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Thoughts on a Changing Landscape for Research Archiving in the Cloud Era: A Critical Perspective from South Africa

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Abstract

This article reflects on humanities research and archival futures in Southern Africa in the Cloud era—those collections that support research on an institutionalised basis, including sound and related collections. Since the 1990s, for comparably smaller, lesser resourced institutions in South Africa, a scramble for digital Africa amid a technological divide piled upon other inequities. This condition has manifested in today's big technology stacks and stakes.

What then, does it mean for archives and their work of helping to produce the conditions for a meaningful engagement with the past and the present, indeed the future? A major challenge for research archives, it seems, may be to do the work of enabling epistemic access, which includes an orientation to ethics from the south, with the new set of vocabularies of digital sovereignty on the other hand. It is also crucial to redefine archival restitution as a social process in which the sovereignty of local communities, digital and otherwise, matters.

Keywords: archives, futures, restitution, sovereignty, cloud computing, postapartheid, activism, foundations, infrastructure.

Résumé

Réflexions sur l'évolution du paysage de l'archive de recherche à l'ère du cloud : Une perspective critique depuis l'Afrique du Sud

Cet article propose une réflexion sur l'avenir de l'archive de recherche en sciences humaines en Afrique du Sud à l'ère du *cloud* – l'avenir des collections archivistiques institutionnelles, tout support confondu, y compris sonores ou multimédias. Depuis les années 1990, et dans un contexte de fracture technologique, la ruée vers l'Afrique numérique n'a fait qu'ajouter une nouvelle inégalité pour les institutions sud-africaines les plus petites et les moins bien dotées en ressources. Cette situation se manifeste dans les grandes concentrations technologiques et les grands objectifs d'infrastructure qui se sont établis aujourd'hui.

Dans ce contexte, qu'est-ce que signifie, pour les archives et les archivistes, de contribuer à produire les conditions d'un dialogue intéressant avec le passé, le présent, voire l'avenir ? Si un défi majeur des archives de recherche est bien l'accès épistémique qu'elles permettent, cela implique, en Afrique, d'une part de réorienter l'éthique depuis le Sud, d'autre part d'investir le nouveau vocabulaire de la souveraineté numérique : en particulier, de redéfinir la restitution archivistique comme un processus social dans lequel la souveraineté des communautés locales, numériques et autres, compte.

Mots-clés : archives, futur, restitution, souveraineté numérique, *cloud*, postapartheid, activisme, infrastructure numérique.

Resumo

Reflexões sobre as mudanças no cenário da investigação sobre arquivos na era da nuvem: uma perspectiva crítica a partir de África do Sul

Este artigo reflecte sobre a pesquisa em humanidades e o futuro dos arquivos na África Austral na era da nuvem – isto é, as colecções que apoiam a pesquisa numa base institucional – incluindo colecções sonoras e conexas. Desde a década de 1990, instituições de dimensão comparativamente menor e com menos recursos na África do Sul, viram-se confrontadas com uma correria pela África digital que, no meio de um fosso tecnológico, se acumulava com outras desigualdades. Essa condição manifesta-se nos grandes *stacks e stakes* tecnológicos de hoje.

Quais são as implicações, então, para os arquivos e a sua missão, de ajudar à produção das condições permitindo um envolvimento significativo com o passado e o presente, e de facto com o futuro? Um grande desafio para os arquivos de pesquisa, poderá ser o de viabilizar o acesso epistémico, o que inclui uma orientação para a ética do sul, acompanhada pelo novo conjunto de vocabulários de soberania digital. Parece também essencial redefinir a restituição arquivística como um processo social, no qual a soberania das comunidades locais, digitais e outras, importa.

Palavras-chave: arquivos, futuros, restituição, soberania, computação em nuvem, pós-apartheid, activismo, fundações, infraestrutura.

Thoughts on a Changing Landscape for Research Archiving in the Cloud Era: A Critical Perspective from South Africa

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An earlier version of this article was presented as a paper at the conference “Music Archive in Southern Africa: Challenges, Opportunities, Innovation” held by IFAS-Research in November 2021 (Layne 2021). This conference was part of the programme “Sounds of Southern Africa: Music, Empowerment, Freedom (2019-2021)”[[archive](#)].

Introduction

In a conference presentation held on 17 November 2021, Lee Watkins, the Director of the International Library of African Music, announced that the institution was acquiring the archive of the South African hip-hop group Prophets of Da City (“Prophets Of Da City” n.d.; Layne 2021).¹ This announcement, made to a small gathering of South African research archivists, was momentous because such an acquisition would have been unthinkable to its charismatic founder, the late Hugh Tracey, who frowned upon such purported “corruption” of African traditional music by Western pop influences (Felber 2010).² Beyond such a radical reinterpretation of the concept of “African music” which the institution had subscribed to up to that point, the gesture challenged old and presented new ideas about the concept of archival preservation, given the range of materials to be acquired, including samplers, and other digital musical banks and gear.

Such events are becoming commonplace, epitomising a sea change sweeping through the small world of research-based music archives in South Africa—and of course also further afield. What has shifted in what we call the archive landscape since the early 1990s when South Africa transitioned from apartheid through a Truth and Reconciliation moment with Nelson Mandela at the helm; and what might we learn from this in the research archive space? Which conceptual frames or approaches might archive makers, stakeholders and supporters adopt in negotiating such changes? This article offers “informed speculations” on institutionalised research archive collections. It offers some core questions for archival futures, from the perspective of a South African curator, sound archivist and scholar.

1. The acquisition was of course part of a more comprehensive set of measures to revitalise access to the ILAM collections and to effect forms of repatriation.

2. Felber notes that Tracey’s notions of ethnicity as the core of cultural expression were outdated even by the standards of the 1950s.

First a reflection on institutional transience. I sit in the Memory Room, built on a balcony behind the pulpit in the old Methodist slave church in Cape Town, the main exhibition area for the District Six Museum, working in memory of the notorious forced removal of people in South Africa from their homes between 1966 and 1980. After the museum's establishment, the church had been refurbished in the late 1990s to meet the needs of the young museum of land dispossession in the city and to host a significant collection of archival materials. Much of this is reference material, newspaper clippings, oral history transcripts, and audio or video materials, including interviews with community musicians, and recordings of performances. Since the early 2000s, the Museum has expanded into another building named "The District Six Museum Homecoming Centre," a place dedicated to the Museum's own programmes but also used as a popular venue for conferences, community workshops, and book launches. As far as the archives are concerned, the photographic, audio-visual and document collections are now outgrowing the available space. The centrepiece yellow sofa is loaded with file boxes. It is a place of archival storage labour—files are neatly arranged on shelves, but also overflow onto floors. The library has also overflowed its tiny space. But it is well-used—by school children, and by researchers like myself.³

At such a time scale, change seems incremental. After its heady first decade of existence, the museum's original work continues, but differently—the community impact is probably more manifest today than in the original exhibition, but with new challenges borne of epochal impacts such as Covid. The important thing is that the museum is a functioning community institution. We might consider that my personal account above of the Memory Room represents but a layer in an ongoing institutional process. Mindful that futures exist in young people, and how they relate to questions of freedom, justice, humanity, and ethics. As I have outlined elsewhere (Layne 2008), locatedness, community methodology and practice have been vital dimensions of the museum's work and its character.

The slow internal change of institutional fortunes should be coupled with sea changes in archiving technologies. Small and midsize archive institutions such as the District Six Museum now operate in a matured internet dispensation which prompts scholars such as Janet Topp-Fargion to evoke the modern trope—"we are all archivists now" (Landau and Fargion 2012). Moreover, the world has become smaller. There is, in other words, a sense in which the activities we might describe as archival—the capacity to recall information, to curate it, to preserve it at the tip of our fingers—are now available to the layperson and the archivist alike and accessible relatively quickly to somebody with a smartphone and sufficient bandwidth. Crucially it is not the mechanics of the archive that are now inaccessible, but the knowledge and knowledge work for producing and marketing knowledge that are inaccessible. The digital divide manifests particularly sharply in these ways. And alongside that, an ethics of how to archive in the cloud era becomes critical.

My reflection on the shifting fortunes of the Memory Room comes from thinking about building an archive then—the internal advocacy, the oral history and museum

3. For an account of its genesis, see Layne and Rassool (2001).



Figure 1. Inside the District Six Museum

Interior detail of the District Six Museum permanent exhibition at the pulpit in the old Methodist slave church, where now hang the street signs and rubble from the bulldozed urban landscape. The Memory Room is situated behind the railings visible at the street sign for Russell Street. A detail of the famous street map is visible on the floor, as is a member of the curatorial team embroidering the messages of its thousands of visitors on a memorial cloth. Daily occurrences of oral storytelling by guides and ex-residents, musical and literary performances and gatherings of ex-residents have all been recorded and archived in these spaces. Photo Credit: Valmont Layne.

programmes, the fieldwork, and exhibition-making—and now. In using this notion of temporal “horizons” for archive institutions in the light of technological change, one draws lessons from the institutional formation of research archives in the age of rapidly changing cloud technologies as the existing technological context for an “archival standard” for preservation. With this set of standards, as a “commandment” for archival nomenclature (as previous standards were built on paper and related analogue and digital media), the long-term relation between archives, their contexts, and epistemological horizons is once again worth reflecting upon.

This article will proceed by marking two key “archival” moments in which a break occurs in the manner or frameworks reckoning with the past—a foundational moment in the terms used at that 2021 archives workshop. In this reflection some key concepts point in the direction of a renewed ethics for archival development in South African humanities research. Here, I will argue, the concept of a designated community, and of the “question to come” should be re-contextualised in the wake of the colonial era, South Africa’s transition to democracy, and rapid and relentless technological acceleration, global inequality and the horizon of disaster and climate change at a planetary scale.

The cloud in this article refers to an interrelated infrastructure at a planetary scale; what Bratton describes as a model for the design of political geography tuned to this era of planetary-scale computation (Bratton 2016, 3). Moreover, as Amoore has argued, the existence of the cloud also drives ethical questions that are profoundly relational (Amoore 2020). The concept of “technogenesis” may be helpful in considering the materiality of the contemporary digital archive dispensation, referring as it can to an implicit connection between human culture and its technical means, the idea that humans and technics have coevolved together (Hayles 2012, 10).

Refoundational moments in South African archives

More recently, another remaking is occurring at the University of the Western Cape, where work to revitalise its iconic archival collections—the core of these held in partnership with the Robben Island Museum—has been underway since 2019. The arts and humanities archives of the University of the Western Cape are anchored by the International Defence Aid Fund (IDAF) Collection, the records of the international Anti-Apartheid Movement based in London since 1956 (Frieslaar 2015). Since that gift which helped form the UWC Robben Island Mayibuye Archive in the 1990s (and later the Robben Island Museum) (see Epstein 2005), the historically black university has transcended the limited and mediocre role allotted to it by the apartheid state and has emerged as a respected research university with strong ties to community organisations and to practice in the health sciences, community development, dentistry, astrophysics, law, government and land policy and several others.⁴

4. This article is also occasioned by a project to revitalise the collections of the UWC RIM Mayibuye Archives, the art collections and new acquisitions such as from journalist and founder of South Africa’s jazz festival, Rashid Lombard. See Abader (2022).

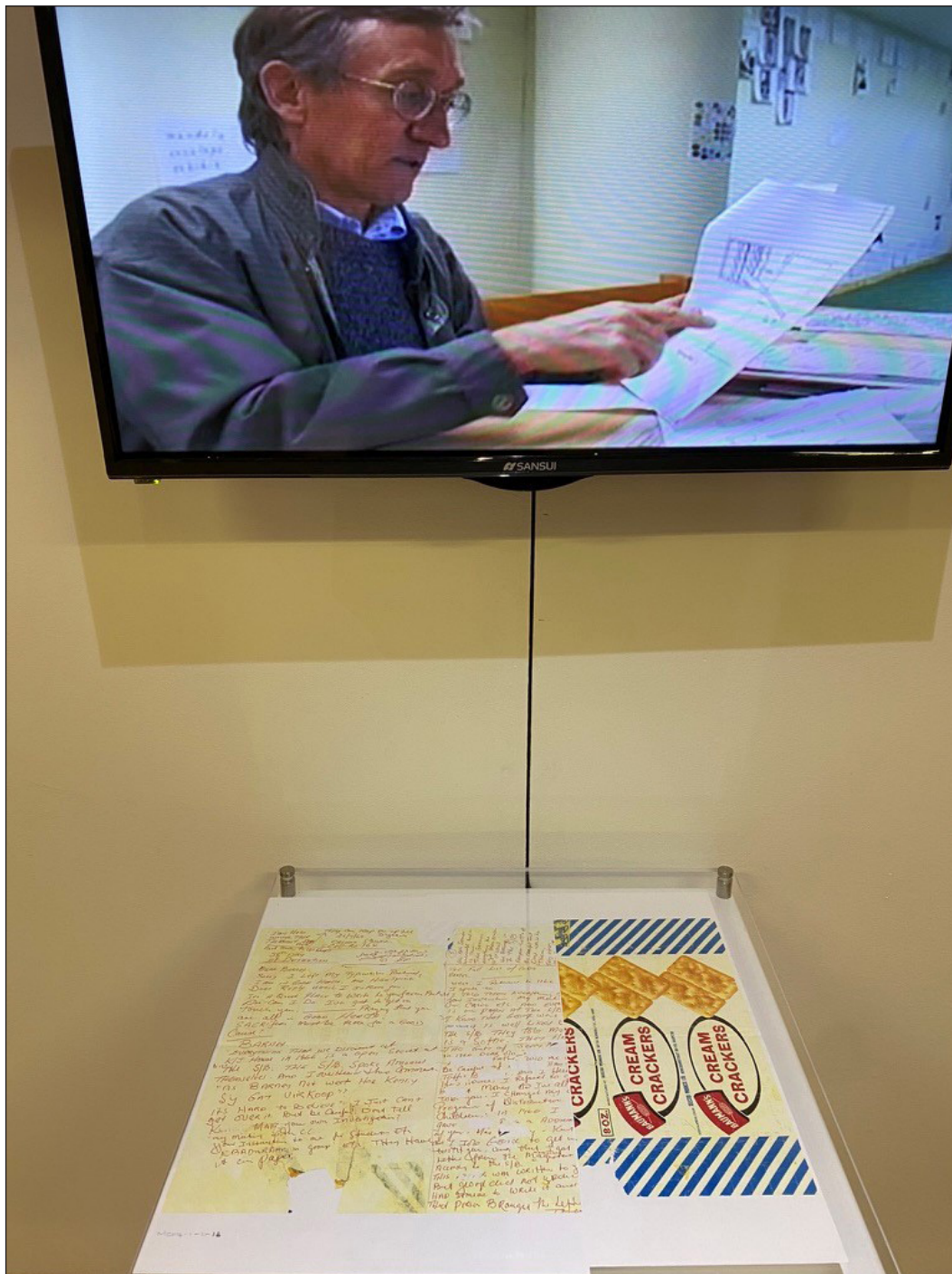


Figure 2. Letters from Imam Abdullah Haroun (UWC Robben Island Mayibuye Archive)

The above exhibit depicts secret letters smuggled out of prison by the respected activist Imam Abdullah Haroun to his wife Galiema and to fellow activist Barney Desai around June 1969. The letters were hidden in a biscuit box inside a flask. Haroun was later tortured and murdered in detention by the South African state on 25 September 1969. His death in detention is the subject of a new inquest (see “Imam Haron Inquest 2022: WEEK 1” 2022).

Held at the UWC RIM Mayibuye Archives, at the University of the Western Cape Bellville campus. The life of the Imam is documented in the film *The Imam and I* by Khalid Shamis (<https://vimeo.com/54882216>).

Photo Credit: Valmont Layne.

In a related discussion, the South African activist and archivist, Verne Harris (2019) referred to a more recent “refoundational” moment in archival work in South Africa. Harris suggested that the Marikana massacre, where the national police killed twenty-four miners during a strike on 16 August 2012, and the rallying of students across the country in 2015–2016 under the demand of “fallism”⁵ (Nyamnjoh 2016; Fairbanks 2015) signal a break with the “Rainbow Nation” honeymoon period of South Africa’s transition out of apartheid in the late 1990s and 2000s. Harris was actually reading current debates about the critique of colonial legacies not only as a moment coming in the wake of “#fallism” but also more largely as an echo to a first foundational moment in archive-making in Democratic South Africa.

This first foundational moment concerns the heady days of political transition from a violent and dying apartheid order to Nelson Mandela’s presidency in 1994, which gave birth to a time of “truth telling,” the intensive querying of atrocities, its repressive actions and of memory—a process notable but not confined to the Truth and Reconciliation Commission. Public institutions of memory and archives had a vital part in this public discussion. For example, in 1994, the District Six Museum opened its doors as a series of exhibitions mobilising a community that had been forced off its land in the inner city of Cape Town (Layne 2008; see also Fouéré 2019). Another aspect of this moment was a discourse of nation-building, evident in the major projects, such as the formation of the Robben Island Museum in Cape Town, and Constitution Hill, in Johannesburg, among many others. The national Department of Arts and Culture also promoted the idea of a national music collection. National renditions of the past have a profound impact on humanities scholarship—be it in ethnographic and ethnomusicology, or elsewhere in the humanities.⁶

There was also an important global dimension (See Nesmith 2002). In 2007, new digital technologies and the internet gave impetus to the international drive to build digital collections of apartheid history. These initiatives prompted historian Premesh Lalu to speak of a virtual scramble for Africa, and to argue for a resilient politics of digitisation for African archives in the wake of emerging neoliberalism (Lalu 2007). Lalu in particular noted the dying narratives of the Cold War and the instrumentalisation of nation-states.⁷ The article in fact points towards the digital as a new terrain of knowledge politics, of restitution. More recently the case has also been strongly made that the “complex of the white savior (sic)” seems sometimes to

5. “#fallism” is the name given to both the #Rhodesmustfall and #feesmustfall movements which manifest as sustained protest action at mainly white liberal universities in South Africa, and in the United Kingdom in 2015. These movements gave new impetus to calls for the decolonisation of universities and public cultural institutions generally.

6. See Layne (2010), which reflects critically on the National Indigenous Music Project (NIMP) announced in 2001, in the wake of South Africa’s Truth and Reconciliation Commission. While the project never happened, it was indicative of the nationalist and disciplinary thinking predominant at the birth of a young democracy.

7. Lalu’s critique took place at the end of the Cold War and the disillusionment with Truth-telling and transitional justice as an archival horizon.

have been turned into the “complex of the digital savior” in a humanitarian African context. In this context, new corporate interlocutors were compared to twenty-first-century missionaries, as they do not “carry [...] Bibles but scanners” (Limb 2007, 23, quoted by Chamelot et al. 2020, 109–11; See also Limb 2005).

If Lalu’s critique pointed to the straining of the national narrative, it was the Marikana Massacre of 16 August 2012, and the student uprisings of 2015, termed #fallism, which seemed to represent a break, a final disillusionment with the “Rainbow Nation” narrative of the 1990s. A critical dimension of these was the radical accompaniment of aesthetic politics and critique—a rejection of multiple colonial legacies in architecture, and public art epitomised in the fall of the statue of South Africa’s preeminent colonial robber baron Cecil Rhodes (Fairbanks 2015).

The pervasive use of social media had made new modalities of archival activity possible and linked these irrevocably to questions of rights and privacy. Beyond the #fallist movement, and the Arab Spring before it, violence against black civilians in the USA led to new concerns about repression and victimisation and to the development of new digital responses. The initiative explored the ethical issues that arise from archiving social media, with a specific focus on social media content created by participants in the recent wave of African-American activism in response to police shootings. The ethical White Paper issued by Documenting the Now, for example, called for activist documentation initiatives to follow archival guidelines in the acquisition of materials (Summers 2020).

Human and machine interlocutors

The postapartheid Truth moment also heralded other responses. Alongside the legacies of colonialism, the technicality of the digital is a key consideration in this discussion. The main research sound collections on the African continent have been created through the efforts of key interlocutors such as Klaus Wachsman, Andrew Tracey and Percival Kirby. Rassool in particular has drawn attention to the scale of such institutional and ideological interventions perpetrated by knowledge workers, asserting that a “veritable army of reformers, linguists, folklorists, chiefs, missionaries, and elders invented tradition in Africa” (Peterson, Gavua, and Rassool 2015).

Recent discussions of ethical practice have signalled a distributed concept of the archive that is oriented towards social processes beyond the confines of institutions. Such an understanding, it seems, should enhance discussions about the role of archives in effecting social justice, and in projects of restitution (See Wallace et al. 2020). Sylvia Nanyonga Tamusuza, in describing the Ugandan experience of repatriation of the Klaus Wachsman collection, asserts that repatriation is a form of cultural critique: a critical and reflexive discourse about the social relations of power in cultural representations, and a model for dissembling and potentially undoing those relations (Nannyonga-Tamusuza and Weintraub 2012).

An explosion of fan archives and archivists often hosted in the cloud with no archival training as such now join the institutional or emphatic archives I have

discussed (De Kosnik 2016). Some scholars predict this to be the shape of the future. Hence, mindful of the disciplinary history of ethnomusicology, Janet Topp Fargion argued for a concept of archives as a social process or “proactive archiving” which involves careful methods of collection, development and dissemination, treating the process as seriously as the product and which also suggests re-imagining archival production as a mutually beneficial partnership and a means to break down the walls between the academy and a community (Landau and Fargion 2012, 126ff). I propose that this applies to restitution as well.

With epistemic change—changes in the modalities and forms of access to knowledge—, we might anticipate new questions and new ways of asking. The foundational moments discussed may give cause for rethinking ethics, the implications of digital and cloud technologies present new opportunities and complications. More recently, Chamelot et al. (2020) noted that the “digital turn of African archives is [...] an object of study in its own right, standing at the crossroads of political and economic interests.” In thinking about development, the technical is enfolded in supporting human life itself on the planet. In more modest terms, we cannot know what might be of value in recordings digitised from analogue originals.

For example, the vocabulary of “noise” has re-entered the vocabularies of a new generation of scholars in the humanities and social sciences (for a sample, see Attali 1985; Denning 2015; Biers 2006). This is pertinent because it was not always such an important question. As a technical specialist in the early 2000s, Dietrich Schuller, former director of the Phonogram Archive in Vienna, Austria, knew about the importance of noise, and emphasised the importance of preserving all sonic information on carrier media, including what might be considered noise, in sound preservation. Schuller was pointing to such a question about noise and futurity. The philosophy, Schuller argued, is to transfer every bit—mistakes, every error—which is on the tape and only remove it in a second postproduction process (Seeger and Chaudhuri 2004, 43). Noise for the purposes of post-production, is potential knowledge for the future scholar. What was at stake for Schuller was the viability of “questions to come,” the future affective vocabularies and technologies that might vastly improve present understandings of sound and scholarship.

What are the implications of this? As archival content becomes information and data, layers of abstraction are added to the already vexed problems of preservation, which must now include hardware and software emulations, and indeed the software and accompanying data itself. An impressive example is the unique Ian Bruce Huntley archive—now secured as a private cloud collection (Albertyn 2013). If it is to endure in the cloud, it has to satisfy several assumptions: that the cloud hosting company—even remarkable new public internet initiatives such as the Wayback Machine—will last, that the links securing access to them will be there forever. It is not hard to imagine that this is not the case by default. Technologies move on quickly, links are lost. Web hosts go out of business.

One implication of this moment is that the intervening technology stack gets more and more complex. Preservation now must take this ever-changing obsolescence perpetually into account. We need to be concerned not just with media obsolescence, but also software obsolescence, bit rot in digital media, and link rot on the web. Hence NASA's archive standard now expects future legibility as the main purpose of an archive in which significant parts are no longer merely digital, but distributed or networked, and which exists entirely as software, data and hardware—such as physical and virtual servers (CCSDS Secretariat 2011). One foresees the need for an ethics that does not merely embrace or reject technical means but engages with them from a grounding in social process. Scholars such as Wolfgang Ernst assert the materialist media grounding of contemporary archives that engage not only with images and sounds but nowadays increasingly with software-based cultural memory. The issue of digital memory is then less a matter of representation than of how to think through the algorithmic calculation—based ontology of a memory (Ernst 2016, 9).

Indeed, disciplinary horizons shift and hence impact on our concept of archival horizons. A sense of such “technicity” is important in helping archivists understand how this works. Technicity, in other words, compounds existing inequalities from the colonial era. That is, colonial legacies have deepened already persistent colonial inequalities – repeated and exacerbated dehumanisations, reproduced and extended dispossessions (Hicks 2020, 26). Global apartheid was enabled with the archival endeavour and produces this anew with each technological age.⁸

Conclusive thoughts on relocating digital sovereignty

The interface of technological and archival moments, as this article has outlined, suggests that archives may enlist a stronger sense of the communities they serve—including the community of scholarship—to negotiate humanities futures. In this, we may harness an informal concept of “digital sovereignty” at the community and institutional level in the wake of the above critiques from Lalu and others. Digital sovereignty is “the idea that states should ‘reaffirm’ their authority over the Internet and the broader digital ecosystem, to protect their citizens, institutions, and businesses from the multiple challenges to their nation’s self-determination in the digital sphere” (Musiani 2022). A range of technical vocabularies developed in the north is at the disposal of larger communities. This article suggests that an analogous discussion be geared towards enabling such “autonomy for the niche of archive institutions and nodes in digital infrastructures in a hyperconnected world” (ibid.). These vocabularies are ridden with the bias of the colonial project. But they cannot be entirely ignored. Humanistic practice needs friends who make these vocabularies.

I have attempted to set out approaches and methods archives might adopt to technical change, the underlying epistemic shifts brought about by rapid change,

8. A case made in Truscott and Van Bever Donker (2017).

and the opportunities and threats inherent in these changes. In this consideration of both digitisation and the contemporary production of born-digital and cloud archiving, the questions of technicity, ethics and social process are intertwined.

The concept of sovereignty is available—in theory—at the level of nation-states. But nation-states are themselves limited concepts at the local community level. The work of “audiovisualising” as a strategy of self-fashioning a nomadic kind of sovereignty is closer to what I imagine for a concept of archives as a collective of linked activities, and by implication, a concept of infrastructure that is more than the return of objects, but rather an idea of the archive as an interconnected process of social development (see Barker 2017). That is, the idea that infrastructure constitutes rhizomatic relationships as well as an edifice; infrastructures as points of interface, contact and control that arrange and materialize underlying relationships.

Here, as an example, we may read the Open Archival Information System (OAIS) framework as a typical indicator of a new archival nomenclature. Developed by NASA, the OAIS is gaining widespread recognition as the standard for modern digital preservation (Lavoie 2014). Its central tenet is that a compliant archive designates a community whose long-term needs it undertakes to serve, and which it anticipates perpetually beyond the horizon of what is known. Critically, this community must be able to access the collection *without the need for expert intervention*. This seems self-evident but has profound consequences. Since the 1980s, Dietrich Schüller has argued for such an open-ended philosophy of preservation, orienting us to such future questions in his articulation of UNESCO’s standards for digital preservation.

In this sense, then, archives are compelled towards a future question, something unprecedented; that which has not been articulated in the present and which seems germane to the humanities in a planetary age. Homi Bhabha held that “Humanism derives its ... [force and inspiration] by dwelling in the realm of the question yet to be asked” (Bhabha 2020, 47). In such circumstances, this line of questioning becomes more than philosophical speculation. The archive is geared toward enabling the emergence of a necessarily unknown horizon. At its hypothetical moment of arrival, the archive must have preserved sufficient information, and contextual knowledge, to pose the question meaningfully. Against this ever-shifting horizon, it is worth revisiting the basis for archival optimism. And for a moment, we might also suspend more pragmatic questions in order to allow this future impression to emerge.

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