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Heritage transformations

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Abstract

This special theme examines the dynamic relationships between production, availability, and usage of Big Data, laying out a research agenda for digital heritage at the time of the 'data turn'. Over the past 15 years, a proliferation of heritage data has been generated by 'ecosystems of distributed practices' enacted by the co-working of bodies, cultural identities, organisational workflows, software, application programming interfaces, etc. The authors of research articles and commentaries in this collection explore the three macro-dimensions along which we can map transformations of and by heritage in Big Data ecologies: (a) ontologies or heritage as datified resources, (b) interactions and (c) methodologies and epistemologies.

Keywords

Heritage transformations, datified heritage, Big Data ecologies, collecting, activism, values

This article is a part of special theme on Heritage in a World of Big Data. To see a full list of all articles in this special theme, please click here: https://journals.sagepub.com/page/bds/collections/heritageinworldbigdata

This special theme examines the dynamic relationships between production, availability and uses of Big Data, laying out a research agenda for digital heritage at the time of the 'data turn'. Digital heritage involves the digitised and born-digital processes and outcomes of contemporary human and non-human actors' co-interactions with objects, places, and traditions from the past (Bonacchi and Krzyzanska, 2019). As a concept, it is therefore pervasive, permeating academic inquiry, cultural industries and everyday life. Over the past 15 years, these overlapping 'realms' of digital heritage have been transformed by an unprecedented proliferation of data. Such a deluge has been generated by 'ecosystems of distributed practices' enacted by the co-working of bodies, cultural identities, organisational workflows, software, application programming interfaces, etc. (Ruppert, 2018, 19–20). To name just a few possible examples, Big Data practices in heritage have included: mass digitalisation of analogue resources housed in Galleries, Libraries, Archives, and Museums (GLAM); the sharing and re-interpretation of archaeological findings via social media; and the grassroots documentation of elements of the historic environment that are devoid of legal protection but valued by local communities. Heritage research, practice and, indeed, funding policy, still tend to place the accent on the digitally enabled democratisation of access to existing GLAM collections (Taylor and Gibson, 2017). Initiatives aimed at building large databases of linked and open data, available in interoperable formats have been financed and implemented in Europe and Northern America and are intensifying in other regions of the world (e.g. China). While efforts of this kind *may* be worthwhile, if solidly based on an understanding of *why,* for *whom* and with *what implications* we are investing in creating digitised resources, there is infinitely more to say and do about heritage in a world of Big Data. Metadata is increasingly becoming the target of preservation actions, generating a profusion of heritage data objects 'in need' and considered worthy of attention (Harrison et al., 2017: 11, 15; Harrison et al., 2020: 13–4). Furthermore, assemblages of Big Data practices can now connect heritage across online and offline fields, bridging multiple web spaces and redefining ideas of locality and place-making. They are also reshaping memory via extremely rapid and hyper-visible rehashing of

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information, and of cultural and social values and meanings. These characteristics are distinctive of heritage 'becomings' in Big Data ecologies, and illustrate their uniqueness compared to historical examples of data collection at scale (see, e.g. Harrison 2014 on mass observation). An ecological view of digital heritage is useful to transcend discussions of whether heritage data possesses formal qualities that define it as 'big' or 'small' (Kitchin and McArdle, 2016; Ruppert, 2018). Such a perspective focuses our attention on how people's relationships with data and with the past co-evolve; it also foregrounds the ways in which heritage continues 'living' and 'being lived' in the present, altering other 'things' that inhabit environments disrupted by Big Data practices.

There are three macro-dimensions along which we can map transformations of and by heritage in Big Data ecologies. The first is *ontologies*, or *heritage as datified resources*. What new forms can heritage take, both as and through data? How are past, present and anticipated futures collapsed in datified heritage? What tangible or intangible parts of the body, of notions of 'self' and 'other', of artefacts – be they monuments, portable items or entire landscapes – are exposed and which are obscured? What (and whose) values are projected? What are the social, economic and environmental impacts of these new heritage ontologies? In responding to these questions, the special theme also aims to dispel the idea that digital heritage is only relevant to the lives of a privileged few, mainly residing in Western societies, who have access to the Internet and the desire, abilities, and knowledge to use it. On the contrary, the existence of heritage in Big Data ecologies also has real-world consequences for those who do not directly participate in these ecologies. Individuals and groups may have their individual and collective memory constructed by others and, potentially, in order to pursue interests that are very different from their own and may even work against them. Absence is relevant, as are presences and (mis)representations. Thompson's commentary develops a framework for analysing and visualising what should be mended (Thompson, 2020). Her contribution is centred on women from the Global South and how their data bodies are rendered, drawing on feminist and more-than-human theorisation. The approach that she outlines can also, however, be applied more widely to investigate affordances and issues connected to 'manifesting' via the heritage data 'record'. Thompson's proposed methodology entails the three crucial stages of 'attuning to and becoming with data, making data physical and changing narratives' (Thompson, 2020). It is in step with an activist understanding of digital heritage research that is intent on fostering positive social change (Bonacchi and Krzyzanska, 2019). Further reflection on the networking of technicity and users is empirically investigated by Marwick and Smith (2021), who detail the relations between contributors, bots, language, the infrastructure of Wikipedia and World Heritage Sites (WHSs). In doing so, the authors describe a situation where the public front of heritage is homogenised and sanitised through datification, while 'hidden' material traces of past vandalism and the controversies surrounding WHS nominations also persist. These ontologies are revealed to be the expression of a dominating Anglosphere, whose values are inscribed in the data practices of Wikipedians. Marwick and Smith (2021) argue that webpages of an apparently 'democratising' Encyclopaedia actually perpetuate the legacy of the British Empire and, encapsulated in it, of the pre-modern past which contributed to inspire it (e.g. Roman imperialism; Bonacchi et al., 2018; Hingley, 2000).

The second strand of heritage transformations concerns the *interactions* through which heritage is created in Big Data ecologies. Ames and Lewis (2020) and Bingham and Byrne (2021) critically address this topic through the lenses of contemporary web collecting, digital scholarship and collections-as-data. Their commentaries delve into the strategic (hence political), technical, legal and ethical factors that lead to specific injustices underpinned by datified heritage. Attempts are made by the authors to suggest how memory organisations can partake in fairer data practices of heritage-making. 'Fairness', in this context, is understood as the product of documenting inequalities so that they are known and accounted for, while also striving to eliminate them whenever possible. In the context of the recent Covid-19 pandemic, for example, GLAMs have not only offered new forms of digital engagement (ICOMOS 2020; Samaroudi et al., 2020) but also reflected more deeply on the social sustainability of their data practices (Terras et al., 2021). Although these efforts are certainly desirable and commendable, it is, however, important to remember that they do not develop in silos. The agency of any single institution or citizen in Big Data ecologies is limited, as private voices are copied, disconnected and reconnected with those of public figures, media websites, etc. What, therefore, might be the impact of 'expert' communications of the past in environments where personal, familiar and 'official' histories can be joined-up, almost equalled and very publicly displayed on social media to forge tribal assemblages (Bonacchi and Krzyzanska, 2021)? Despite the promises of the 'data turn', we witness the persistent power of traditional media, public communications that are strongly influenced by the agendas of neoliberal academies and the commercially emotional design of social networking sites (Bonacchi and Krzyzanska, 2021). Moving from this premise, how can the past be re-assembled in ways that attend to decoloniality and intersectionality in a world of Big Data? Furthermore, how is the past 'framed' to fit the 'stripped' and more homologated language that is encouraged by networked web infrastructures? What happens to the folding of the past into present and future if, online, 'language is traded and valued according to how it "performs"'

(Berardi, 2012)? It is not only a matter of historical accuracy, but also of identity sensitivities, and of rendering nuances so that selected aspects of the human past are not taken to serve as labels under which 'the other' is constructed antagonistically and excluded.

Finally, the third area of transformation concerns methodologies and epistemologies. The abilities required to both craft and analyse heritage online have probably never coincided as much as they do today. Yet, most researchers in digital heritage remain largely unprepared to explore the emerging modes via which people experience and perform their pasts in Big Data ecologies. One could argue that the field has remained fairly impermeable to the charms of the 'algorithmic sublime' when it comes to research methods (Ames, 2018), partly as a consequence of disciplinary training centred in humanistic and qualitative methodologies and of the limited availability of adequate infrastructures. Such hindrances have resulted in a general tendency to either abstain from or outsource the technicity of digital heritage research, even though data-intensive methods informed by bigger data may open rich opportunities to advance thinking and provide new answers to old questions. Altaweel and Hadjitofi's (2020) study assesses cultural value by investigating the sales of antiquities on eBay via Natural Language Processing. The authors find that Western markets dominate sales, and – I would add – that some of the popularity 'triggers' previously detected for mass media portrayals of ancient material culture are also active in Big Data ecologies. The greater public appeal of Egyptian and Roman artefacts compared to heritage from other periods, and of 'rarer' and 'higher status' objects such as jewellery had already been exposed in an analogue world. The attractiveness of these kinds of past was evidenced by the consumption of heritage television and archaeological press in Britain, for example (Piccini and Henson, 2006). 'Doing digital methods' in heritage (Rogers, 2019) may tell us something about heritage interactions with and beyond web spaces. It also provides a historical perspective on the relationships between taste, status and the social values mediated by archaeological artefacts and their acquisition. Despite this potential, there are nevertheless risks involved in claiming representativity online, especially for a field, i.e. heritage, which conceives of identities as ever-changing and fluid. Contributions in this special issue examine all these heritage transformations, taking the reader on a voyage of re-thinking digital heritage in a world of Big Data.

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