

Developing a Digital Heritage Model for Preserving Religious and Cultural Knowledge across Generations of the African Diaspora

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Abstract: *The African diaspora constitutes a complex transnational space in which second- and third-generation Africans often face challenges in maintaining cultural memory, religious identity and connections with their ancestral heritage. Indigenous spiritualities, religious beliefs and community traditions constitute important foundations of diasporic identity, providing mechanisms through which historical memory, values and cultural practices are transmitted across generations. But as indigenous people become part of a variety of societies throughout the world, traditional mechanisms of intergenerational knowledge transmission are increasingly disrupted by migration, geographical separation, social change and technological transformation.. Cultural erosion is also associated with limitations in conventional Eurocentric archival practices, which may marginalize, misrepresent or overlook living, non-Western traditions and community-defined forms of heritage, non-Western traditions, and a persistent digital divide and the limited interactivity of conventional museums may further reduce the accessibility and relevance of heritage resources to younger transnational generations. This paper therefore, proposes a conceptual holistic digital heritage model to protect and preserve religious and cultural knowledge among the African diaspora generations. Taking this idea of data storage one step further, the proposed model would involve three layers: an Ingestion and Curation Layer, a Transmission and Intergenerational Layer and an Engagement and Interaction Layer. The model consists of three interconnected layers: an Ingestion and Curation Layer through which communities document and govern their heritage data; a*

Transmission and Intergenerational Layer that facilitates structured knowledge exchange between elders and younger generations; and an Engagement and Interaction Layer that employs immersive technologies such as virtual reality and augmented reality to enhance participation.. Through the application of this model, generational and digital gaps can be overcome and a decentralized sustainable solution for the conservation of the living heritage of the African diaspora can be established while critical points of ethics referring to data sovereignty, consent and digital re-patriation can be addressed.

Keywords: *African Diaspora, Cultural Preservation, Decolonized Archiving, Digital Heritage Model, Immersive Technologies, Indigenous Spiritualities, Intergenerational Knowledge Transmission*

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1.0 Introduction

The African diaspora comprises diverse communities whose members are geographically dispersed across regions of the world while maintaining varying degrees of social, cultural and historical connections with their places of origin. Migration, displacement and resettlement have created transnational communities in which questions of identity, belonging, collective memory and cultural

continuity remain particularly important.. As diasporic communities are dispersed across geographic boundaries, they continue to face the challenging processes of maintaining a collective memory and cultural heritage in the faraway places they migrated from (Dellios & Henrich, 2020). Heritage is a living and ongoing process, where communities negotiate their identity continuously, and are actively involved in preserving and sharing histories in a globalised world (Bihari, 2023). Within African diasporic communities, heritage extends beyond physical objects and monuments to include oral histories, languages, religious beliefs, rituals, indigenous knowledge, artistic expressions, communal values and other intangible cultural practices. The preservation of these forms of heritage is particularly important because much of the knowledge is transmitted through interpersonal relationships, oral traditions and participation in community practices rather than through formal archival systems.

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The disruption of these transmission mechanisms creates a significant risk of

intergenerational cultural knowledge loss, particularly when elders and other cultural custodians who possess specialized oral, ritual and historical knowledge are no longer able to transmit that knowledge directly to younger generations. Robinson (2023) states that when the elders, who are the holders of oral history and ritual knowledge, pass away, second and third-generation members of the diaspora often find that the gap between them and the culture increases. A major challenge to this is the historic shortcomings of mainstream heritage institutions, who have traditionally used Eurocentric archiving practices that marginalise, misrepresent, or ignore living non-Western traditions altogether (Ngoepe & Bhebhe, 2023). Consequently, preservation approaches that rely primarily on institution-controlled collections may not adequately reflect the cultural authority, contextual meanings and access protocols established by the communities from which such knowledge originates.

Moreover, the increasing digitization of heritage does not automatically resolve the challenges of cultural preservation. Although digital technologies can improve access, documentation and engagement, unequal digital access, limited digital literacy, inadequate community participation and concerns about ownership and cultural sensitivity can constrain their effectiveness (Wagner & De Clippele, 2023) that strongly aggravates the cultural erosion. Especially conventional archives and museums are physically inaccessible for transnational youth, have mostly a physical character, and lack an approach to meet the expectations of digital natives building their social and cultural realities (Bublitzky & Siegenthaler, 2022). Younger members of the African diaspora are digitally literate and interested in learning more about their heritage, but there is a lack of interactive, engaging and culturally relevant digital spaces that connect them to their ancient



heritage and modern-day lives (Lamptey, 2023).

These limitations suggest the need for a digital heritage approach that is not merely focused on digitizing cultural materials but also integrates community governance, intergenerational transmission, meaningful youth engagement and ethical management of culturally sensitive information.

Despite increasing scholarship on African diaspora identity, collective memory, indigenous knowledge, digital heritage, participatory archiving and immersive technologies, these areas have largely been addressed as separate dimensions of cultural preservation. Existing studies provide useful insights into digital documentation and heritage engagement, but limited attention has been given to integrating community-controlled curation, intergenerational knowledge transmission, immersive engagement and ethical data governance within a single framework for preserving African diasporic religious and cultural knowledge. In particular, there remains a need for a model that recognizes elders and cultural custodians as knowledge authorities while enabling younger generations to participate actively in documenting, interpreting and learning from their heritage. This conceptual gap provides the basis for developing an integrated Digital Heritage Model that combines digital preservation, intergenerational exchange, community participation and immersive technologies within an ethically governed framework.

The aim of this study is to develop a conceptual Digital Heritage Model for preserving and transmitting religious and cultural knowledge across generations of the African diaspora through community-controlled digital curation, intergenerational knowledge exchange and immersive technologies. **Objectives of the Study**

The specific objectives are to:

1. examine the challenges affecting the preservation and intergenerational transmission of religious and cultural knowledge within African diaspora communities;
2. examine existing approaches to digital heritage preservation, participatory archiving and intergenerational knowledge transmission;
3. develop a conceptual model integrating community-controlled curation, intergenerational transmission and immersive digital engagement; and
4. identify ethical considerations relating to cultural ownership, data sovereignty, informed consent, privacy and digital repatriation in the preservation of African diasporic heritage.

The proposed model is significant because it provides a conceptual framework for addressing the erosion of religious and cultural knowledge across generations of African diaspora communities. It emphasizes community participation and cultural authority in the documentation and governance of heritage while providing younger generations with accessible and interactive mechanisms for learning and engagement. The model may also contribute to more inclusive digital archival and museum practices by incorporating cultural ownership, data sovereignty, informed consent and ethical access protocols. In addition, the framework provides a basis for future empirical research and technological development involving digital archives, virtual reality, augmented reality and other participatory heritage technologies.

2.0 Literature Review & Theoretical Framework

2.1 Diaspora and Collective Memory

As Uwakweh (2022) has pointed out, the idea of the African diaspora is rooted in negotiating the displacement, the rootlessness and the search for home. Gilroy's concept of the Black Atlantic provides an important theoretical lens



for understanding the African diaspora as a transnational and intercultural network shaped by migration, displacement, cultural exchange and identity formation.. In the digital age, however, the concept can be extended by considering how digital networks, social media and online archives create additional spaces through which diasporic communities maintain connections, reconstruct collective memories and negotiate identity.. Digital spaces whether specific databases of ancestors, or forums and networks that are decentralized online can be viewed as virtual homelands, where dispersed populations can continuously reconstruct and perform collective memory across wide geographies (Clarke et al., 2023).

In such cyber-homelands, collective memory is no longer bound exclusively to physical monuments, geographical proximity or tangible artifacts. Rather, digital platforms are fluid archives that are constantly re-written, commemorated and contested by transnational communities (Randall, 2023). The virtual architecture allows second and third generation members of the diaspora to have instant access to symbols of origin and community narrative (Hajj, 2021). Thus, the digital space becomes a very important place of cultural reproduction for diasporic subjects, who use it to build counter-narratives to contest Eurocentric historical erasures and ground their identities in a living, networked continuum (Iovine, 2022).

2.2 Religious Syncretism and Preservation

The transmission of the ancestral religious practices in the diaspora is not simple and is certainly filled with adaptations, resistances and syncretisms as Gallego (2020) says. The practice of these traditional African religions, whether Yoruba religions or other religions that have emerged from them (Santería and Candomblé) or Vodun, may undergo significant adaptation when practiced within different sociocultural contexts. Their practitioners, in the past, had to camouflage or syncretize these sacred traditions with the local

religions to avoid persecution and hence rich syncretism exists. The challenge has shifted from it being suppressed by the colonizers to the risk of it being diluted, secularized and misrepresented in secularized societies like the west, where these traditions may be subject to exoticization, commodification and cultural misrepresentation (Khosrokhavar, 2021).

Moreover, physical, experiential, locally based rituals, initiations and sacred languages are essential to the passing on of these spiritual systems, and are not always easy to adapt to contemporary, urbanized, diasporic settings. However, younger generations, who may feel disaffiliated with the formal institutional dogma, or are not able to find places to engage in ritual, struggle to access the subtleties of their families' religions, Krantz (2023) argues that In order to maintain these traditions, adaptive systems that recognize the dynamism of syncretic practice (Hill & Hill, 2022) need to be adopted, transcending the purist perspective. Digital platforms offer a new medium for documenting, contextualizing and preserving these sacred systems without impacting their ritual purity or community-led governance (Tahara et al., 2023).

2.3 Theories of Knowledge Transmission

Hefner, (2021) said a cultural or religious tradition cannot survive without a knowledge transmission mechanism that is effective. African and diasporic cultures, historically speaking, have continued to rely on oral histories, hierarchical mentorships and communal rituals, with elders playing the key role of anchors of history and spirituality, and as the primary and trusted sources of such memories (Falola & Griffin, 2021). In these traditional models, these forms of communal attachment were often intimate and strongly embedded within social relationships The reduction in co-presence between the old and the young due to geographical distance and the contemporary way of life has broken the traditional hierarchical path of knowledge transfer from one generation to the next,

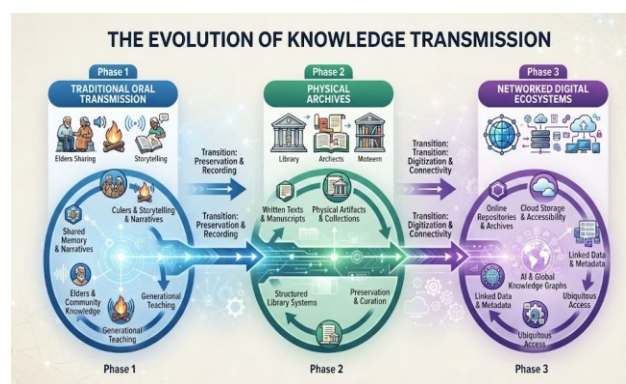


leading to a gap in knowledge for the younger generation unable to learn from the older generation (Adeyemo et al., 2023).

To overcome this generational gap, recent research suggests paradigm shifts towards networked, participatory digital ecosystems, instead of the traditional top-down teaching paradigm. Based on connectivism learning theories and participatory culture frameworks, the conception of knowledge transmission is seen as a multi-directional network and decentralized web (Feser, 2020). Within those ecosystems, young people are not just passive recipients of history, but active taggers, archivists and co-creators who interact with heritage in their own digital ways. Setijadi, (2023), says that with the adoption of interactive digital architecture and traditional mentorship, a robust knowledge-sharing system can be established in communities actively seeking to bridge the gap between traditional knowledge and the digital-native world.

dispersed elders, cultural custodians and younger generations and facilitate the exchange of knowledge across physical boundaries. Participatory culture complements this perspective by positioning users not merely as consumers of heritage information but as active contributors, interpreters and co-creators of cultural content.

Together, these perspectives provide a theoretical basis for the three-layer architecture proposed in this study. The Ingestion and Curation Layer reflects the distributed collection and organization of knowledge; the Transmission and Intergenerational Layer reflects networked interaction between knowledge holders and learners; while the Engagement and Interaction Layer reflects participatory and technology-mediated engagement with heritage. The integration of these perspectives supports a model in which digital technology functions as an enabling mechanism rather than a replacement for community authority, cultural practice and human relationships.



The incredible journey of technology (Vedanams, 2024).

2.4 Theoretical Foundation of the Proposed Model

The proposed Digital Heritage Model is informed by connectivism and participatory culture perspectives. Connectivism conceptualizes knowledge as distributed across networks of people, information resources and digital technologies. This perspective is relevant to diaspora communities because digital platforms can connect geographically

3.0 The Proposed Digital Heritage Model

3.1 Overview and Structural Architecture

The proposed Digital Heritage Model is a multi-layered conceptual framework designed to preserve, transmit and revitalize religious and cultural knowledge across generations of African diaspora communities. The model conceptualizes heritage preservation as a continuous process involving community-controlled documentation, ethical curation, intergenerational knowledge transmission and digitally mediated engagement.. The model is conceived not merely as a digital repository but as an interconnected sociotechnical environment in which heritage is documented, governed, transmitted, interpreted and experienced by community members across generations The model comprises three interconnected layers: (i) the Ingestion and Curation Layer, which focuses on community-controlled documentation and ethical



management of heritage resources; (ii) the Transmission and Intergenerational Layer, which facilitates knowledge exchange between elders, cultural custodians and younger generations; and (iii) the Engagement and Interaction Layer, which employs interactive and immersive technologies to enhance access, interpretation and participation..

The model receives heritage inputs including oral histories, religious narratives, indigenous knowledge, languages, rituals, cultural practices, historical records and community-approved artifacts. These inputs undergo documentation, authentication, contextualization and access classification before being transmitted through intergenerational mentorship and made available through appropriate interactive technologies. The expected outputs include improved knowledge accessibility, strengthened intergenerational relationships, increased youth engagement, enhanced community control over heritage resources and sustainable preservation of living cultural heritage.

The three layers operate through continuous feedback loops rather than as a strictly linear sequence. Knowledge documented in the Ingestion and Curation Layer can be transmitted through intergenerational interactions, while feedback from elders and younger users can inform the revision, contextualization and governance of digital heritage resources. Similarly, engagement data and community responses can guide the development of new content and preservation practices.

3.1.1 Ingestion Layer and Curation Layer (The Repository)

The first layer involves the systematic identification, documentation, digitization, contextualization and ethical stewardship of community-approved sacred texts, oral histories, indigenous knowledge, cultural artifacts and associated practices. Conventional archival and museum practices have sometimes

inadequately recognized the ritual, spiritual and community-specific contexts of cultural artifacts, while heritage materials originating from African and Indigenous communities may remain physically or institutionally inaccessible to their source communities. The layer therefore emphasizes community authority over the ownership, storage, access, interpretation and representation of culturally sensitive heritage information, consistent with applicable legal, ethical and community-defined protocols. Oral histories from community elders and other authorized knowledge holders can be recorded, transcribed, contextualized and catalogued alongside digitized representations of approved cultural artifacts and practices.. Consistent with ethical curation guidelines, appropriate use of spiritual information is achieved by a tiered approach recognizing the traditional hierarchy of information, ensuring that sacred information is not commoditized nor culturally appropriated (Turetsky, 2023). This layer provides the foundation for the model by incorporating mechanisms for authentication, provenance tracking, contextual documentation and controlled access. Community review and approval can help ensure that representations remain culturally appropriate and consistent with established community protocols.

3.1.2 Engagement and Interaction Layer

Following appropriate curation and access classification, the Engagement and Interaction Layer provides mechanisms through which users can encounter, interpret and interact with heritage resources using digital and immersive technologies.. Recognizing the growing importance of digital media in the everyday lives of many younger diaspora populations, this layer employs interactive and immersive technologies to create additional avenues for heritage engagement. The layer may employ Virtual Reality (VR) to create immersive representations of approved sacred or historically significant spaces, such as ancestral

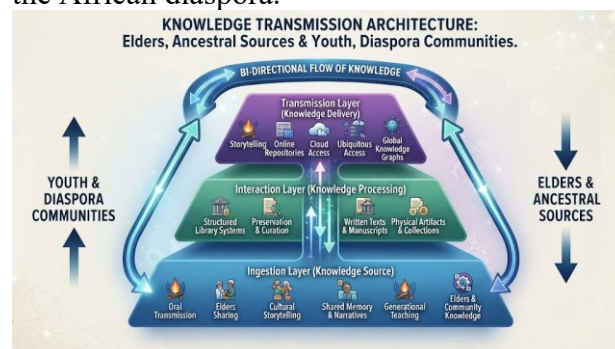


sites, temples or ceremonial environments. However, access to representations of sacred spaces should be determined by community-defined cultural protocols to prevent inappropriate exposure, commodification or misuse of restricted knowledge. Augmented Reality (AR) may also be used to provide contextual information, audio narratives, historical explanations, language resources and symbolic interpretations associated with community-approved physical artifacts or heritage sites. The layer may incorporate carefully designed gamification and interactive digital narratives to encourage active learning and sustained engagement among younger users. Such features should remain culturally appropriate and should not trivialize, commercialize or gamify sacred knowledge that communities regard as restricted. Users can either complete historical quests, or decipher linguistic puzzles using African languages, or retrace the historical migration paths of their own diasporic community. These technological media will dispel the old-fashioned notions about museums, and turn exploring and understanding the heritage into something easy, fun, and emotional, to be understood by a younger generation.

4.0 Transmission and Intergenerational Layer The Transmission and Intergenerational Layer constitutes the human-centered component of the model and directly addresses the risk of intergenerational loss of cultural and religious knowledge. Although digital technologies can facilitate preservation and access, sustained cultural transmission requires meaningful interaction between knowledge holders and younger generations. Digital technologies alone cannot ensure the continuity of living cultural traditions; meaningful human relationships and community participation remain essential to intergenerational knowledge transmission (Kotut et al., 2020). Accordingly, this layer facilitates structured digital mentorship between elders, spiritual leaders, cultural custodians and

younger community members who may be geographically separated. These virtual environments allow for live narrative, Q&A, and coaching on the process of living with their identity in the socio-cultural setting they've moved to a process that is traditionally done via a communal mentorship menthol.

Further, through crowdsourcing community tagging and participatory archiving, youth can provide their own digital interpretation, translation and perspective on ancestral practices. The elders and youth can co-create content in this co-occupied digital space, departing from a top-down model to a conversational one for preservation (Giglietto et al., 2023). It is a reciprocal process whereby religious and cultural knowledge is not merely inherited from the past, but also continuously transformed, valued and rejuvenated as a living and growing tradition for future generations of the African diaspora.



Open science, the challenge of transparency (Rentier, 2019).

5.0 Methodological / Conceptual Application

5.1 Real-World Application: The Yoruba Ifá Tradition

The proposed Digital Heritage Model can be considered in practice by a look at how it was applied to the preservation of Yoruba Ifá traditions in the U.S. and Caribbean diaspora. The Ingestion Layer allows for the secure recording and archival of traditional babalawos' (priests) and community elders' oral Ifá verses (esé), chants, and divination markers, and ensure that liturgical secrets are not shared. At the Engagement Layer, second and third-



generation diaspora youth can interact with mobile applications or Augmented Reality that translate complex philosophical ideas and historical proverbs to be more accessible and engaging for sacred linguistic heritage.

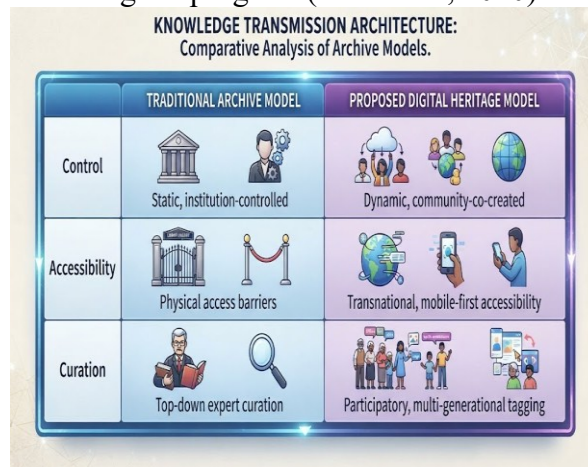
The Transition Layer embraces a community bridge and includes virtual mentorship and crowd sourced knowledge spaces. Young practitioners can reach out to those who have the lineage directly for structures, context in ritual, and ethical interpretation perhaps in large cities such as New York or Atlanta. In addition, diaspora youth share their own modern documentation, for instance, of practising Ifá in the West's urban centres, thereby co-creating a living and evolving repository that is able to connect ancient wisdom of ancestors with the modern reality of living in the diaspora.

5.2 Ethical Considerations: Data Sovereignty and Repatriation

In his article, Rouhani (2023) points out, that while the power of digital models for cultural preservation is transformative, there are also important ethical issues that must be considered and addressed well. At the top of this list is data sovereignty and ownership communities must have absolute legal and moral control over their digitized heritage, and they do not want their spiritual knowledge (Kuruk) patented or commercialized by Western tech companies or for commercial use by anyone without their consent (Kuruk, 2020; Shukla *et al.*, 2022). The frameworks need to make clear that it will not allow cultural appropriation, sacred religious practices to be taken out of their context, to be gamified irresponsibly, nor exposed to an external audience for whom it was never meant (El Yaafouri, 2022).

Last but not least, complex issues of consent and digital repatriation should be addressed by developers and institutions. Before sacred text or rituals are made into digital media, Free, Prior and Informed Consent (FPIC) must be secured from lineage elders. Furthermore,

scholars must not give Western museums an easy out for not granting the return of the physical remains of their looted ancestors, by accepting their digital version, be it in the form of high-resolution scans, 3D models or virtual archives (Kimbangu, 2023). Digital tools should be used to empower source and diaspora communities, not to reinforce the historic colonial power dynamics, albeit in the name of technological progress (Ponzanesi, 2020).



Introduction to information science (Bawden & Robinson, 2022).

6.0 Discussion and Implications

The proposed Digital Heritage Model addresses the identified gap by integrating community-controlled heritage curation, intergenerational knowledge transmission and digitally mediated engagement within a single framework. Its implications extend beyond technological preservation to encompass identity formation, community participation, cultural governance, ethical stewardship and the long-term sustainability of African diasporic heritage.

6.1 Sociocultural Impact and Transnational Belonging

A holistic approach to digital heritage may have significant sociocultural implications for African diaspora communities by strengthening connections to ancestral histories, cultural practices and collective identities (Dellios & Henrich, 2020).. Digitization of ancestral histories and cultural resources may be particularly valuable for



second- and third-generation diaspora members who negotiate identities across multiple cultural and geographical contexts.. By providing accessible connections to oral histories, languages, religious traditions, cultural narratives and community memories, digital heritage platforms may provide additional pathways through which younger generations can explore and negotiate their relationships with ancestral cultures. The platforms offer a creative approach to sharing abstract historical stories, making them more interactive and accessible while furthering important aspects of identity and pride in indigenous spiritual and cultural heritage (Green, 2021).

Beyond individual benefits, digitally mediated heritage environments may reduce the effects of geographical separation by connecting diaspora members who share cultural or ancestral affiliations but live in different locations (Sing, 2023). . Youth participation in sharing, discussing, annotating and co-creating heritage resources may strengthen intergenerational dialogue and contribute to the development of shared digital memory (Wager et al., 2023). Such transnational belonging may strengthen diasporic solidarity and support the development of dynamic, networked and participatory forms of collective memory that complement individual and community-based memories (Zepeda, 2022) . .This transnational belonging renews diasporic solidarity and turns fragmentary historical memory into a vibrant, networked, participatory one that resists the process of erasure, which was limited by individual memory (Zepeda, 2022).

6.2 Technological Challenges and Practical Barriers

However, there are technological and structural challenges to be addressed in the implementation of this digital heritage model and careful mitigation is needed (Pansoni et al., 2023). This issue with digital obsolescence is an important one: the rapid evolution of software, of virtual reality hardware and

software, of storage format, etc. in the cloud means that without continuous transfer and updating, this archived information may not be available in just a few years. Furthermore, there is the challenge of maintaining funding: without the monetary means of a larger state-funded museum and/or tech company giant, community-led archives simply can't keep their operations going (Joy, 2020).

Additionally, the older generations generally suffer from a lack of digital literacy they would be holders of TK, and without proper support if they need it to access and navigate digital platforms, they simply wouldn't be able to. In addition, important issues of data privacy involve strong, decentralised encryption mechanisms to secure sensitive spiritual information from harmful cyber attacks, commercial exploitation or even government tracking. Amongst these practical issues, it is necessary to seek solutions to the challenges that would allow the complete safety of the digital model, its access and long-term sustainability.

7.0 Conclusion and Future Research Directions

This paper here concludes by looking to the idea of a complex digital heritage model to protect and promote the religious and cultural knowledge of one generation of African diaspora to the next. This is an exploration of the possibilities of using a set of ethical curation, immersive digital interfaces and intergenerational co-creation to construct a set of new, extended links between the static physical archive and traditional modes of transmission. Overall it is a decentralised and viable way to overcome the 'generational amnesia' and not forget the living and rich inheritance of indigenous African spiritualities and cultural practices which are passing on to the new generation of 'digital natives' in our times.

This needs to be a conscious, crossdisciplinary and collaborative call to action if the potentials of this framework are realised. For technology



development, cultural anthropologists and religious leaders need to actively participate in the work of each other to guarantee that the technologies can be technologically advanced and culturally legitimate. These stakeholders, in coalition, may work to create platforms that could overcome technical hurdles, fit with traditional practices and data sovereignty, and are able to be effective with the modern audience.

Following this theory, the next step would be to put the theory to the test in large centres of diaspora throughout the world London, Atlanta, Toronto, etc. Further testing of the actual 'feasibility' of the model, as well as monitoring response of elderly and youth to the model and development of technical problems, will be conducted through small scale trials. The empirical research projects implemented will give invaluable insights to make digital heritage initiatives flexible, respectful, truly empowering for transnational communities in an increasingly digital world.

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All data used in this study will be readily available to the public.
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