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DIGITAL CULTURAL HERITAGE – ISSUES OF VALUE, SELECTION, AND PRESERVATION IN ARCHIVAL PRACTICE

Abstract

Purpose: *This work aims to summarize the current state of digital preservation in the context of digital cultural heritage from an archival perspective. The author examines the importance of cultural heritage concepts globally and locally, focusing on some of the main challenges. The fundamental question is how archivists select and evaluate the value of archival collections for cultural heritage. The author is interested in the decision-making process during the creation of digital cultural heritage and the selection for digitization, which has significant social and political implications.*

Methods*: The paper reviews recent literature on digital cultural heritage and digital preservation and analyzes several online digital resources that are on local, national, and international levels, such as UNESCO, the EU (European Union), and several national institutions in Hungary.*

Results*: In non-Western and underdeveloped countries, digitization was critically perceived (even as a form of digital colonization). Aware of this, the author suggests a careful balance of decisions and approaches to be considered (review of non-economic cultural heritage values, steps in support of consistent and evidence-based evaluation, including factors for long-term preservation).*

Conclusions*: The problem of digitization of cultural heritage is not only a technological issue but a more complex one. The author believes this paper could help archivists understand their complex position and embrace a more holistic approach to digital preservation and cultural heritage.*

Keywords*: cultural heritage, digital cultural heritage, values, selection, digital preservation, UNESCO.*

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PATRIMONIO CULTURALE DIGITALE – QUESTIONI DI VALORE, SELEZIONE E CONSERVAZIONE NELLA PRATICA ARCHIVISTICA

Astratto

Scopo: *Questo lavoro mira a riassumere lo stato attuale della conservazione digitale nel contesto del patrimonio culturale digitale da una prospettiva archivistica. L'autore esamina l'importanza dei concetti di patrimonio culturale a livello globale e locale, concentrandosi su alcune delle principali sfide. La questione fondamentale è come gli archivisti selezionano e valutano il valore delle collezioni d'archivio per il patrimonio culturale. L'autore è interessato al processo decisionale durante la creazione del patrimonio culturale digitale e la selezione per la digitalizzazione, che ha significative implicazioni sociali e politiche.*

Metodi: *L'articolo esamina la letteratura recente sul patrimonio culturale digitale e sulla conservazione digitale e analizza diverse risorse digitali online a livello locale, nazionale e internazionale, come l'UNESCO, l'UE (Unione Europea) e diverse istituzioni nazionali in Ungheria.*

Risultati: *nei paesi non occidentali e sottosviluppati, la digitalizzazione è stata percepita in modo critico (anche come una forma di colonizzazione digitale). Consapevole di ciò, l'autore suggerisce un attento equilibrio tra decisioni e approcci da considerare (revisione dei valori non economici del patrimonio culturale, misure a sostegno di una valutazione coerente e basata sull'evidenza, compresi i fattori per la conservazione a lungo termine).*

Conclusioni: *Il problema della digitalizzazione del patrimonio culturale non è solo una questione tecnologica ma più complessa. L'autore ritiene che questo articolo potrebbe aiutare gli archivisti a comprendere la loro complessa posizione e ad abbracciare un approccio più olistico alla conservazione digitale e al patrimonio culturale.*

Parole chiave: *patrimonio culturale, patrimonio culturale digitale, valori, selezione, conservazione digitale, UNESCO.*

DIGITALNA KULTURNA DEDIŠČINA – VPRAŠANJA VREDNOSTI, IZBORA IN HRANJENJA V ARHIVSKI PRAKSI

Izvleček

Namen: *Cilj tega prispevka je povzeti trenutno stanje digitalnega arhiviranja v kontekstu digitalne kulturne dediščine z arhivskega vidika. Avtor preučuje pomen konceptov kulturne dediščine na globalni in lokalni ravni ter se osredotoča na nekatere glavne izzive. Temeljno vprašanje je, kako arhivisti izbirajo in vrednotijo vrednost arhivskih zbirk za kulturno dediščino. Avtorja zanima proces odločanja pri nastajanju digitalne kulturne dediščine in izbor za digitalizacijo, ki ima pomembne družbene in politične posledice.*

Metode: *Prispevek pregleduje novejšo literaturo o digitalni kulturni dediščini in digitalnem ohranjanju ter analizira več spletnih digitalnih virov na lokalni, nacionalni in mednarodni ravni, kot so UNESCO, EU (Evropska unija) in več nacionalnih institucij na Madžarskem.*

Rezultati: *V vzhodnih in nerazvitih državah so digitalizacijo dojemali kritično (tudi kot obliko digitalne kolonizacije). Zavedajoč se tega, avtor predlaga skrbno uravnoteženje odločitev in pristopov, ki jih je treba upoštevati (pregled neekonomskih vrednot kulturne dediščine, koraki v podporo konsistentnemu in na dokazih podprtem vrednotenju, vključno z dejavniki za dolgoročno ohranitev).*

Sklepi: *Problem digitalizacije kulturne dediščine ni le tehnološko vprašanje, ampak je bolj kompleksno. Avtor verjame, da bi lahko ta članek pomagal arhivistom razumeti njihov kompleksen položaj in sprejeti bolj celosten pristop k digitalnemu arhiviranju in kulturni dediščini.*

Ključne besede: *kulturna dediščina, digitalna kulturna dediščina, vrednote, izbor, digitalna hramba, UNESCO.*

1. INTRODUCTION

This work focuses on digital cultural heritage from the archival perspective. The author analyzes the context and content of current definitions of digital cultural heritage and issues of digital heritage today. The author starts the analysis by explaining its evolution and analyzing international standards and regulations. How archivists make selections and what criteria they use to assess the value of archival collections for digital cultural heritage.

Cultural heritage institutions (GLAM[2]) have a vast quantity of static data, which they produce, process, describe, transform into valuable information, and present in a dynamic visual representation, thus creating a new type of knowledge and cultural heritage attractive to a wide specter of users. However, digitization has a disruptive impact on these processes in GLAM institutions, which, each in its way and on its territory, cope with complex issues of digitization, privacy issues, copyrights, access, commercialization, and Wester-centric bias in shaping a policy (Wagner & Cippele, 2023).

The study compares the latest international and supernational organizations' provisions and recommendations (primarily focusing on UNESCO and the EU recommendations on digitizing cultural heritage). The author is interested in the technology of the formation of digital cultural heritage and especially in the selection process for digitization. With this comes the cultural heritage's social and political connotation, whether heritage created locally is part of world heritage or exclusively belongs to the local community and minority groups. Should we discuss distinct types of cultural heritage based on the various values and purposes they stand for?

The author posits that the appraisal of analog materials differs from selecting materials for long-term preservation by creating professional and ethical challenges. The author elaborates on the set of values and complex conditions inspiring GLAM institutions to prioritize digitization and preservation of their collections. This work aims at archivists embracing a holistic approach to digitization by focusing on the selection criteria and the values of collections. Archivists make challenging decisions to protect collections for posterity in their daily work, missing the broader ap-

2 GLAM - galleries, libraries, archives and museums.

proach that their work creates local and national digital heritage assets. The author concludes by briefly explaining the evolution of the Hungarian digital heritage and the socio-political conditions in which it appeared and functions.

2. CULTURAL HERITAGE

2.1. UNESCO AND EU PERSPECTIVES

Over the past decades, our understanding of cultural heritage has evolved. The scope of heritage expanded in terms of type and scale and with the time between creation and preservation (de la Tore, 2013). Today, heritage is perceived more as a process than a product (Rouhani, 2023). Moreover, cultural heritage incorporates broader concerns such as ethics, access, control, dissemination, and digital economy. Article 2 of the 2003 Convention for Safeguarding the Intangible Cultural Heritage relates to the practices, expressions, representations, knowledge, and skills (Peña et al., 2023, 1926). Cultural heritage is also closely associated with the concept of value, especially "universal value," as mentioned in the 1972 UNESCO World Heritage Convention. Rouhani believes one should avoid a reductionist approach in which heritage is cut off from its community and broader context (Rouhani, 2023). Therefore, heritage can also be seen as of world, regional, national, or local importance (Sotirova et al., 2012).

The definitions of cultural heritage range from very general and broad to very narrow and specific. "*Heritage is defined as our legacy from the past, what we live with today, and what we pass on to future generations. As commonwealth of all humankind, its enduring value should be kept for future generations*" (Wang, 2020, 365–366). Cultural heritage is a culturological and legal term that encompasses a set of cultural values of a community, and its conservation and preservation are of utmost importance for the preservation of national identity and the sustainable development of society (Trencheva & Zdravkova-Velichkova, 2019, 6082).

Zaagsma believes there is an intrinsic connection between heritage and the nation-building process because what society chooses to appoint as heritage and to be worth preserving is deeply political (Zaagsma, 2023, 832). Smith, too, stressed that heritage is never neutral and always negotiated, often contested, and thus inherently political (Smith, 2006). Since the 'archival turn,' it has been commonly recognized that archives have been active in the reconstructions and visions of

the past and, thus, became powerful actors and potential gatekeepers in producing historical knowledge (Zaagsma, 2023, 832).

In the European Union, promoting cultural heritage is inextricably linked to strengthening a sense of European unity and identity (Whitehead et al., 2020), as is digitization politics (Zaagsma, 2023, 834). The EU launched the *Europeana* portal, aggregating content from hundreds of GLAM institutions that produce a new form of cultural memory politics that converges national and supranational representations with global information infrastructure (Zaagsma, 2023, 834). The 2018 Statement on the European Year of Cultural Heritage illustrates the complexity and richness of the European cultural space. The lack of a common notion of cultural heritage is perceived as a strength, not a weakness (Whitehead et al., 2020).

"The aim of the European Year of Cultural Heritage is to encourage more people to discover and engage with Europe's cultural heritage, and to reinforce a sense of belonging to a common European space… Cultural heritage shapes our identities and everyday lives. It surrounds us in Europe's towns and cities, natural landscapes, and archaeological sites. It is not only found in literature, art, and objects but also in the crafts we learn from our ancestors, the stories we tell our children, the food we enjoy in company, and the films we watch and recognize ourselves in… You may think of heritage as being 'from the past' or static, but it evolves though our engagement with it. Moreover, our heritage has a big role in building the future of Europe (Whitehead et al., 2020, 4)."

Thus, cultural heritage affects the sense of belonging to the common European space and forms self-consciousness because it surrounds us in literature, art, and objects, but also in the crafts we learn from our predecessors (Trencheva & Zdravkova-Velichkova, 2019, 6082).

Many European countries have national digitization strategies that stress the importance of the 'national' in the selection procedure, although to various degrees. Thus, the Croatian Cultural Heritage project (Lemić, 2022) highlights the importance of digitization for networking, preserving cultural diversity, and using cultural content in education, tourism, and other service activities (Zaagsma, 2023). The digitization strategy of the Hungarian Government and its archival National Database Program reflects the current impact of social transformation on an ar-

chival system meant for publishing collections and granting full access to their users (Hegedus, 2019).

2.2. CRITICISM

Although there are obvious benefits from digitizing and preserving cultural heritage - because they stimulate free access to information and contribute to further democratization of human knowledge – some who see cultural heritage through the prism of politics often connect digitization as an extension of Western hegemony and colonialism for its asymmetrical knowledge production (Zaagsma, 2023, 835). Such views appear in the post-colonial Global South when dealing with the imagined past of the indigenous people; colonial or slavery themes - must be taken into consideration. Similar criticism and serious ethical concerns are raised when conserving and reconstructing many archeological sites and other cultural heritage places (Ul-Assar, 2021, 39).

Some critics argue that UNESCO's concept of digital heritage as static objects is not adequate because digital heritage includes items that are or represent dynamic processes and patterns of use that share more common features with intangible heritage (Colley, 2015, 15).

Critical remark on the heritage sector arrives from the point that the heritage and its production is no sole player of digital cultural heritage because many heritage-like practices exist across all domains, especially in data economies in the government and research sector and gaming communities, which all make decisions about what data should be archived for the future (Cameron, 2021, 7). In this regard, we should also mention the context of digital consumerism that we live in and where culture and heritage play a significant role in this development (Matečić, 2016). Thus, Cameron sees digital cultural heritage as all digital data that society considers vital to preserve and keep as a source of knowledge for future generations. According to him, this raises the question of how much digital data for digital heritage is enough and if all digital data is worth our time, money, and investment for long-term preservation (Cameron, 2021).

Today, heritage practitioners are under pressure to organize and manage the past in the present because of the ubiquitous and growing digital transformation that slowly takes over many spheres of human life. Government institutions and party politics instrumentalize the tourist economy, so taxpayers' money sent to GLAM

institutions results in more dynamic cultural interaction, including "intellectual products" used in the tourist industry. Such heritage praxis tends to segregate the past from the present, understanding it as concluded and therefore amenable to exhibition in museums or public remembering (Whitehead et al., 2020, 225).

There are opinions that Europe needs a new direction for European heritage: to recognize and address historical situations of division, contest, conflict, and exchange as formative of the richness of European cultures today (Whitehead et al., 2020, 227). Thus, the construction or sense of a shared heritage is entangled with affirmations of belonging at the level of rhetoric and policy. What happens at the level of practice, and in our case – archival practice? What happens when heritage is involved in refusals of belonging or when belonging is tacitly or overtly denied to some people, like national minorities and other marginal groups (Whitehead et al., 2020, 208)? Can cultural heritage with universal values diminish the role of heritage of minorities and local communities with their value systems on a local level? Or what shall we do with countries and nations that do not share common philosophical fundaments of conservation in the non-Western world and whose interest in preserving and conserving cultural heritages is missing in their cultural policies and legal protection (Peña et al., 2023)? There are regions and institutions, even in the West, where the notion of preserving digital heritage is still not functioning in praxis due to the lack of knowledge/interest and human and financial resources.

3. DIGITAL CULTURAL HERITAGE

3.1. GLOBAL AND EUROPEAN PERSPECTIVES

Digital cultural heritage is defined as all digital data that society sees as essential to retain and keep as a source of knowledge for future generations when digital data encapsulates our digital interface with the world (Cameron, 2021, 5). Digital heritage records include, thus, all digital data from the cultural heritage, scientific knowledge, government information, business, and personal information. It is the totality of the evidence of digital societal activity from the past in archives, libraries, museums, and digital archives such as research data archives, broadcast archives, Internet archives, business archives, memory institution archives, etc. (T & B van der Werf, 2014, 9). Both individuals and institutions decide what to

keep in the future by converting societal data into historical data (T & B van der Werf, 2014, 9).

The purpose of digital heritage long-term preservation is also to prevent it from disappearing and ensure it remains accessible to the public (Wang et al., 2020, 567). Digital heritage is thus centered around digital products deriving from its cultural heritage ontology and related environment. It is crucial to determine the process of how digital heritage is formed and present how to protect it and develop related products, and what is even more important, how to transform these products into new digital products in the form of knowledge (Wang et al., 2020, 567).

"Faced with the growing danger of loss of valuable information that determines the world's legacy of knowledge, the identity, history, and values of mankind, UNESCO strives to sensitize governments, relevant institutions, and the public at large of the importance to preserving information for present and future generations" (Schorlemer, 2020, 36). UNESCO developed a campaign to promote digital preservation to combat technical obsolescence and physical decay. These efforts resulted in the adoption of UNESCO's Charter of 2003, which aimed to regulate the use of cultural heritage.

UNESCO's *Charter on the Preservation of the Digital Heritage* is the first global initiative defining digital heritage. The Charter consists of a Preamble and 12 articles. Article 1 deals with the scope of digital heritage, including human knowledge and expression. It embraces cultural, educational, scientific, and administrative resources, as well as technical, legal, medical, and other information created digitally or converted into digital form from existing analog resources. Where resources are "born digital," there is no other format but the digital object. Digital materials include texts, databases, still and moving images, audio, graphics, software, and web pages, among various formats. They are often ephemeral, requiring purposeful production, maintenance, and management to be retained. Article 2 explains the purpose of preserving digital heritage to ensure it is still accessible. Articles 3-5 stress the importance of guarding against loss of heritage for posterity, such as rapid obsolescence of the hardware and software that brings it to life, but also uncertainties about resources, maintenance, preservation, and the lack of supportive legislation. Articles 6-9 are dedicated to required measures, where the first-place strategies and policies to preserve the digital heritage

must be developed. Article 7 is devoted to the selection process and what should be kept, which varies between countries. However, the main criteria for deciding what to keep are their significance and lasting cultural, scientific, evidential, and other values. Articles 8 and 9 distinguished between protecting the digital heritage and preserving cultural heritage. While the former concentrates on legal and institutional frameworks, the latter focuses on its societal and cultural dimensions. Articles 10-12 deal with the roles and responsibilities of the member states, especially the sharing of tasks and responsibilities based on existing roles and abilities where the emphasis is on partnership and cooperation (Article 11), and the role of UNESCO under its mandate and functions (Article 12), (UNESCO, Charter, 2003).

The 38th session of UNESCO's 2015 General Conference adopted supplements to the 2003 Charter, called R*ecommendation Concerning the Preservation of, and Access to, Documentary Heritage Including in Digital Form* ("The 2015 Recommendation"). It was adopted under the impression that despite the 2003 Charter, a considerable share of the documentary heritage had been lost due to rapid technological change. Both documents, the 2003 Charter and the 2015 Recommendation, mark an essential guideline for UNESCO's approach to the preservation of digital heritage and provide a legal policy framework at the global level (Schorlemer, 2020, 38). The sense of urgency has not diminished even today.

However, in the European Union, there was a strong parallel effort in that direction. The European Commission brought *Commission Recommendations of 27 October 2011 on the digitization and online accessibility of cultural material and digital preservation,* which stated the following:

"The Digital Agenda for Europe seeks to optimize the benefits of information technologies for economic growth, job creation and the quality of life of European citizens, as part of the Europe 2020 strategy. The digitization and preservation of Europe's cultural memory which includes print (books, journals and newspapers), photographs, museum objects, archival documents, sound and audiovisual material, monuments and archaeological sites (hereinafter 'cultural material') is one of the key areas tackled by the Digital Agenda, (EC Recommendation, 2011, Point 1)."

The EU's strategy for digitization and preservation builds on the work done over the last few years in the digital libraries initiative. The European actions in this

area, including the development of *Europeana*, Europe's digital library archive and museum, were supported by the European Parliament and the Council in a Parliament resolution of 5 May 2010 and the Council Conclusions of 10 May 2010 (EC Recommendation, 2011, Point 2). However, the context for digitization efforts and collaboration at the European level changed significantly because it included new elements such as the launch of *Europeana* in November 2008, the publication of the report 'The New Renaissance' by the 'Comité des Sages on bringing Europe's cultural heritage online' of 10 January 2011 and the Commission's proposal for an Orphan Works Directive of 24 May 2011 (EC Recommendation, 2011, Point 4).

The Commission brought an updated set of measures and recommendations for Member States concerning digitization and bringing cultural heritage online and for digital preservation. In that context, the development of digitized material from libraries, archives, and museums should be encouraged to ensure that Europe supports its place as a leading international player in the field of culture and creative content and uses its wealth of cultural material in the best feasible way.

As a result of these efforts, *Europeana*, Europe's digital library, archive, and museum, was launched on 20 November 2008. The further development of the *Europeana* platform depended primarily on how the Member States and their cultural institutions fed it with content. It made it visible and accessible to citizens (Purday, 2012).

By 2011, *Europeana* gave direct access to more than 19 million digitized objects. Only 2 % of these objects were sound or audiovisual material. Increasing the content accessible through Europeana, including types of underrepresented materials, made the site more enjoyable for the users and was therefore encouraged. The overall target of 30 million objects by 2015 has been in line with Europeana's strategic plan and a steppingstone for getting Europe's entire cultural heritage digitized by 2025 (EC Recommendation, 2011, Point 15)

The European Commission launched in 2023 the 'Twin It! 3D for Europe's Culture campaign invited the 27 EU Ministries of Culture to select and submit one 3D digitized cultural heritage asset to the European data space for cultural heritage deployed by the *Europeana* initiative. The aim is to accelerate the use and reuse of 3D in the common European data space by raising awareness of the

opportunities and benefits and to help build the capacity of EU Member States' heritage institutions (*Europeana*). Europeana initiative. The aim is to accelerate the use and re-use of 3D in the common European data space by raising awareness of the opportunities and benefits and to help build capacity of EU Member States heritage institutions.

Commissioner for Internal Market Thierry Breton stated in 2023 that: "*Europeana currently gives access to 57 million cultural heritage assets with only 0.01% in 3D. Let's take advantage of the opportunities brought by technology to preserve our European cultural heritage for future generations. Today, we are calling Member States to select digital 3D assets to enhance innovation and creation in the cultural and creative sectors, education, tourism, and smart cities. This will benefit and empower people and businesses"* (EC, 2023)

The Commission's Recommendations of 2021 for Member States are aimed at accelerating the digitization of all cultural heritage monuments and sites, objects, and artifacts for future generations, to protect and preserve those at risk, and boost their reuse in domains such as education, sustainable tourism, and cultural creative sectors. Thus, according to Pena et al., digital conversion principles have considerably transformed how digital knowledge is produced and disseminated around the globe (Peña et al., 2023, 1928).

4. SELECTION CRITERIA AND VALUES OF DIGITAL HERITAGE

4.1. THE SELECTION

Archival institutions digitize archival materials for various purposes. In the late 1990s and early 2000s, digitization was considered the best mode for preserving rare or damaged analog materials. However, very soon, it became evident that with the approach of global digital transformation, archives had to reassess their role and decide to be more visible by using digitization as a new strategy to reach community and international users. Concurrently, digital content was produced for education and the global tourist industry. In this deluge of digital content, appraising collections' value for cultural heritage is problematic. Despite guidelines and recommendations from international organizations (UNESCO, ICA, or EU), there are still various approaches to this problem.

In this chapter, the author elaborates on the selection process for digitization and, ultimately, digital heritage. This process varies from institution to institution but also depends on the geographic region, weather conditions, legal provisions, financial and human resources, etc. In archives, the value of figuring out priorities for digitization and curation was primarily motivated by two crucial criteria. Firstly, the condition of the physical materials that need preservation and digitalization, and secondly, the historical value (the uniqueness or originality) of the collections that motivate research and education. However, the initiator for digitization could also be a group of various stakeholders working on specific digitization projects. Also, in recent times, we have seen society and local communities actively involved in creating new and "unheard" collections with dynamic metadata sets. All this supports and strengthens communal memory and their identity.

Thus, archives create their own acquisition policies inside the institution, established in a set of guiding values. These acquisition policies are also very much in line with the archives' mission and goals they want to achieve. Digital portals and websites that have appeared in the past 25 years were not intended to be cultural heritage *per se.* Still, some of them just earned that status because they have become so important and widely accepted because of their longevity and the value they incorporate. They become an intrinsic part of our lives, portals such as Wikipedia, YouTube, or social media such as FB, Instagram, etc. However, on the other hand, cultural heritage institutions started systematic digitization, accommodating the interests of their researchers and stakeholders to discover new and exciting themes that make static holdings – active ones. Inspired by the idea to open their collections to local communities, their websites have become a valuable tool for preserving distinct types of cultural heritage. Together with the national archival institutions, many regional archives followed the digitization and brought very colorful themes and digitization projects to the fore. Themes include digitization of theater posters, theater plays from regional theaters, drama analysis, family photographs, local music and songs, collections of recipes and prominent local individuals, collections of minority languages and their ethnographic traditions, and many others. Apart from the valuable artifacts, books, or archival collections, the GLAM institutions also produce administrative data such as archaeological reports, photographs, or archival inventories and finding

aids, which are as important as the cultural heritage object per se. All this will be published online, and many websites will supply valuable contextual information.

UNESCO 2003 Recommendations were more focused on how to store and preserve digital information rather than how to make decisions about selection for posterity. The Recommendations acknowledged that selection principles vary from country to country. However, the main criteria for deciding what digital materials to keep would rely on their significance and lasting cultural, scientific, evidential, and other values. These values remained quite general, leaving many unanswered questions. However, born-digital materials were given more priority. "*Selection decisions and any subsequent reviews need to be carried out in an accountable manner, and be based on defined principles, policies, procedures, and standards"* (UNESCO, Charter, 2003, Article 7).

As the digital world moves at lightning speed, it causes a severe challenge to heritage institutions and other information organizations to select, preserve, and access the documentary heritage. Already in 2011, the OECD observed that "more data was created in 2011 than the whole of human history, or at least since the invention of the alphabet". [3] With such progressive growth of digital content, it was obvious that identification and early preservation interventions are crucial (UNESCO/PERSIST, 2021, 2). Around 2016, the first edition of the UNESCO/PERSIST Guidelines for selecting digital heritage appeared. It was an initiative from the Memory of the World Conference in Vancouver in 2012. In 2020, the PERSIST project was integrated into the activity of the Preservation Subcommittee of the UNESCO Memory of the World Program. The Guidelines were intended to help raise awareness among governments and civil society about the transient nature of digital information. The text was dedicated to information practitioners who must decide on selecting materials for long-term preservation (UNESCO/PERSIST, 2021, 2). The first edition of the UNESCO/PERSIST Guidelines for the selection of digital heritage emerged. It was an initiative from the Memory of the World Conference in Vancouver in 2012. In 2020, the PERSIST project was integrated into the activity of the Preservation Subcommittee of the UNESCO Memory of the World Program. The Guidelines were intended to help raise awareness among governments and civil society about the transient nature of

3 Quoted from Titia and Bram van der Werf, The paradox of selection in the digital age, IFLA 2014, Lyon

digital information. The text was dedicated to information practitioners who must decide on the selection of materials for the long-term preservation (UNESCO/PERSIST, 2021, 2).

The second edition of the Guidelines was supported by UNESCO, with the primary purpose of raising awareness of digital information preservation and access in many parts of the world. They also acknowledge that they cannot be too specific in their application due to cultural heritage policies that differ among countries, regions, and institutions. However, there are many reasons for different perceptions of cultural heritage in some countries. Still, the guidelines stimulate their selection policies for preservation (UNESCO/PERSIST, 2021, 3).

Schorlemer (2020) advocates that the main aim of digitization is twofold; firstly, it is aimed to preserve the analog information resource and its long-term storage in the format of digital copies, and secondly, to provide access to digital copies via digital devices and networks by concurrently implementing standards to protect copyrights and intellectual property. An institution should answer these questions by evaluating the relative significance of the digital heritage to its mandate and public; firstly, by assessing its sustainability, that is, the institution's capacity to preserve it for long-term access and use; and secondly, by considering its availability in other heritage institutions, that is, its prospects for preservation elsewhere and the most appropriate institution or community group (Schorlemer, 2020, 45).

Every memory institution is unique in its mandate, collections policy, and resources. The UNESCO/PERSIST guideline suggests a set of questions that can be used to advise during digital selection decisions. These steps can form the starting point for an institutional discussion about selecting digital heritage for long-term preservation (UNESCO/PERSIST, 2021, 6). The selection criteria are generally expressed and defined in the acquisition policy of the archival institution. For instance, documentary heritage institutions such as archives select records for long-term value based on the **function** they perform by an institution or Government. The following criteria are based on the **topic, provenance,** and **format.**

In some cases, institutions may capture all the digital heritage material now and apply selection criteria later in the form of delayed selection. There are two spe-

cific collection practices: comprehensive collecting and representative sampling. **Comprehensive** collecting is used to acquire all the material produced on a given subject area, time, or geographic region. This approach requires significant institutional resources or a narrow focus. Archives sometimes employ comprehensive collecting practices, such as for influential public figures. **Sampling** is another approach used to find material for long-term preservation. It is often used when an institution does not have the resources or ability to collect comprehensively and when differentiating the material by specific selection criteria is problematic. Sampling captures a representative picture, making selection and preservation more manageable and less resource-intensive (UNESCO/PERSIST, 2021, 7).

Before embarking on a project to select digital heritage, it can be helpful to consider the overall contextual milieu at work. A **decision tree** for selection in individual institutions is an approach of four steps in a set of questions to support consistent and evidence-based evaluation. Table 1 includes the following steps: a. **identification** of the materials to be acquired or evaluated; b. **legal framework** to prevent legal issues such as intellectual property and privacy restrictions; c. **application** of three **selection criteria** (significance, sustainability, and availability); d. **decisions** made based on the results of all earlier steps (UNESCO/PERSIST, 2021, 9–12).

Table 1: A Four steps in support of consistent and evidence-based evaluation, (UNESCO/PERSIST, 2021, 9–12)

Identification	materials to be acquired or evaluated
Legal framework	prevent legal issues: intellectual property, privacy restriction
Application of three selection criteria:	1. significance, 2. sustainability, 3. availability
Decision making	based on the results of all earlier steps

Although the identification of materials, legal issues, and decision-making are intrinsically connected while making decisions, the author emphasizes the role, importance, and significance of the materials that encompass their value. The value of archival materials for culture, art, history, and society is also what societal values these materials embody and represent. One can also discuss how closely these values align with one's archive's mission and mandate. Also, one can examine whether the object is born digitally or owns a digital surrogate of a physical

record. However, one of the most important criteria is whether it has a significant social, cultural, historical, or artistic value for the community and humanity. One must always ask whether it holds such content worth continuous archival attention and research UNESCO/PERSIST (2021).

In archival praxis, we often face the problem that some analog collections, due to their size and values, will never be digitized, although it would be worth doing so. On the other hand, digital collections already exist in the digital format, for which some intrinsic values are missing. In this way, we create an asymmetric and disadvantageous relationship between nondigitized and digitized collections. Archivists often assess archival collections according to their historical and research values, which could lack a broad national and cultural heritage perspective. When digitizing historical collections, archivists are guided primarily by the preservation principle of the analog materials, where digital surrogates become a contingency plan or access copy for the profession and accessibility for their users. The author suggests that archival curators of digital archival collections should be more active in promoting the preservation of digital assets as a permanent legacy of archivists and archives in general.

As mentioned, the operating models and modes of serving the public used in libraries, museums, and archives are changing rapidly, so information professionals mustn‘t leave their traditional collection management activities to IT specialists.

While national, regional, and municipal archives are mandated to collect official governance-related materials, community and counter archives are motivated to fill in gaps and “silences” in the official record and promote new and different perspectives (Zaagsma, 2023, 832). While some of the boundaries between libraries, archives, and museums are blurring in the digital age, there are still issues to keep in mind that are relevant to each.

Archives focus on the importance of authenticity, provenance, and context in appraising archival records for acquisition. The legal environment often dictates what digital information must be acquired by an archive and how, or if, it can be made accessible for public access and research. Archives get original or unique records for permanent preservation. They have traditionally relied on the passage of time between their creation and acquisition to lend a historical perspective in making selection decisions (UNESCO/PERSIST, 2021, 13).

4.2. THE VALUES

One of the most fundamental reasons for preserving cultural heritage is that it embodies the permanent value of the human community. Throughout history, many civilizations and cultures have always maintained those material goods that they considered valuable for them and their society. In Article 1 of the Charter on the Preservation of Digital Heritage, UNESCO recognized that many digital resources own "lasting value and significance" and require an active preservation strategy (Schorlemer, 2020, 42). It is still unclear how to assess its real "value" and "significance" although UNESCO Director-General noted already in 2002 that digital heritage, in principle, can be considered as part of the world's cultural heritage" (Schorlemer, 2020, 43). The simple definition of value in the context of culture is seen in terms of "the qualities and characteristics" reflected in objects or practices, thus incorporating various meanings depending on its context (Matečić, 2016, 17).

By studying the values of the conservation of the material cultural heritage, one can discern a lot about the intellectual, religious, cultural, and sociopolitical weight. The varying points of study can also result in different points of view because of the subjective approach to that issue. Mason stipulates that there are two fundamental value categories, which he distinguishes as sociocultural and economic (Mason, 2002).

Table 2, Deconstruction of material non-economic values of cultural heritage (Matečić, 2016, 77–78).

Political value	Protection and preservation of cultural heritage (laws)
Historical value	The fundament of heritage that causes the reaction toward the past and its objects (identity, memory)
Scientific value	For scientific research and interpretation (publications)
Authentication value	Uniqueness and integrity of cultural heritage
Symbolic value	It stands for the national identity of the communities (common national values)
Spiritual/religious value	It reflects on sacred or religious interpretations of heritage
Aesthetic value	It refers to visual characteristics of cultural heritage, the most individual among all cultural heritage values

Table 2 represents cultural non-economic values that could be deconstructed and distinguished into the following seven groups. Material cultural goods do not necessarily need to hold all these types of cultural values because they often depend on various stakeholders involved in preserving and managing cultural heritage.

Following his distinction of material values, archival digital heritage should hold similar types of values. The historical, scientific, and authentic/unique values and symbolic values are sublimed into one – digital value. One digital collection can be more important than the other because of its quality and the values it embodies, but also because of different researchers and stakeholders in various times and social and political environments. This brings us to the theoretical legacy of Terry Cook and others about the Appraisal theory and archivists assessing the value of archival records (Cook, 1997). During selection for digitization, the archivist curator applies another round of appraisal/selection, but this time on a digital level. In short, records that once faced appraisal and were left to be part of the physical collection are now facing a new level of appraisal by being selected for digitization.

5. CHALLENGES OF DIGITIZATION AND DIGITAL PRESERVATION

According to UNESCO's Guidelines, digital media do not have the same longevity as books, documents, or physical objects, which could be preserved for centuries. Digital file formats, systems, and storage media are constantly changing, endangering the readability and integrity of digital heritage. Even digital systems that are both tools for content creation and creation are acknowledged as digital content worth preserving (UNESCO/PERSIST, 2021, 3). One should note that the responsibility for maintaining digital heritage goes beyond archival institutions because it requires the engagement and cooperation of the public and private sectors and content creators. Digital preservation also implies a challenge for the institutional budget, which puts many undeveloped countries in a disadvantageous position.

Guidelines stimulate collaboration with underrepresented communities when selecting decisions to ensure that documentary heritage created by and about those communities is found and selected for long-term digital preservation (UNESCO/PERSIST, 2021, 4). Colley advocates that the transformative nature of digital technologies raises serious ethical, sociopolitical, and cultural questions for GLAM institutions because digital technologies involve dematerialization, compression, high-speed access, non-linear access, and qualitative changes in the production, nature, representation, and use of digital content (Colley, 2015, 14).

"Digital Preservation refers to the series of managed activities necessary to ensure continued access to digital materials for as long as necessary. Digital preservation… refers to all the actions needed to support access to digital materials beyond the limits of media failure or technological and organizational change. Those materials may be records created during the day-to-day business of an organization; "born-digital" materials created for a specific purpose (e.g., teaching resources); or the products of digitization projects" (Digital Preservation Handbook, 2015).

Digital preservation has been perceived as a technological challenge, but recently, much more accepted as a practice that needs to consider the norms and values of society (T. & B. van der Werf, 2014, 2). Digital preservation lacks a clear ethical framework for who, how, what, where, and why to restore certain historical artifacts through technology (Ul-Assar, 2021, 38). With those questions in mind, digital preservation of tangible heritage differs from that of intangible heritage because it is not concerned so much with its physicality and locality. UNESCO addressed the preservation of digital heritage as a part of its activities for safeguarding documentary heritage. While, in one way, there is an attempt to preserve digital cultural heritage, there is also an unlimited drive of individual self-publishing on the web, creating an information overflow that considerably challenges the selection for digital preservation (T. & B. van der Werf, 2014, 3). However, digitization transforms information on an analog carrier into digital form. This digital conversion process transformed knowledge production and dissemination around the planet, stimulating the culture of participation where institutions and users can collaborate (Peña et al., 2023, 1928).

Some authors believe it is essential to distinguish between digitization to preserve cultural elements and digital preservation as a tool to protect the value of manifestations or assets. The former relates to creating new digital products from heritage elements, while the latter refers to the strategies used to preserve heritage, regardless of whether it is tangible or intangible (Peña et al., 2023, 1929).

The long-term preservation is associated with many complex issues. We should mention a few that could be gathered into six distinctive groups where each is a particular aspect, although never independently, and where each can affect the other. Table 3 shows the following: cultural, technological, legal, methodological, economic, and social factors (Voutssas, 2012, 86).

Each factor from Table 3 has its issues and challenges. Still, they are valuable aids to enable the design and execution of a strategic plan for digital collections within cultural heritage institutions. According to Voutssas, these factors are the "big picture" around the preservation issues and create a functional framework to deal with them strategically (Voutssas, 2012, 89). Daily, archivists and other information professionals developed through long-time issues that can be grouped into seven goals or "principles" functional for digital preservation. These include selection, quality, provenance, accessibility, availability, trustworthiness, and functionality (Voutssas, 2012, 90)

Table 3: Factors of Long-Term Digital Preservation (Voutssas, 2012, 86–89)

Cultural	Lack of awareness of large groups within society, including decision-makers and planners, about the historical significance of digital documentary heritage. This issue is very acute within developing countries.
Technological	A rapid and unstoppable shift of devices, practices, and aspects relating to ICT. Hardware and software obsolescence, storage devices and changes in formats, programs, interfaces, lack in interoperability, new standards, etc.
Legal	How to achieve a delicate balance between protecting copyrights and confidentiality while defending access rights to information. Right to privacy but also to be forgotten.
Methodological	"Documentary" factors were the most neglected. They were associated with tools and standards used for appraisal. Structural metadata.
Economic	What is the cost of digitization and long-term preservation
Social	To ensure enduring access and usability for future generations

We realize that a significant challenge in digitizing cultural heritage is organizing and integrating information into traditional databases. The latest information society, which focuses on exchanging information and cultural communication in real-time, realizes the need for digital representation of cultural heritage in the global information space (Trencheva & Zdravkova-Velichkova, 2019, 6084). That real-time exchange of information and cultural communication in the information society became a significant characteristic of people's communication (Trencheva & Zdravkova-Velichkova, 2019, 6084).

A new digital environment has created new forms of expression and representation, ranging from web pages and interactive social media sites to private research databases, digital artworks, and online gaming environments. These products overlap with boundaries, blur the lines of responsibility, and challenge past approaches to collect (UNESCO/PERSIST, 2021, 5). Books, periodicals, government records, private correspondence, personal diaries, maps, photographs, film and sound re-

cordings, historical records, and works of art have digital equivalents, which often fit well within existing practices and mandates. In addition to digital equivalents of analog materials, digital heritage includes social media, Virtual Reality (VR) and Augmented reality (AR) material, digital art, web archiving, and many others.

Archivists and information specialists should also be aware that they must select and appraise materials across formats, as paper and digital often coexist in what can be referred to as a long hybrid tail. Selection practices, therefore, must be approached holistically rather than as purely digital or purely paper/analog. Other challenges arise about interlinking paper documents with their digital surrogates (UNESCO/PERSIST, 2021, 5).

6. HUNGARIAN DIGITAL CULTURAL HERITAGE

6.1. HUNGARIKUM

The example below will analyze how politics shapes national heritage values within national borders and extends them into the regions and countries where ethnically Hungarians still live. The purpose of such a stand lies in preserving the national identity and uniqueness of the Hungarian nation in a space shared with different countries and national minorities. With this regard, the Hungarian national heritage aspires to distinguish itself from the other nations and neighboring cultures whose histories intermingled throughout the centuries.

The Hungarian Parliament adopted the Act XXX of 2012 on Hungarian national values and *Hungarikum* (in effect since 2015 with a consensus between the five major parties) to establish an appropriate legal framework for the identification, collection, and documentation of national values important to the Hungarian people and by providing an opportunity for making them available to the broadest possible audience and for their safeguarding and protection. The act wishes to set up a supportive legal framework for the "*Hungarikum* movement," an extensive civil initiative already in place. According to the legal definition, *Hungarikum* refers to a collective term denoting a value worthy of emphasis that is the highest quality of Hungarian products with its characteristic Hungarian attributes, uniqueness, special nature, and quality (Act XXX, 2012).

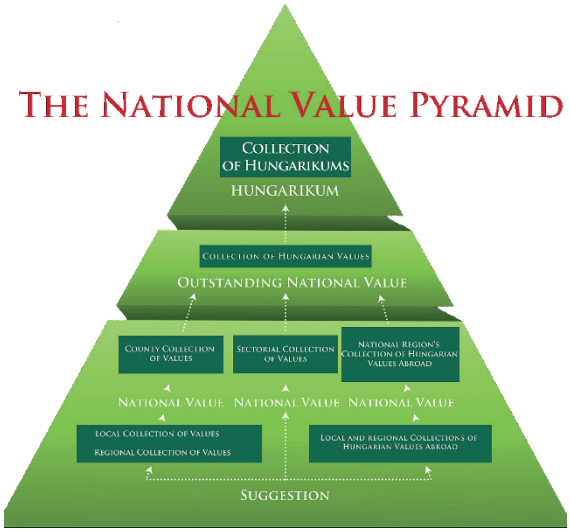
The term cultural heritage was integrated within the concept of *Hungarikum* and thus elevated to the same level as an intrinsic part of the Hungarian cultural her-

itage. Hence, Act XXX of 2012 defines Hungarikum as a collective term about a value standing for the highest quality of Hungarian products divided into the following thematic groups. It includes products ranging from agriculture and food industry, health and lifestyle, built environment, industrial and technological solutions, cultural heritage, sport, natural environment, and tourism and catering (Act XXX, 2012).

Act XXX of 2012 did not bring any provisions about digital heritage because such a term did not exist at that time. In Part 4, Section 19. on closing provisions in point f. there is one single place mentioning the term "digital format" in which the Government is authorized to establish by special decree: "rules about the registry of the contents of national values, outstanding national values and Hungarikum presented in a digital format and to ensuring public access to the same" (Act XXX, 2012, 9). However, Hungarikum still does not include all heterogeneity of the digital heritage of heritage institutions because of the diverse and rich nature of the materials they preserve. Thus, the legislator primarily saw the role of digitization in accessing and publicizing cultural heritage easily.

According to the National Value Pyramid's bottom-up building system in Chart 1, anyone can suggest a value to the essential collections by filling out the proper standard form. After the admission, the so-called national value can be suggested further to the Collection of Hungarian Values, and the Hungarikum Committee decides whether the national value might be accepted. If something becomes of outstanding national value, then the petitioner can submit it to the Collection of Hungarikum. If the Hungarikum Committee agrees, the value can be named Hungarikum. Thus, the Hungarian cultural heritage is structured around national goals regulated by special law in which the notion of *Hungarikum* is elevated to the rank of a unique Hungarian – value.

Chart 1, The Hungarian National Value Pyramid (Collection of Hungarikums, 2014)



The digitization of cultural heritage could also be contested and provocative for some communities, especially if it is shared by several nations where each nation presents digital heritage as its intellectual product. The space of Central Europe and the Balkans have many contested heroes and events due to the shared history and universal Medieval Latin culture, which undoubtedly opens new avenues for future discussion (Monok, 2012).

An excellent example of the "digital unification" of the Hungarian cultural heritage was the *Bibliotheca Corviniana Digitalis* Program (2001-2004), which virtually restored the fifteen-century library of King Matthias Corvinus. Thus, *Bibliotheca Corviniana* brought pieces that were dispersed throughout European libraries and, by virtual reconstruction, made access to scientific research and publishing easy (Hegedus, 2019).

6.2. HUNGARICANA

The Hungarian Cultural Heritage Portal (*Hungaricana*) is a joint website of Hungarian archives, museums, libraries, and other institutions that provides access to various digital collections of Hungarian cultural heritage, such as maps, archives, books, photos, and more. The portal is part of the *Hungaricana* project (not to be mixed with Hungarikum), which aims to share Hungarian cultural heritage

with the public and enable them to explore Hungary's history and culture in a user-friendly way. The Ministry of Human Capacities and the National Széchényi Library support the portal. The *Hungaricana* project aims to share Hungarian cultural heritage, including content that has never been accessible. The goal is to create an environment where everyone can explore Hungary's history and culture quickly and efficiently (Hngaricana site).

Launched in 2015, the *Hungaricana* has become a leading public collection provider in one year. The portal was created by the collaboration of the Parliamentary Library, the Budapest City Archives, and the Arcanum Data Base Ltd., and currently brings together the digital content of about 150 public collections and collaborators. It is primarily intended to share and distribute content generated by the digitization support of a cultural agency of the Hungarian Government. On this site, we can find about 5 million images and 7 million OCR pages, and the website is used by 2.2 million visitors per year, which is a considerable amount compared to other member states' published statistics (Hegedus, 2019).

The *Hungaricana* project consists of several databases. The gallery database includes artworks, paintings, photos, postcards, graphics, and a tapestry database, with the materials deriving from 27 geographically dispersed museums and libraries. The library database comprises 19,163,315 pages of various publications, documents, newspapers, the old Hungarian library, and religious and diaspora collections. The maps database consists of 77823 valuable maps and 42652 plans. The archival database forms charters, *Libri Regii*, archival documents, *Urbarium* 1767, *Urbaria* et *Conscriptiones*, and *archontology*. The Budapest Time Machine enables retrieving historical data and offers navigation in space and time via interactive maps, with quick and straightforward crossing through different time sections.

In the Budapest Time Machine / Maps application, there are four different time sections (1837, 1873, 1908, 1937) in which the transformation of the city's structure can be studied with the assistance of vectorized maps made by the contemporary available most detailed high-resolution maps. Finally, the last database is dedicated to folk music. This collection gradually took over the role of the central archives of straightforward Hungarian folk music from the collection at the Museum of Ethnography.

7. CONCLUSION

In this work, the author focused on analyzing digital archival heritage and their digital repositories, which, due to technological obsolescence, could become increasingly vulnerable to damage and loss of data. Suppose websites and digital repositories cannot preserve their visibility and accessibility for the long term. In that case, it creates a fundamental problem in the trustworthiness and reliability of cultural heritage data and their institutions. In our case, archives must preserve their dominant role as the *'loca credibilia'* or trustworthy places for the "documentary" cultural heritage and support high professional standards of protection and dissemination. In conclusion, evaluating and assessing digital heritage is based on many principles related to traditional selection, such as context and provenance, while acknowledging that some aspects of conventional collection may not wholly transfer into the digital environment. The concept of digital heritage thus requires thoughtful consideration of emerging issues concerning long-term preservation, accessibility, use, ethics, and others when making selection decisions and finding its social, cultural, and other values (UNESCO/PERSIST, 2021, 6).

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SUMMARY

This work focuses on digital cultural heritage from the archival perspective. The author analyzes the context and content of current definitions of digital cultural heritage and issues of digital heritage today. How do archivists make selections, and what criteria do they use to assess the value of archival collections for dig-

ital cultural heritage? In everyday work, archivists make challenging decisions to protect collections for posterity, missing the broader approach that their work creates local and national digital heritage assets. This work aims at archivists embracing a holistic approach to digitization by focusing on their collections' selection criteria and values.

The author analyzed the evolution of international standards and regulations concerning cultural heritage and how GLAM institutions produce a vast quantity of static data, transform it into valuable information, and present it in a dynamic representation.

Although there are apparent benefits to digitizing and preserving cultural heritage, critical voices often see cultural heritage through the lens of politics, frequently connecting digitization as an extension of Western domination, colonialism, and asymmetrical knowledge production. There are opinions that Europe needs a new direction for its heritage: to recognize and address historical situations of division, contest, conflict, and exchange as formative of the richness of European cultures.

Digital cultural heritage is all digital data that society sees as essential to retain and keep as a source of knowledge for future generations when digital data encapsulates our digital interface with the world. Digital heritage records include all digital data from cultural heritage, scientific knowledge, government, business, and personal information. The purpose of digital heritage long-term preservation is to prevent it from disappearing and ensure it remains accessible to the public. UNESCO's Charter of 2003 on the Preservation of Digital Heritage is the first global initiative defining digital heritage. UNESCO's 2015 General Conference adopted supplements to the 2003 Charter, called Recommendation Concerning the Preservation of, and Access to, Documentary Heritage Including in Digital Form. These two documents marked an essential guideline for UNESCO's approach to preservation at the global level.

However, there was a strong parallel effort in that direction in the European Union. The European Commission issued Commission Recommendations on 27 October 2011 on the digitization and online accessibility of cultural material and digital preservation. European actions in this area led to the development of Europeana, Europe's digital library archive and museum.

The selection criteria are generally expressed and defined in the acquisition policy. Archives select records for long-term value based on the function they perform by an institution or Government, their uniqueness, and historical value. Today, society and local communities are creating new and "unheard" collections with dynamic metadata sets that support and strengthen communal memory and identity.

By studying the values of conserving material cultural heritage, one can discern a lot about the intellectual, religious, cultural, and sociopolitical conditions. The simple definition of value in the context of culture is seen as "the qualities and characteristics" reflected in objects or practices, thus incorporating various meanings depending on its context. The author ends his work by explaining the pyramid of the Hungarian national heritage values (Hungarikums) and the Hungarian Cultural Heritage Portal (Hungaricana).

Typology: 1.01 Original scientific research