Hamburg, received a Bachelor of Arts in Sociology from the Macquarie University and a Master of Arts in Cultural and Social History from the University of Essex. She obtained her doctorate with a historico-sociological survey from the University of Hamburg: Consuming Whiteness. Australian Racism and the 'White Sugar' Campaign (Lit 2014) examines the entanglement of the political history of Australian nation building with economic, cultural, and social processes and investigates the mechanism of inclusion/exclusion and questions of socio-political organisation in the settler society, with a particular interest in the role of mass media and popular culture in the everyday (re)production of ideology.

PAUL LONGLEY ARTHUR is Vice-Chancellor's Professorial Research Fellow and Chair in Digital Humanities and Social Sciences, at Edith Cowan University, Australia. He speaks and publishes on major challenges and changes facing 21st-century society, from the global impacts of technology on communication, culture and identity to migration and human rights. A Fellow of the Royal Historical Society, he has held visiting positions in Europe, Asia-Pacific and North America. His latest book is *Open Scholarship in the Humanities* (with Lydia Hearn, Bloomsbury 2024).

KIMBERLY COULTER coordinates the research focus "Visual Regional Geographies" at the Leibniz Institute for Regional Geography (IfL) in Leipzig. Previously, she led a digital mediation project for Munich's Alte Pinakothek and directed the Environment & Society Portal at the Rachel Carson Center (LMU Munich/Deutsches Museum). She holds a Ph.D. in Geography from the University of Wisconsin–Madison.

MARIJKE VAN FAASSEN (Huygens Institute, KNAW Amsterdam) is a historian and a senior researcher. Her research focuses on political and institutional history, international relations and migration history. She coordinates the project Migrant, Mobilities and Connection, a collaboration between Dutch and Australian historians and literary scholars of Huygens, Edith Cowan University and HOME-centre Perth. She is partner in the Dutch-Australian Shared Cultural Heritage Project since 2018, together with the National Archives The Hague and the National Archives Australia. Previously she has been editor in chief of various analogue and digital source publications. In 2014 she was awarded her PhD on the Dutch emigration governance system Polder en Emigratie and the online research guide Emigration 1945–1967 (resources.huygens.knaw.nl/emigratie). In 2016 she received a NIAS-Lorentz grant to organise a 5-day international workshop on Migrant (R)ecollections with data scientist, digital humanities experts and cultural heritage institutions, together with Rik Hoekstra.

VICTORIA HERCHE is a post-doctoral researcher and lecturer in the English Department at the University of Cologne, Germany. She is the Public Relations Coordinator at the Centre for Australian Studies (CAS) in Cologne and assistant editor of *Anglistik: International Journal of English Studies*. Her first monograph is titled *The Adolescent Nation: Re-Imagining Youth and Coming of Age in Contemporary Australian Film* (2021). Her research interests include Migration and Refugee Studies, Australian Literature and Film, Indigenous Studies, Post-Colonial Theory, Ecocriticism and Energy Humanities.

RIK HOEKSTRA (senior researcher at DHLab/Huygens, KNAW Humanities Cluster) is a digital historian. He has a historical background in the colonial history of Mexico and has been focusing on the publication of historical information on the internet since the 1990s. He contributed to and devised and supervised numerous digital publications, including the correspondence of William of Orange, the Dutch Biographical Portal and the Dutch Charter Portal. With a combined scholarly and technical background, he bridges research, data, and development; his research interests are primarily in the combination of established and innovative, digital methods. With Marijke van Faassen, he has been involved in the Migrant Mobilities and Connection Project from the beginning, devising methodology to connect worldwide distributed cultural heritage collections and concentrating on digital collection evaluation and accessibility. In addition, he is involved in the REPUBLIC project. It uses cutting edge digital methods to provide digital accessibility for all estimated one million decisions of the Dutch Republic States General decisions from the time it existed (1576–1796).

JANA KECK is research fellow in Digital History at the German Historical Institute (GHI) in Washington, DC. Before joining the GHI in 2020, she was working at the University of Stuttgart, Department of American Literature and Culture, in "Oceanic Exchanges: Tracing Global Information Networks in Historical Newspaper Repositories, 1840–1914" (DFG). The DH-project boasted a team of scholars from seven countries in Europe and the Americas to study transnational news circulation in nineteenth-century newspapers. Her PhD project "The German-American Press Network and Gender: A Scalable Reading of Transtextuality in Digitized Newspapers, 1830–1914" uses digitised newspapers and computational methods to examine reprinting practices and genre conventions in German-American newspapers. In 2021, the project received the first Peter Haber Prize for Digital History at the "53. Deutscher Historikertag" (German Historians Conference).

POLLY LOHMANN is a Classical Archaeologist at Heidelberg University. She holds an MA in Classics from the University of Heidelberg, and received her PhD in Classical Archaeology at the Ludwig Maximilian University of Munich in 2016 as a fellow of the Munich Graduate School for Ancient Studies. For her doctoral thesis on

graffiti in Pompeian houses, Polly Lohmann was awarded with the 2017–2018 travel grant of the German Archaeological Institute (DAI). Her research interests include Roman housing and the construction of social space, graffiti and the materiality of inscriptions, as well as gender ideals, role models, and representations of 'otherness'. Since February 2018, she is lecturer and curator at the Institute of Classical Archaeology and the Heidelberg Center for Cultural Heritage, where she oversees the collection of antiquities and plaster casts. In that capacity, she also researches the history of the collection, and late 19th/early 20th century antiquities trade and academic networks.

AARON PATTEE is a doctoral candidate at the Institute for European Art History and the Interdisciplinary Center for Scientific Computing at Heidelberg University. He is writing his dissertation on the topic of 12th/13th century ministerialis castles in the German Palatinate with the application of 3D photogrammetric and laserscan models, GIS (Geographical Information Systems) based spatial analyses, and a graph-database of over 700 medieval charters. Prior to pursuing his PhD in Heidelberg, he received his Master of Arts in Anthropology with a focus in Historical Archaeology and a certificate in Digital Humanities from the University of Nebraska-Lincoln in 2016.

ROMANY REAGAN is an Arts Council England funded audio artist and research fellow, creating works with a focus on dark heritage, feminist history, layers of memory in place, and folklore. She has crafted pieces of creative public engagement at various local and national-level museums and heritage sites in London, UK. Romany received her doctorate from Royal Holloway, University of London in Performing Heritage in 2018. Her practice-based thesis explored the layers of heritage within Abney Park cemetery, which led to a study of the occult literary heritage of Stoke Newington, 'earth mystery' psychogeography, and folklore. Since completion of her PhD, Romany has documented her ongoing research into lost histories and place-based folklore and legends on her blog Blackthorn & Stone. Her most recent work 'Women's Weeds: The hidden history of women in medicine', an audio installation running July – September 2023 at the Museum of the Home in London (funded by Arts Council National Lottery Project Grant) is now part of the permanent interpretation in the Museum of the Home 'Gardens Through Time'. This project is accessible through the Women's Weeds tab on Blackthorn & Stone; Bloomberg Connects museums app under the Museum of the Home page; and also alongside other audio experiences and walks through various sites in London, which are available for free on SoundCloud.
Instagram / TikTok: @msromany
https://blackthornandstone.com/
https://soundcloud.com/romany-reagan
https://www.youtube.com/@blackthornandstone

ANA LUISA SÁNCHEZ LAWS is Professor of Interdisciplinary Methodologies and Methods at UiT The Arctic University of Norway. Her research covers topics within digital cultural heritage, immersive journalism, and peace and conflict transformation. Her books include *Panamanian Museums, History, Context and Contemporary Debates* (Berghahn Books), *Museum Websites and Social Media* (Berghahn Books), *Conceptualizing Immersive Journalism* (Routledge) and *Insights on Immersive Journalism* (Routledge).

FRIEDERIKE SCHMIDT is a doctoral candidate in art history at the University of Greifswald. In her dissertation, she investigates the appropriation practices of so-called collectors and British officials in Australia in the 19th and 20th centuries using a mixed-methods design. Therefore, she combines quantitative data analysis with qualitative individual case studies, thus contributing to the research fields of Digital Humanities and Post Colonial Studies. She is a member of the Critical Heritage Studies Network at the University of Stockholm and creator of the European Museum Collections of Aboriginal Material (EMCAM) dataset. At the German Association of Australian Studies she co-edits the newsletter and is responsible for creating graphs and maps. Her previous positions include curatorial assistance at the Art Gallery of Western Australia, associate membership of the research group "The Transcultural Heritage of Northwest Australia" at the University of Heidelberg as well as the presidentship of the management team of the Stockholm Dual Career Network.

ISABEL SMITH is a Research Associate in the School of Arts and Humanities at Edith Cowan University, Western Australia, with particular interests in digital storytelling and the relationships between memory, narrative and identity. Previously a History Curator at major state museums in Australia and a social researcher in the UK, she is currently working on an online exhibition exploring legacies of slavery in Australia as part of the Australian Research Council grant *Western Australian Legacies of British Slavery*.

PAUL TURNBULL is Professor Emeritus in History and Digital Humanities at the University of Tasmania. He also holds honorary research professorships at the Australian National University and the University of Queensland. He is the pre-eminent historian of the scientific theft and uses of the bodily remains of Australian First Nations peoples, and the history of comparative human anatomy and anthropology in Oceania from the Enlightenment to the early twentieth century. His publications are deeply grounded in archive-based historical research and analysis, informed by concepts in the historiography of science and colonialism. Paul's innovative scholarship has been accompanied by applied archival research in the service of reconciliation. For near thirty years now, he has assisted First Nations, state and national museums in Australia and overseas, and Australia's federal government,

to locate, identify and repatriate First Nations Ancestors from overseas scientific institutions to their communities of origin for reburial. He is also internationally recognised as a pioneer in creating research-based digital resources for Pacific and Australian history, and has been instrumental in the creation of the Research, Reconcile, Renew Archive, an innovative, indispensable online knowledge base for assisting Australian and other First Nations communities in locating and repatriating their Ancestors. His publications include, Science, Museums and the Collecting of Indigenous Human Remains in Colonial Australia (Palgrave 2018).

CARSTEN WERGIN is Associate Professor of Anthropology at Ruprecht-Karls-University Heidelberg. He is chairperson of the German Association for Australian Studies (GASt) and member of the executive committee of the Association for Critical Heritage Studies (ACHS). His work is located at the intersections of heritage, culture, and ecology, with regional foci in Australia, Europe, and the wider Indian Ocean World. Carsten Wergin is the author of *Tourism, Indigeneity, and the Importance of Place: Fighting for Heritage at Australia's Last Frontier* (Lexington, 2023). His articles have appeared in journals such as the Anthropological Journal of European Cultures; Ethnos; Journal of Cultural Economy, or Innovation: The European Journal of Social Science Research.

'Digitising Heritage' presents new interdisciplinary studies about the diverse manifestations of heritage in digital form, in museums, academic institutions, politics, and history. Individual contributions span across literary studies, forensics, physics, sound studies, law, postcolonial studies, archaeology, migration and museum studies. How can researchers and practitioners make effective use of digital technologies to foster a sustainable heritage engagement? To what extend can critical heritage concepts find expression in the digital age? The volume answers these questions in a multimedia format that combines audio, video, 3D graphics and technologies.

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