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## 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).<sup>1</sup> 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

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.<sup>2</sup>

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*

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, subsiding 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 digitisation 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’.<sup>3</sup> 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

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,<sup>4</sup> 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.<sup>5</sup> 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”.<sup>6</sup>

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

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.<sup>7</sup> 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.<sup>8</sup> UNESCO also collected stories

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,<sup>9</sup> 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 sight-seeing 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

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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