The Legacy of Collective Memory in Digital Culture: Digitisation, Cultural Mapping and Co-Creation

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Abstract

Amidst the digital transition, where digital heritage comes to meet the need for preserving and managing cultural information in an era of accelerated and unregulated production, cultural mapping emerges as an aggregating and multidisciplinary approach that calls for participation. In this context, design stands out as a mediator between multiple disciplines, becoming less centred on the materialisation of objects as a purpose, favouring the implementation of co-creation processes and the activation of socio-technical systems connecting people, contexts and technology. Within this background, we highlight the preservation and promotion of cultural heritage, which has been institutionally held by museums, libraries and archives, responsible for collecting, preserving and making it available to the community. This article highlights the impact of the digitisation of culture and the open access policies in memory institutions regarding managing collections and fruition experiences through technology inside and outside the institutions. It also presents participatory methodologies with communities taking an active role in the documentation and safeguarding of intangible cultural heritage, and also highlighting some relevant initiatives, particularly developed in Portugal.

Keywords

social archives, digital co-creation, digitisation, collective memory, cultural heritage

O Legado da Memória Coletiva na Cultura Digital: Digitalização, Mapeamento Cultural e Cocriação

Resumo

Em plena transição digital, na qual o património digital emerge como resposta a uma necessidade de preservação e gestão da informação cultural numa era de produção acelerada e desregulada, o mapeamento cultural destaca-se como abordagem agregadora e multidisciplinar que convoca à participação. Neste contexto, o design afirma-se como mediador entre múltiplas disciplinas, tornando-se cada vez menos centralizado na materialização de objetos como finalidade, em favor da implementação de processos de cocriação e ativação de sistemas sociotécnicos que congregam pessoas, contextos e tecnologia. Neste âmbito, destaca-se a preservação e dinamização do património cultural, que tem vindo a estar institucionalmente a cargo dos museus, bibliotecas e arquivos, responsáveis pela recolha, preservação e disponibilização à

comunidade. O presente artigo evidencia o impacto da digitalização da cultura e das políticas de acesso aberto nas instituições da memória, em termos de gestão das coleções e de experiências de fruição dentro e fora das instituições com recurso à tecnologia, bem como apresenta metodologias de participação ativa de comunidades na documentação e salvaguarda do património cultural imaterial, com destaque para várias iniciativas, em particular desenvolvidas em Portugal.

1. Introduction: Digitisation and Collective Memory

The posthumous work of Maurice Halbwachs (1950/1992), *On Collective Memory*, launched in 1950, is a milestone in introducing memory studies in the social sciences, essentially addressed by philosophy and social psychology. Halbwachs advocates an integrating vision assigning to remembrance the activation of impressions from *individual memory* experiences and the consolidation of those memories from dynamics related to groups and communities one belongs to, in light of the doubts and cogitations of the individual in the present. Thus, *collective memory* refers to a permanent process of active reconstitution and re-signification of a past which is not continuously recorded but updated and shaped by *social memory* attached to everyday life, dictating what will be remembered and forgotten. Unlike *historical memory*, which is more distant and based on logical arguments to corroborate linear and centralising narratives about humanity (Halbwachs, 1950/1992). This dynamic process of re-signification, supported by collective and social memory, reflects the brain's own plasticity, which superimposes new connections to previously recorded structures, valuing, in particular, multisensory stimuli as major activators (Damásio, 2010). Hence, the mnemonic importance of the oral narrative and the contexts of conviviality and interaction within families and groups of greater proximity is paramount (Goody, 1998), as well as traditional and celebration rituals that ensure a shared cyclical remembrance and the passing of memory from generation to generation (Connerton, 1989). Furthermore, cultural heritage and the public involvement in safeguarding initiatives advocated by memory institutions — which include libraries, archives and museums — represent another major strategy for disseminating memory and territories. However, they are often the subject of some touristic and economic orchestration (Nora, 1989).

The acceleration of digitisation and the proliferation of native digital formats leave behind analogue formats, which become almost relics in personal and family albums and in many cases will never be digitised (van Dijck, 2007). Nevertheless, phenomena of revival and nostalgia are emerging, once again focusing on the collection, documentation and artistic recognition of personal archives. In this context, the "Family Film Project: Archive, Memory, Ethnography. International Film Festival" (https://familyfilmproject. com/pt/) is worthy of note. This Portuguese initiative emerged in 2012 to disseminate and encourage documentary and fictional narratives exploring the intimate and biographical

dimension linked to personal memories, homemade movies and family albums. New technologies also surface to bring old photographs to life through animation techniques using artificial intelligence. One example is the Deep Nostalgia application, which became viral for generating videos of deceased personalities and stands as a new wave of tech enhancement of the remembrance of the past (Le Goff, 1988/1990). There are artificial phenomena, particularly those generated by the media, which evoke a kind of nostalgia for the unlived, despite this, Arjun Appadurai (1990) also extols the great imaginative and communal potential emerging from the global space of flows (Castells, 2001). One amplified by technology insofar as it allows for the democratisation and recognition of cultural diversity, providing tools that empower social and creative practices previously inaccessible to many marginalised social spheres.

As such, by referring to different approaches and projects, especially Portuguese initiatives, this article aims to highlight how collective memory is deeply affected by the forms and technologies of registration and access. It also emphasises the social dynamics enhanced by participatory methodologies and tools, with an impact on the institutions' operation and access to knowledge, open and networked with other institutions and communities. The paper is structured into four sections: the introduction to the concept of collective memory and how it has been affected by technology and the process of digitisation of culture; the second section focuses on participatory approaches implemented by memory institutions regarding cultural heritage, towards the consolidation and expansion of a legacy constructed through digital heritage; the third section highlights the active role of communities in the digital co-creation of collective memories, namely by establishing social archives; and the last section outlines some concluding remarks on the impact and challenges of digital culture on the co-creation of a collective legacy of memory.

2. Participatory Approaches to Cultural Heritage and the Affirmation of Digital Heritage

Following the publication of the Universal Declaration on Cultural Diversity (Declaração Universal Sobre a Diversidade Cultural, 2001) and the Convention for the Safeguarding of the Intangible Cultural Heritage (Convenção Para a Salvaguarda do Património Cultural Imaterial, 2003) by the United Nations Educational, Scientific and Cultural Organization, memory institutions — which include museums, libraries and archives — made it a priority to digitise collections and manifestations of culture and heritage, progressively since the 2000s. This digital transition impacts the institutions' practices by combining traditional and technological skills, creating specialised subdisciplines, such as cybermuseology (Langlais, 2005; Leshchenko, 2015), focusing on the production of knowledge in digital heritage, that according to the Charter on the Preservation of the Digital Heritage (2009; United Nations Educational, Scientific and Cultural Organization, n.d.) of the United Nations Educational, Scientific and Cultural Organization, it includes computerised and digital resources of multiple formats, such as

texts, sounds, still and dynamic images, databases, web pages and software. Meanwhile, the potential of the digital allows the development of sensorially rich and immersive museographic experiences, which introduce new layers of meaning in the museum space (Vairinhos, 2015, 2016). Digital experiences of outdoor cultural exploration also started to proliferate through mobile applications that leverage geolocation, of which some examples stand out: the mobile application Streetmuseum[1], launched in 2010 by the London Street Museum, uses augmented reality to provide photographs of the past, superimposed on the urban grid, providing historical context while moving around the city; the platform *Historypin* (https://www.historypin.org/en/), also launched in 2010, to show the time evolution of places through photographs of the past, using geographic navigation and a timeline, while providing web 2.0 tools to create pages and collaborative collections of content, adopted by individual and institutional users, such as libraries, archives, museums and cultural and social associations; and the ZoomGuide mobile application (https://www.zoomguide.app/; https://zoomguide.pt/), which, through geolocation and using artificial intelligence to analyse photographs sent by the user, suggests and provides information on nearby points of cultural interest. ZoomGuide was developed by a Portuguese start-up of the same name. It was distinguished by the World Summit Awards 2021 in the "Culture & Tourism" category for its innovative technology, which no longer requires QR codes or Bluetooth proximity devices (beacons), often used in indoor and outdoor routes and tours.

Regarding visits to museums, there are also two projects using this kind of location identifiers inside the museum space to generate tailored digital memories of the visits: the Pen device (Cooper Hewitt, n.d.), a pen developed in 2015 for the Cooper Hewitt Smithsonian Design Museum, used to draw and interact with specific interactive pieces, and also, to record the works the visitor has approached (through the contact of the pen with a graphic symbol inscribed on the captions), allowing the visitor to revisit them and access more detailed content, through an online space made available to each visitor using a code provided in their ticket; and the *MixMyVisit* research project, launched in 2019 through a partnership between AlticeLabs and the University of Aveiro, which developed an application to generate automatic videos of visit routes, tested in collaboration with the Serralves Museum. Besides the automatic videos that the museum provides with content based on the visited rooms, the users can also send (using a chatbot) personal photos and videos captured during their visit to be embedded in a customised video that can be edited and shared through the online platform (Almeida et al., 2021).

Aside from playful and immersive fruition experiences, which enhance and facilitate access to cultural heritage, it is also important to consider active encoding and interpretation approaches (Tilden, 1977) increasingly collaborative between the institutions and the publics (Oomen & Aroyo, 2011). Thus, the role of institutions is directed towards providing connections between different sources to promote the co-construction of knowledge and address the diversity of interpretations and perspectives, which make culture richer (Langlais, 2005; Stuedahl, 2009). The acceleration of digitisation

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[1] The application is no longer available, but it is possible to see how it works in the video shared by Kerruish (2010).

has led to new research practices, namely in collecting, documenting and analysing cultural resources, introducing new forms of classification and community engagement. The focus is no longer only on objects and collections but on the relationships and digital narratives that can be established between them (Stuedahl, 2009). A paradigmatic example is the *Europeana* portal, launched in 2008, and funded by the European Commission, to make available and relate databases of digital collections from member states' institutions. However, due to the different metadata standards and categorisation taxonomies, one of the biggest obstacles to this cross-linking of data is the lack of interoperability between the different institutions' systems. On the other hand, the existing standards still represent a Western centralising vision of knowledge structuring, which is agnostic to the singularities of minorities and specific communities, such as indigenous peoples (Stuedahl, 2009). Therefore, efforts to involve people in the processes of heritage collection and signification, namely through technologically mediated *folksonomy* and *crowdsourcing*[2] initiatives (Oomen & Aroyo, 2011), aim to reverse these installed paradigms and open up to the language of non-experts, closer to their artefacts and practices. These efforts also aim to value the role of people in safeguarding their heritage, history and memory, leading to greater involvement, awareness and co-responsibility (Rollo, 2020; Simon, 2010; Sousa, 2018). Furthermore, it is important to ensure physical, social and intellectual accessibility to the publics with special needs, as highlighted by the Acesso Cultura association (https://acessocultura.org/), which, following the research work of Maria Vlachou (2013), author of the blog *Musing on Culture* (http://musingonculture-pt.blogspot.com/), has been promoting culture accessibility in Portugal.

The online dynamics and participatory tools related to web 2.0 (of which blogs and *wikis* stand out as pioneers) have also led to the emergence of research communities and specialised studies on museums, such as the *Museums and the Web* initiative (Museums and the Web, n.d.; https://www.museweb.net/), the work of Nina Simon (2010) around the idea of a *participatory museum* and the concept of *significance 2.0*, proposed by Roslyn Russell and Kylie Winkworth (2009). This concept highlights technology's contribution to enhancing the relational interpretation of artefacts and tracing their historical and cultural relevance through cross-referencing with other collections and interacting with their contexts and publics. Félix Stalder (2018) highlights how we are witnessing two different, though related, phenomena: the *digitisation* of the analogue world to enable its tracking and monitoring; and the *digital condition* which concerns the ubiquity and possibilities of combining information associated with new patterns for organising culture. According to Stalder (2021), these patterns also represent new typologies of audiences, namely, based on "referentiality" (on how they see the world and their personal interests), on "communal formations" (within groups sharing common interests and integrating multiple points of

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[2] One of the pioneer projects using social tagging in the context of memory institutions is *STEVE - The Art Museum Social Tagging Project* (https://www.steve.museum/), a platform developed in 2006 by the University of Maryland. Currently, crowdsourcing is also very recurrent for transcription tasks. One example is the project *The Real Face of White Australia* (https://www.realfaceofwhiteaustralia.net/; https://transcribe.realfaceofwhiteaustralia.net/#/). It requests people's help in transcribing identification documents for immigration services to study the origins of the Australian people and counter the persisting discriminatory stereotype based on skin tone by creating a repository of photographs of these immigrants.

view) and on "algorithmicity" (based on the biases stemming from the algorithmic processing of large amounts of data). For most people, this bias that determines what is accessible is not clear. Particularly for many digital natives, whose definition of searching and accessing information has always been linked to the internet through search engines and social networks, whose non-transparent operating mechanisms are based on business models.

This reality reinvigorates the importance of *open source*[3] initiatives, proclaimed since the 90s of the 20th century. They are becoming more widespread in memory and knowledge institutions, which are beginning to provide access to their digitised archives and collections through through application programming interfaces within within a framework of open science and FAIR (findable, accessible, interoperable and reusable) access. Ensuring the adoption of good practices[4] that enable communication between the various systems towards semantic aggregation solutions is fundamental to promoting innovation that stems from the cooperation and sharing of digital data in open access. The possibility of working on the malleability and relational cross-referencing[5] of large amounts of data on collections enables their remixing through creative experimentation using *big data* and artificial intelligence techniques. Some of these approaches are documented on the Google Experiments platform (https://experiments.withgoogle.com/), showcasing exploratory projects developed with Google's support. Despite the risk of overpowering involved, this technological giant, namely Google Cultural Institute, is one of the main players in the massive digitisation of culture, covering various types of cultural artefacts, from books to historical documents and art collections. Within this scope, the *Google Arts & Culture* programme (https://artsandculture.google.com) is dominant, providing access to collections and virtual exhibitions in partnership with institutions worldwide. In the Portuguese context, besides the web pages dedicated to museums and specific entities, like the web page *Portugal: Arte e Património* (https://artsandculture. google.com/project/portugal-art-and-heritage?hl=pt-PT) which provides information on museums, palaces and monuments, is also worthy of mention and the Virtual Museum of Lusophony (https://artsandculture.google.com/story/_QVB_gjMuVetJw?hl=pt-BR), launched in 2020 by the University of Minho. Research and development initiatives around open access digital data are also gaining popularity, namely specialised *hackathons*[6], which are collaborative programming marathons with

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[3] GitHub (https://github.com/), created in 2008, is the main repository for sharing files, databases and source codes of software and applications to enable open access and reuse by the community, and is used by developers and institutions.

[4] Notable initiatives include the *Open Knowledge Foundation* (http://okfn.org), the *Open Archives Initiative* (https://www.openarchives.org/) and the *Open GLAM Initiative* (http://openglam.org). They aim to disseminate and contribute to the normalisation of standards and good practices to ensure the interoperability of systems, particularly within the context of institutions linked to culture and access to knowledge, identified by the acronym GLAM (galleries, libraries, archives, museums).

[5] An example of relational analysis based on big data techniques in the digital humanities is the *Diggersdiaries* (https://diggersdiaries.org/). It allows cross-reading and thematic analysis of several diaries from World War I kept at the State Library of New South Wales, Australia, using advanced techniques of semantic text analysis and correlation (topic models).

[6] One of the pioneers and best-known open access cultural heritage hackathons is the *Coding da Vinci* (https://codingdavinci.de/en).

multidisciplinary teams to develop exploratory proposals that leverage the potential of data from collections and archives, and that may be implemented by institutions. Within this framework, Leonardo Araújo (2018, p. 112)[7] proposes the model of cultural data hacking as a constructivist practice, which aims to develop "digital interpretive artefacts" to bring people closer to collections by providing tools that allow interaction, appropriation and creation of narratives to foster a more active and comprehensive interpretation.

The Rijksmuseum in Amsterdam was one of the pioneering institutions to grant access to copyright-free, high-resolution reproductions of works and to encourage the creation and sharing of thematic collections, graphic compositions created from fragments of works and even the customisation of merchandising objects through digital tools made available in a dedicated area of the website, called "Rijks Studio" (Rijksmuseum, n.d.), launched in 2013. Another major initiative to democratise experimentation around open access digital collections is led by the Smithsonian Institution (https://iiif.si.edu/). It uses the International Image Interoperability Framework image protocol to provide advanced annotation files on works from its collection (high-resolution images, videos and 3D renderings) to track the original image, access the record of derivations, and even annotate specific moments in videos. Thus opening up a wide range of creative possibilities for museum educational services, teaching and research institutions and the common user. In 2020 the Getty Museum launched another initiative that explores this technology. It targets the video game community, specifically Nintendo's *Animal Crossing* players, by making available the "Animal Crossing Art Generator" extension (Getty, n.d.), which allows importing fragments of artworks and using them in the game's virtual environment.

Another perspective of visitor involvement in the museum is *The GIFT Project* (https://gifting.digital/; 2017–2019), promoted by Europena, to challenge young people to think about the museum experience of the future. By providing a toolkit (The Gift Box), which includes open source tools and design and planning techniques (design thinking), groups of young people submitted and developed ideas through immersive exploration in the museum space by producing their own content, creating paths, stories, sound and emotional mappings, 360° experiences, among other proposals, demonstrating the intersection between the personal and simultaneously shareable dimension of the visiting experience, enhanced by digital technology as a mediator of expression, interpretation and creation. These appropriation practices increasingly aim at captivating and involving the public by providing them with customised options to explore and interpret cultural resources from a dynamic and intertextual perspective, leading to new perceptions and creative possibilities and the production of knowledge in tune with our times. However, they do not invalidate the need for a critical view of the dangers of its orchestration and trivialisation.

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[7] As part of a cultural heritage hackathon, Araújo (2018) developed an experimental prototype of a platform with an open data model based on a dual speed architecture, which allows a fast semantic layer to act on the robust and slow infrastructure of the institutional management system, to enable richer exploration and reuse of artefacts from various repositories, namely through games, audio-guides using bots and augmented reality, and the creation of collections and digital narratives between works to support the curation of virtual exhibitions.

3. Social Archives and the Digital Co-Creation of Collective Memories

Today, creating and socially sharing digital records is a seminal practice of contemporary visual and participatory culture, leading authors to consider the so-called "social photography" (Jurgenson, 2019) as a genre. As such, following the principle of social and community archives (Bastian & Flinn, 2020) spontaneously created by individuals and groups or mediated by institutions[8], often related to ephemeral objects from local, personal, family, minority, social movement or event histories (e.g., photographs, oral history records, diaries, letters, postcards, etc.), gain new meaning when we consider the democratisation introduced by social and online sharing platforms (Benoit & Eveleigh, 2019; Benoit & Roeschley, 2019; Flinn & Sexton, 2019; Geismar, 2017). Hence, some institutions have been interested in collecting and documenting these materials through participatory strategies to prevent the loss of visual records representing an important historical and sociological legacy as relevant contemporary manifestations and practices in various fields. These strategies can streamline the collection process and empower their authors to contribute actively. One example is the research project *Collecting Social Photo* (2017–2020; https://www.collectingsocialphoto.org/en/home; http://collectingsocialphoto.nordiskamuseet.se/), which stems from a partnership between Nordiska Museet (Sweden), Stockholm County Museum (Sweden), the Finnish Museum of Photography (Finland) and Aalborg City Archives (Denmark). Based on case studies led in the different institutions, *Collecting Social Photo* developed a toolkit of methods, approaches and recommendations, supported by the prototype of a tool for social enrichment of archives and participatory collection of photographs, created within the project and made available in open source to be reused by other institutions (Boogh et al., 2020).

Another highlight in the context of intangible cultural heritage is the creation of online inventories[9], which compile and make available the results of extensive and systematic collection work with communities, which is essential in preserving and safeguarding heritage. A unique project in the Portuguese context is the *MEMORIAMEDIA: e-Museu do Património Cultural Imaterial* (http://www.memoriamedia.net/), launched in 2006 under the guidelines of the Convention for the Safeguarding of the Intangible Cultural Heritage (Convenção Para a Salvaguarda do Património Cultural Imaterial, 2003). This museum is dedicated to cataloguing and disseminating multimedia resources on national cultural manifestations, such as oral and performative expressions, knowledge and crafts. As a repository, it also congregates audiovisual collections from entities and individuals, highlighting, among others, the Cinemateca Digital and the Michel Giacometti Museum of Labour. *MEMORIAMEDIA* promotes scientific initiatives[10] and permanent monitoring

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[8] The September 11 Digital Archive (https://911digitalarchive.org/) is the largest social digital archive acquired by the Library of Congress, dedicated to preserving the history and memory of the terrorist attack of September 11, 2001, with over 150,000 specimens collected in the media and sent by people, including emails, first-person records and photographs.

[9] The *Digital ICH Observatory* (https://digitalich.memoriamedia.net/) maps online inventories worldwide to disseminate them and create a shared network of knowledge and practices, boosting studies on the world's intangible cultural heritage.

[10] *MEMORIAMEDIA* has its own scientific journal, the *MEMORIAMEDIA Review - Intangible Cultural Heritage* (https://review.memoriamedia.net/) and includes national and international research projects.

of cyclical events linked to intangible cultural heritage to study its transformation to the present day. It also develops regular collection and heritage-related activities with communities. Here, we highlight the work of Filomena Sousa (2015, 2018), who is part of the project's founding team and has been disseminating methodologies and good practices. According to the author, it is essential to highlight the difference between intangible cultural heritage and audiovisual and multimedia documents produced from it. The latter form new representations but do not replace[11] the first since heritage is not only memory but its manifestation passed on from generation to generation. Thus, intangible cultural heritage should always be understood as a living narrative that depends on its protagonists and their time and context. The process of safeguarding and preserving heritage relies on a consented and, desirably, active negotiation to capture the meaning and value ascribed by people and what they want to tell and share (Sousa, 2018).

First-person testimonies are the basis of oral history practices centred on autobiography (Thompson & Bornat, 2017). They are one of the richest recording formats, with a high potential to encapsulate expressive information and generate identification and empathy by incorporating the authenticity and uniqueness of the subject's verbal and non-verbal language. This personal dimension of life stories is the basis of the Museu da Pessoa (https://museudapessoa.org/; Museu da Pessoa, 2016), launched in 1997 in Brazil as one of the first virtual museums and distinguished for being collaborative and for granting autonomy to participants. The museum provides instructions on making their records and sharing them via the website to contribute to a collective collection and access to the cultural diversity reflected in them. In Portugal, in a similar vein focused on oral history, the *Memory For All* (https://memoriaparatodos.pt/), launched in 2009, is defined by its founder Fernanda Rollo (2020) as a programme of affections. Because it establishes lasting friendship relationships between researchers and communities, drawn from long processes and proximity to the people. This initiative encompasses several training and collaborative research projects, in articulation with archives, libraries, schools, municipal facilities, private entities and local associations, with different mediation and collection dynamics[12] in the communities. The collections are mainly conducted through biographical and oral history research methods, through "memory days" and collaboration with citizens' representatives[13], which foster territorial cohesion and social mobilisation. More than 30 projects are currently registered in the programme. They focus on memories linked to different times, places and themes, from personalities, entities and specific practices (e.g., factories and industrial heritage, linked to professional

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[11] There are often appropriations that distort the original essence of the cultural demonstrations for the sake of tourism marketing objectives that do not reflect the legacy of the people. Among these are gentrification phenomena and some applications to the lists for world heritage of the United Nations Educational, Scientific and Cultural Organization.

[12] Regarding creative collection strategies with communities, we highlight the activist participation actions called "raids", developed by Daniel Brandão (2014). In these raids, recording equipment is provided for two hours in a limited area in Porto, followed by exhibitions with the community in local commercial establishments. The records are centralised in the platform *Museu do Resgate* (http:// www.museudoresgate.org/).

[13] Within the framework of the project Avenidas Novas de Lisboa, the citizens' representatives were affectionately called "the elders of the avenues".

practices such as the police and insurance, etc.) and also to natural landscapes and environmental issues (e.g., projects associated with the Lagoa de Óbidos, biosphere reserves in various regions of mainland Portugal and islands, the Gorongosa National Park in Mozambique, among others). One of the fundamental aspects of this project is the democratisation of the access to historical research tools and the rigour of scientific and critical verification of sources, which are often unclear when they refer to vague and scattered memories. As such, the project's maturity steadily consolidates good practices in close cooperation with specialists of each domain under study and with the active involvement of the communities, who validate and attest its representation in all the published materials, following the guidelines of knowledge promotion in open access.

One of Portugal's largest open access audiovisual collections is part of the project *A Música Portuguesa a Gostar Dela Própria* (MPAGDP; http://amusicaportuguesaagostardelapropria.org/), which has, since de beginning of 2023, over 6,500 videos and 3,700 projects. It is a personal venture by the director Tiago Pereira, which aims to disseminate the heritage linked to living oral traditions (e.g., songs, tales, music, dances and sacred and profane practices). This type of cultural manifestation is still scarcely known and is at permanent risk of disappearing, given the advanced age of their holders. Since 2011, this initiative has been mapping and collecting videographic testimonies in the various regions of Portugal in the natural landscape and, more recently, also outside the country, with the expansion of the project to include minorities and specific communities: "A Música Cigana a Gostar Dela Própria" (Gypsy music loving itself); "A Música Ibérica a Gostar Dela Própria" (Iberian music loving itself); and "Música Portuguesa (Lá Fora) a Gostar Dela Própria" (Portuguese music [out there] loving itself), collecting in Japan, Berlin, São Tomé and Príncipe, Goa and Malacca.

In addition to its own channels, this label has been unfolding in various initiatives, from official protocols with municipalities, reiterating the intrinsic value of the collected material, which lends itself to various presentation and dissemination formats, namely, using online and physical strategies and supports (e.g., DVDs and books with the songs and lyrics, illustrated maps and musical postcards with QR codes to access the videos, podcasts, playlists on streaming platforms, documentary series, etc.). Of note is the broadcast on the public radio and television (permanently available online on the RTP Play platform), namely: the documentary series *O Povo que Ainda Canta* (The People Who Still Sing) launched in 2010 and aired on RTP, sold in a limited edition on DVD and book, with commentary sections by episodes on Antena 1 and Antena 2 radio stations; and the daily series on RTP Memória thematic channel hosted and commented by Tiago Pereira[14]. Following the pandemic, the MPAGDP also created a daily video commentary section in the multimedia cultural supplement *P3* in the newspaper *Público*. Among the project's latest activities, which moved its headquarters to the village of Serpins, in Lousã, is the launching of the biannual *Serpins Magazine* in 2022, focused on the dissemination of the project's activities, and the creation in 2023 of an interpretive centre in this territory (Lusa, 2021).

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[14] During the COVID-19 pandemic, this section was included in the breaks of broadcasted TV classes, reaching thousands of viewers per day, as stated in the project's activity report available on the *A Música Portuguesa a Gostar Dela Própria* website (A Música Portuguesa a Gostar Dela Própria, n.d.).

Tiago Pereira does not assume an ethnographic ambition behind this project and rejects the comparison with Michel Giacometti's legacy. However, he states that his driving force is the affective connection rising from direct contact with people who generously pass on their memories and ancestral wisdom. That prompted him to preserve and share this privilege, which is not fully translatable into records (Frota, 2015). On the other hand, the director explains that although the materials produced are stored digitally, they are subject to the volatility of the *cloud* and the obsolescence of the storage equipment, which mirror a collection process over more than a decade. This reality poses the risk of permanent loss due to the lack of support and public policies for preserving such collections, though we are in a full digital transition. Against this background, creating and consolidating collaborative networks between the institutional, scientific and technological systems close to civil society is crucial to ensure that knowledge, memory and digital cultural heritage are passed on to future generations (Rollo, 2020).

Many of the mentioned participatory projects rely on the records' collection made by teams of professionals working with the communities. However, the global outbreak of the COVID-19 pandemic in 2020, which brought restrictions on physical contact and access to places, gave rise to several initiatives to use digital technology to access services and culture (from remote working to TV classes), including autonomous practices of self-recording. One example is the Museu da Pessoa, which created the section "Pandemic Diaries" (Museu da Pessoa, n.d.) entirely focused on self-documentation of how people lived through this turbulent period and which prompted a virtual exhibition. Also the Portuguese programme *Memory For All* created the section "Memories to Bring Home" (https://www.instagram.com/explore/tags/memoriasdetrazerporcasa/; Memória Para Todos, n.d.-a; n.d.-b). This initiative encouraged people to use their time in lockdown to share stories of important objects in their lives and family, using the hashtag #memoriasdetrazerporcasa, asking them to contextualise the utilitary and symbolic value of these personal objects. The MPAGDP created the section "A Música Portuguesa a Gravar-se a Ela Própria" (Portuguese music recording itself; 2020). It invited artists from all over the country to film themselves playing and singing, in tandem with the initiative developed in Vila Nova de Poiares to film people performing at windows, on balconies and at a distance in backyards. The aim was to mitigate the isolation of rural and ageing communities, further aggravated by the pandemic (esectv, 2020).

As highlighted by the examples mentioned, cultural mapping represents a recurrent action-research approach in projects linked to memory and cultural heritage. It encompasses the collection, engagement and presentation dynamics embedded into the populations through educational, social, artistic and community tools to identify and promote, internally and externally, the visibility of cultural practices in territories (Duxbury et al., 2015). As for cultural tourism, another relevant endeavour is the project *CREATOUR - Creative Tourism Destination Development in Small Cities and Rural Areas* (2016–2019; https://creatour.pt/; Centro de Estudos Sociais da Universidade de Coimbra, 2019).

Coordinated by the Centro de Ciências Sociais da Universidade de Coimbra, it involves five research centres and 40 pilot entities in an incubation-demonstration format that calls on local craftspeople and artists to involve communities and tourists in hands-on activities such as workshops. It aims at the sustainable development of the territories providing an immersive connection to the places and their traditions. In this domain, another pertinent project linked to traditional knowledge and crafts is *ANTIAMNESIA* (https://endlessend.up.pt/antiamnesia/index.html; 2018–2020), promoted by ID+, the Research Institute in Design, Media and Culture of the Faculty of Fine Arts of the University of Porto, in partnership with other Portuguese universities. It focuses on industrial ethnography, aimed at reinventing disappearing Portuguese materials and manufacturing techniques and towards developing innovative products. Another example focused on the Portuguese territory and based on oral culture is the project *LU.GAR* (https://lugar. memoriamedia.net/), promoted by the Faculty of Social and Human Sciences at the New University of Lisbon and the cultural association Memória Imaterial CRL, launched in 2018 in the region of Alenquer with the support of the city council. The project focuses on community co-creation projects. It combines face-to-face events and digital dynamics, such as workshops, reading sessions, multimedia exhibitions, podcasts, festivals, publications, documentaries, partnering with cultural associations and cooperatives, musicians, reading mediators, storytellers, artists and illustrators. It is worth highlighting the focus on traditional regional tales and the promotion of intergenerational dynamics and the synergy between professional and local storytellers. Another initiative that explores intergenerational approaches using the Internet of Things is the project *LOCUS – Playful Connected Rural Territories* (https://locusproject.pt/), developed by the University of Aveiro. This project addresses the creative production of georeferenced cultural content, both within the *Second Life* metaverse and the territory of the village of Amiais, exploring narratives about local identity and cultural heritage to mitigate isolation and boost rural cultural tourism aiming to replicability in similar territories.

Reference should also be made to other national ethnographic projects focused on audiovisual repositories and participative platforms linked to memory and heritage, demonstrating the growing interest and quality of projects involving communities: the project *Arquivo da Memória* (https://arquivodememoria.pt/) launched in 2010, focusing on the development of a digital archive based on the collection of testimonies in the Vale do Côa, promoted by the Amigos do Parque e Museu do Coa, funded by the Calouste Gulbenkian Foundation within the Clube UNESCO Entre Gerações; the project *SOMA – Sons e Memórias de Aveiro* (https://soma-ua.pt/; 2018–2021), promoted by the Instituto de Etnomusicologia - Centro de Estudos em Música e Dança, as a living digital archive and an intergenerational laboratory space, with experts and members of the community, namely retired people, aimed at boosting the collection of oral testimonies and soundscape of Aveiro, through social inclusion activities, documentaries, podcasts and partnerships with local radios; the platform *Lojas com História* (http://lojascomhistoria.

pt/), created in 2017 with the aim of mapping the cultural heritage linked to traditional commerce and urban and architectural aspects of the city of Lisbon, following a partnership between Lisbon City Council and the Faculty of Fine Arts of the University of Lisbon; the *Mapa Emocional de Miraflor* (https://miramapaemocional.net/), an artistic initiative promoted in 2018 by Associação Cultural Fórum Mira, in partnership with the Programa Cultura em Expansão of the Porto City Council and the Catalan sound artist Nacho Muñoz, focusing on the sounds and testimonies of inhabitants and traders of Rua de Miraflor, in the Campanhã area, and extended to other areas of Porto as of 2021; and the platform *Rostos da Aldeia* (https://www.rostosdaaldeia.pt/), launched in 2021, created by the journalist Luísa Pinto, the author of the travel blog *Alma de Viajante*, Filipe Morato Gomes, and the videographer Tiago Cerveira, to disseminate the popular culture of underpopulated territories, through the testimonies of local communities.

Alongside the featured projects, the last few years have seen the proliferation of scientific events highlighting the growing interest in reflecting on practices related to cultural mapping, heritage and memory, regarding museums and archives, and embedded in participatory dynamics echoing the diversity of approaches introduced by digital culture.

4. Final Considerations: Opportunities and Challenges

We are witnessing more than ever the urgency of digital preservation of information, namely cultural, not just for posterity but also to access and use in contemporary times. Particularly as their proliferation accelerates and due to the risk of permanent loss, especially in the case of intangible heritage that vanishes with its holders. Therefore, information must be natively digital or be translated into records that can be stored and accessed by others. This task is all the more difficult, the more immaterial and inaccessible the information to be preserved. Safeguarding cultural heritage has institutionally been the responsibility of museums, libraries and archives, often referred to as "memory institutions", whose mission is to collect, preserve and make it available to the community. Thus, citizens participation has been increasingly valued and requested to actively integrate this collective construction, minimising a centralising vision, with the advantage of facilitating access to certain contents and their richer contextualisation. Integrating the individual in a system controlled by institutions and media, with their own interests and agendas, can promote greater impartiality in disseminating information and foster empathy and a sense of belonging and self representativeness in the public sphere.

This article highlighted the impact of the digitisation of culture and the open access policies in memory institutions regarding the technology mediated management of collections and fruition experiences indoors and outdoors. It also presented participatory methodologies with communities taking an active role in the documentation and safeguarding of intangible cultural heritage, by highlighting several initiatives, particularly developed in Portugal. The many projects presented confirm how most participatory

processes are mid or long-term. They rely on the complementarity between face-to-face and digital dynamics and on a social and active sharing of experiences between experts and non-experts, who promote mutual exchanges in which digital mediation acts as: a registration tool; a communication facilitator; a vehicle for empowerment and inclusion; a stimulus for knowledge; and for the promotion and mapping of culture.

Cultural mapping stands out in this context as an aggregating and multidisciplinary approach in which design and technological mediation come together as catalysts and activators of socio-technical systems, calling for synergy between multiple disciplines, communities and territories, supported by the digital. Another example of the potential of the digital emerged during the challenging context of the COVID-19 global pandemic. By imposing restrictions on physical contact and access to locations, it demonstrated the functional and creative potential embedded in digital cultural practices to bridge the distance, thus creating alternative forms of expression and creation. Nevertheless, structural problems of technical obsolescence and digital exclusion persist and are not yet fully covered by the ongoing digital transition.

In any case, the challenge of co-creating a legacy for future generations, based on the power of digitisation and digital mediation, is irreversibly launched. It is a movement of transversal action that transcends the scientific sphere and the academy, extending to groups and communities and their ancestral and daily and vernacular practices, in the production of culture and its digital traces. These digital records, guided by a fragmented and combined aesthetic and use mechanic materialize in various formats and dynamization models, shaping the foundations of future archives and forms of remembrance. Finally, we should not overlook that the cultural and technological ecosystem is formed by multiple agents whose interests are not always aligned and thus continue to pose challenges that require the greatest transparency and scrutiny.

Within this context, following the research conducted on the impact of visualisation and participation in network dissemination and digital co-creation practices (Velhinho, 2023), the development of a co-creation and visualisation platform of collective memories is proposed to be validated in the territory of Aveiro, based on digital humanities and participatory design methodologies, in partnership with the communities and the Municipal Historical Archive. The *POLARISCOPE* project aims to co-design and evaluate a technological and social mediation solution in mobility, working as an open interface for sharing and making available correlated records to enrich documental archives and on-site experiences. Thus, the goal is to reconcile the possibility of a living social archive's preservation, study and activation to foster the diversity of interpretations and the creation of multidimensional perspectives on cultural manifestations with replicable potential to other places and events.

Translation: Anabela Delgado

Acknowledgements

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