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ARTIFICIAL INTELLIGENCE AND THE PROTECTION OF CULTURAL HERITAGE:
HUMAN RIGHTS AND THE ROLE OF INTERNATIONAL LAW IN ADDRESSING FUTURE
ETHICAL DILEMMAS

1. *Introduction*

Artificial intelligence has been a paradigm-changing force for many domains, however, one of its most under-explored implications concerns its intersection with human rights and cultural heritage. AI technologies present enormous potential and urgent normative challenges, as they increasingly become part of the systems that manage cultural preservation, interpretation and access. The interaction between AI-mediated heritage practices and the international cultural-rights framework, rooted in Art. 27 of the Universal Declaration of Human Rights[1] and Art. 15 of the International Covenant on Economic, Social and Cultural Rights[2], underscores the growing recognition of heritage as a dimension of human dignity.

Such normative instruments support the right to engage in cultural life and the corresponding duty of governments to ensure equitable access and preservation, that - alongside participation - are mutually reinforcing components of the indivisible matrix of

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[1] Recognises the right to freely participate in cultural life, enjoy the arts, and share in scientific advancement. This implies the preservation and transmission of cultural knowledge and practices, which are essential components of collective memory. From now on it will be used the acronym UDHR.
[2] Affirms the right of everyone to take part in cultural life and obliges states to promote the conservation and development of culture. From now on it will be used the acronym ICESCR.

cultural human rights[3]. In this context, core research questions arise: to what extent can international legal frameworks ensure ethical governance and human rights protection in AI-driven practices concerning cultural heritage, and how can they safeguard collective memory against the risks of digital dispossession? This is especially relevant given the role AI plays in determining how society is accessed and interpreted: in the field of tangible heritage it allows restoration initiatives, real-time object recognition and virtual reconstructions of sites either destroyed or inaccessible[4] and for intangible heritage, AI enables voice preservation, dialect analysis and the transmission of oral traditions through NLP[5] and machine learning[6].

These are presented as inherently democratising tools: 3D modelling, augmented reality and intelligent retrieval systems promise to broaden access to cultural artefacts for diverse populations, including those with disabilities or in remote areas[7].

Yet digitisation relies on classificatory choices that may not preserve cultural context.

The translation of cultural expressions into data categories may produce representations that diverge from community understandings, thereby affecting the integrity and protection of heritage under international cultural rights frameworks[8].

Moreover, AI-generated heritage may seem neutral while it often incorporates institutional perspectives, developer preferences or imaginative elements that distort the original meaning. In this sense, international legal systems are insufficient.

The 2021 UNESCO Recommendation on the Ethics of Artificial Intelligence affirms human rights, cultural diversity and inclusiveness as core principles guiding AI development.

However, as a non-binding instrument, it provides ethical guidance rather than enforceable obligations and contains no specific provisions addressing the protection of cultural heritage[9]. The AI Act of the European Union, on the other hand, focuses primarily

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[3] Y. DONDERS, Protection and promotion of cultural heritage and human rights through international treaties: two worlds of difference?, in C. WAELDE, C. CUMMINGS, M. PAVIS, H. ENRIGHT (eds.), *Research Handbook on Contemporary Intangible Cultural Heritage*, Cheltenham, 2018, pp. 54-77.

[4] See, among the others, J. LI, *Application of artificial intelligence in cultural heritage protection*, in *Journal of Physics: Conference Series*, Vol. 1881, N. 3, 2021, pp. 1-7; B. R. DAS, H. B. MARINGANTI, N. S. DASH, Role of artificial intelligence in preservation of culture and heritage, in D. MISHRA, S. M. SAMANTA (eds.), *Digitalization of Culture through Technology*, London-New York, 2022, pp. 92-97; D. HARISANTY, K. L. B. OBILLE, N. E. V. ANNA, E. PURWANTI, F. RETRIALISCA, *Cultural heritage preservation in the digital age, harnessing artificial intelligence for the future: a bibliometric analysis*, in *Digital Library Perspectives*, 2024, vol. 40, pp. 609-630.

[5] Referring to natural language processing.

[6] Y. FU, K. SHI, L. XI, *Artificial intelligence and machine learning in the preservation and innovation of intangible cultural heritage: ethical considerations and design frameworks*, in *Digital Scholarship in the Humanities*, 2025, vol. 40, pp. 487-508; A. TSATSANASHVILI, *Artificial Intelligence in the Protection of Intangible Cultural Heritage*, in *European Journal of Transformation Studies*, 2024, pp. 163-178.

[7] H. I. M. GAUDÊNCIO, *Culture Access and Technology: How Can Technology Democratize Cultural Access?*, Master thesis, Universidade NOVA de Lisboa, 2019.

[8] M. GASPAROTTO, *Digital Colonization and Virtual Indigeneity: Indigenous Knowledge and Algorithm Bias*, Rutgers University, 2016, pp. 1-21.

[9] B. S. SOLOMON, *UNESCO Best Practice Submission: A Unified Moral AI System for Global Ethics*, IT Analysis and Training Ltd., 2025; B. GIOVANOLA, P. GRANATA, Ethics for human-centered education in the age of AI, in F. SPIGARELLI, L. KEMPTON, L. CAMPAGNUCCI (eds.), *Entrepreneurship and Digital Humanities*, Cheltenham-Northampton, 2024, pp. 96-109; E. BEAN, C. BURLEIGH, C. HASKELL, T. BURRIS-MELVILLE, J. PAYNE, B. PATHAK, *Eavesdropping on UNESCO AI Policy, Leadership, and Ethics*, in *Journal of Leadership Studies*, 2025, vol. 18, n. 4, pp. 98-110.

on risk-based regulation, but has not so far established specific protections for intangible cultural heritage, that derives its meaning from community-based relational practices[10].

AI systems that ignore these specificities can decontextualise traditions or introduce externally imposed standards of authenticity, resulting in forms of digital dispossession where cultural data are extracted or repurposed without the free, prior and informed consent of the communities concerned[11]. This article addresses these tensions through a human rights lens, arguing that the preservation of heritage in the age of AI should be redefined as a moral and legal activity necessary to preserving the rights of people to access and share their legacy on their own conditions. This analysis is grounded in the international legal framework governing cultural heritage and draws on the human-rights-based approach developed in contemporary doctrine, outlining the normative bases of cultural heritage protection within international human rights law before examining the opportunities and risks associated with the use of AI in heritage contexts[12] and attempts to contribute to a fairer approach to the control of AI for cultural legacy.

2. *The international legal framework for the protection of cultural heritage*

The contemporary international framework for the protection of cultural heritage is the outcome of a gradual normative consolidation[13]. Initially conceived as an object of State sovereignty and national patrimony, cultural heritage progressively acquired an international legal dimension as the international community recognised its transboundary and universal value[14]. This shift was driven by the impact of armed conflicts and increasing awareness that heritage loss, whether through destruction, illicit trafficking or neglect, affects not only individual States but humanity as a whole[15]. From this evolution emerged a distinct *corpus* of rules, later complemented by human-rights developments, which frames cultural heritage as a protected interest requiring both domestic implementation and international cooperation[16].

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[10] P. HACKER, *AI regulation in Europe: from the AI act to future regulatory challenges*, in *arXiv preprint*, 2023, pp. 1-18; I. KUSCHE, *Possible harms of artificial intelligence and the EU AI act: fundamental rights and risk*, in *Journal of Risk Research*, 2024, pp. 1-14.

[11] M. PISONI, G. GALENA ET AL., *Human-centred artificial intelligence for designing accessible cultural heritage*, in *Applied Sciences*, 2021, vol. 11, n. 2, p. 870.

[12] N. AHMAD, A. W. ALI, M. H. B. YUSSOF, *The challenges of human rights in the era of artificial intelligence*, in *UUM Journal of Legal Studies*, 2025, vol. 16, pp. 150-169.

[13] L. V. PROTT, Unesco International Framework for the Protection of the Cultural Heritage, in J. A. R. NAFZIGER, A. M. NICGORSKI (eds.), *Cultural Heritage Issues: The Legacy of Conquest, Colonization and Commerce*, Leiden, 2009, pp. 257-285.

[14] C. FORREST, *International Law and the Protection of Cultural Heritage*, London, 2010.

[15] J. BLAKE, *On defining the cultural heritage*, in *International & Comparative Law Quarterly*, vol. 49, 2000, pp. 61-85. See also E. J. TECHERA, *Protection of Cultural Heritage Times of Armed Conflict: The International Legal Framework Revisited*, in *Macquarie Journal of International and Comparative Environmental Law.*, 2007, pp.1-20; J. HLADÍK, *Different legal issues related to the protection of cultural property in peacetime and wartime*, in *Proceedings of the ASIL Annual Meeting*, Vol. 106, 2012, pp. 453-462; P. GERSTENBLITH, *Archaeology in the context of war: Legal frameworks for protecting cultural heritage during armed conflict*, in *Archaeologies*, vol. 5, 2009, pp. 18-31.

[16] M. PHELAN, *A synopsis of the laws protecting our cultural heritage*, in *New England Law Review*, vol. 28, 1993, pp. 63-108. J. H. MERRYMAN, *"Protection" of the Cultural "Heritage"?*, in *The American Journal of Comparative Law*, vol. 38, 1990, pp. 513-522.

The international protection of cultural heritage is therefore based on a normative architecture that integrates treaty law, soft-law instruments and human-rights jurisprudence.

The 1954 Hague Convention and its 1999 Second Protocol establish the first comprehensive regime, with obligations of safeguarding during armed conflict, including measures of prevention, such as the Enhanced Protection regime and individual criminal responsibility[17]. The Second Protocol also strengthens enforcement by establishing sanctions for grave breaches and increasing obligations of domestic implementation[18].

It further states that the protection of cultural heritage is an obligation *erga omnes*, which reinforces the principle that it does not fall within the domain of domestic jurisdiction alone, even in cases of armed conflict[19]. Complementing conflict settings regulation, the 1970 UNESCO Convention deals with illicit import, export, and transfer of cultural property by establishing due-diligence duties, restitution mechanisms, and cooperation obligations[20].

It also operationalises the principle of good faith in restitution processes, requiring signatories to adopt appropriate legislative measures and museum-sector standards to prevent illicit circulation. A parallel shift occurred with the 1972 World Heritage Convention, which introduced the concept of Outstanding Universal Value and linked heritage protection to State obligations of identification and periodic reporting, establishing a system of international monitoring and collective oversight over State compliance[21].

The 2003 Convention for the Safeguarding of the Intangible Cultural Heritage[22] marked a decisive turn toward community-based protection, recognising that the transmission of intangible heritage depends on the consent of the communities concerned, and imposing on States the duty to ensure that safeguarding measures are community-driven and culturally appropriate[23]. The 2005 Convention on the Protection and Promotion of the Diversity of Cultural Expressions reaffirmed the cultural-rights dimension of heritage emphasising pluralism and equitable access to cultural expressions, coupled with the affirmation of the sovereign right of States to adopt cultural policies in conformity with their human rights commitments, thus reinforcing the linkage between cultural diversity and cultural rights[24]. These treaty regimes operate alongside a substantial body of soft-law instruments with significant normative influence.

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[17] E. CUNLIFFE, P. FOX, *Safeguarding Cultural Property and the 1954 Hague Convention: All Possible Steps,* Woodbridge, 2022, pp. 3-39.

[18] M. ZIA-UD-DIN, *The International Legal Framework Governing the Protection of Cultural Heritage*, in *FWU Journal of Social Sciences*, vol. 18, 2024, pp. 35-43. See also J. HLADIK, *Reporting system under the 1954 Convention for the Protection of Cultural Property in the Event of Armed Conflict*, in *International Review of the Red Cross*, vol. 82, 2000, pp. 1001-1016; T. DESCH, *The Second Protocol to the 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict,* in *Yearbook of International Humanitarian Law*, vol. 2, 1999, pp. 63-90; J. D. KILA, *Heritage under siege: military implementation of cultural property protection following the 1954 Hague Convention*, Leiden/Boston, 2012.

[19] R. O'KEEFE, *World cultural heritage: obligations to the international community as a whole?,* in *International & Comparative Law Quarterly*, vol. 53, 2004, pp. 189-209.

[20] L. V. PROTT, *International control of illicit movement on the cultural heritage: The 1970 UNESCO convention and some possible alternatives*, in *Syracuse Journal of International Law and Commerce*, 1983, pp. 333-351.

[21] H. CLEERE, *The concept of "outstanding universal value" in the World Heritage Convention*, in *Conservation and Management of Archaeological Sites*, 1996, pp. 227-233.

[22] L. LIXINSKI, *Intangible cultural heritage in international law*, Oxford, 2013.

[23] J. BLAKE, *Engaging "communities, groups and individuals" in the International mechanisms of the 2003 Intangible Heritage Convention*, in *International Journal of Cultural Property*, vol. 26, 2019, pp. 113-137. See also J. BLAKE, UNESCO's 2003 Convention on Intangible Cultural Heritage: The implications of community involvement in 'safeguarding', in L. SMITH, N. AKAGAWA (eds.), *Intangible Heritage*, London, 2008, pp. 45-73.

[24] Y. DONDERS, *Do cultural diversity and human rights make a good match?,* in *International social science journal*, vol. 61, 2010, pp. 15-35.

The Faro Convention of the Council of Europe frames cultural heritage as a substantive right, founded in democratic participation and thus reinforcing the shift towards a right-based approach to heritage governance[25]. ICOMOS charters and UNESCO Operational Guidelines further specify technical standards relating to authenticity, integrity, community involvement and safeguarding obligations, and have acquired *de facto* normative authority through consistent State practice and their integration into operational monitoring mechanisms[26]. International and regional jurisprudence provides additional consolidation.

The Inter-American Court and Commission have interpreted cultural heritage within the corpus of indigenous rights, emphasising continuity and collective memory as protected legal interests. The UN Human Rights Committee has read Art. 27 ICCPR as safeguarding minority cultural practices, including traditional land-related activities, while regional courts - including the European Court of Human Rights, which has recognised cultural identity and community life as protected interests within the scope of Art. 8 ECHR - have incorporated cultural dimensions into their jurisprudence[27]. The ICC's Al Mahdi judgment confirmed that intentional destruction of cultural heritage constitutes a serious breach of international law insofar as it directly affects the identity and collective memory of protected groups[28].

The case concerned the deliberate targeting of mausoleums in Timbuktu in 2012 and marked the first time an international criminal tribunal recognised the destruction of cultural heritage as a standalone war crime under Article 8(2)(e)(iv) of the Rome Statute[29].

Taken together, this corpus articulates a multilayered body of norms under which cultural heritage, tangible and intangible, is protected both as a collective interest and as an expression of cultural rights. It also provides the substantive and procedural *criteria* against which emerging technologies must be assessed, ensuring that AI-driven heritage practices align with established international obligations on safeguarding and cultural-rights protection, while still revealing areas where existing instruments have yet to fully accommodate the regulatory challenges posed by artificial intelligence.

2.1. *Cultural heritage and human rights*

The integration of cultural heritage into the field of international human rights has followed a separate normative trajectory from the development of heritage-specific treaty

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[25] W. LOGAN, Cultural diversity, cultural heritage and human rights: towards heritage management as human rights-based cultural practice, in S. EKERN, W. LOGAN, B. SAUGE, A. SINDING-LARSEN (eds.), W*orld heritage management and human rights*, London, 2016, pp. 19-32.

[26] C. BORTOLOTTO, *UNESCO, cultural heritage, and outstanding universal value: value-based analyses of the World Heritage and Intangible Cultural Heritage Conventions*, in *International Journal of Heritage Studies*, vol. 21, 2015, pp. 528-530.

[27] F. FRANCIONI, Culture, Heritage and Human Rights: an Introduction, in F. FRANCIONI, M. SCHEININ (eds.), *Cultural Human Rights*, Leiden, 2008, pp. 1-15.

[28] K. WIERCZYŃSKA, A. JAKUBOWSKI, *Individual responsibility for deliberate destruction of cultural heritage: contextualizing the ICC judgment in the Al-Mahdi case*, in *Chinese Journal of International Law*, vol. 16, 2017, pp. 695-721.

[29] P. ROSSI, *The "Al Mahdi" Trial Before the International Criminal Court: Attacks on Cultural Heritage Between War Crimes and Crimes Against Humanity*, in *Diritti umani e diritto internazionale*, 2017, pp. 87-100. See also M. M. SADOWSKI, *Heritage strikes back: the Al Mahdi case, ICC's policy on cultural heritage and the pushing of law's boundaries*, in *Undecidabilities and Law*, 2022, pp. 99-119; I. Salsano, *The Absent Framework: A Legal Semiotics Inquiry into the Destruction of Collective Memory through Cultural Heritage Loss*, in *International Journal for the Semiotics of Law-Revue internationale de Sémiotique juridique*, 2025, pp. 1-27.

regimes[30]. From the 1960s onwards, the consolidation of cultural rights as part of the universal human-rights *corpus* provided a new conceptual basis for understanding heritage as an interest rooted in human dignity. This evolution introduced rights-based protections for cultural identity and participation, grounded in human-rights obligations and operating independently of UNESCO's preservation-oriented regime[31]. Art. 27 ICCPR constitutes the first explicit recognition of cultural entitlements in universal human-rights law[32].

By requiring States to ensure that minorities enjoy their own culture, Art. 27 establishes: (i) a substantive guarantee protecting cultural practices as elements of group identity; (ii) a continuity requirement that obliges States to prevent measures that would interrupt the intergenerational transmission of such practices; and (iii) a spatial dimension, whereby cultural rights extend to land-related practices, territories and knowledge systems essential to the maintenance of heritage[33]. In parallel, Art. 15 ICESCR introduces a complementary dimension of protection by recognising the right of everyone to take part in cultural life and shifting the focus from minority status to the general conditions under which cultural participation is possible[34]. Art. 15 imposes positive obligations on States and requires ensuring the availability of cultural institutions and resources, their physical and economic accessibility and the existence of appropriate institutional arrangements for the preservation, documentation and transmission of cultural expressions[35].

In this perspective, the material and immaterial components of heritage constitute part of the infrastructure through which the right to participate in cultural life is realised.

Read together, these articles configure a dual axis of protection: on the one hand, group-specific guarantees that shield the cultural practices of minorities from disruption and erasure; on the other, general obligations to create and maintain an enabling environment for cultural participation. Once cultural participation acquired the status of protected legal positions, cultural heritage itself entered the normative orbit of human rights.

A series of interpretive developments consolidated this shift.

First, heritage came to be regarded not merely as an object of preservation but as one of the conditions for the exercise of cultural rights. This entails that States must regulate heritage in a manner that does not impair the material, spatial and institutional environments upon which cultural practices rely[36]. As clarified in the practice of human-rights bodies, the protection of cultural rights therefore extends to the maintenance of contextual conditions: an approach consistently affirmed by the Human Rights Committee in General Comment

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[30] A. F. VRDOLJAK, Human Rights and Culture Heritage in International Law, in F. LENZERINI, A. F. VRDOLJAK (eds.), *International Law for Common Goods: Normative Perspectives on Human Rights, Culture and Nature*, Oxford, 2013, pp. 139-174.

[31] H. SILVERMAN, D. F. RUGGLES, *Cultural Heritage and Human Rights*, New York, 2007. See also L. F. HASHIMOVA, *The Development of the Human Rights Factor in Cultural Heritage Protection: Interrelationships and New International Legal Trends*, in *Vestnik of Saint Petersburg University Law*, 2025, pp. 151-166.

[32] S. HOSSEIN, *Article 27 of the Universal Declaration, Preserving Individual Rights or Mechanism for Support Collective Ones*, in *International Journal of Humanities & Social Science Studies (IJHSSS)*, 2017, pp. 203-228.

[33] G. ANDRÁSSY, *The Real Meaning of Article 27 ICCPR and the Deeper Understanding of Overlapping Human Rights Its Exploration Requires*, in *Austrian Review of International and European Law Online*, vol. 28, 2025, pp. 61-93.

[34] Y. DONDERS, *Foundations of collective cultural rights in international human rights law*, in *Amsterdam Law School Research Paper*, 2015, pp. 1-19.

[35] R. O'KEEFE, *The "right to take part in cultural life" under article 15 of the ICESCR*, in *International & Comparative Law Quarterly*, vol. 47, 1998, pp. 904-923.

[36] J. BLAKE, *Taking a Human Rights Approach to Cultural Heritage Protection*, in *Heritage & Society*, 2011, pp. 199-238.

No. 23[37], which interprets Art. 27 as protecting the territorial, environmental and practical circumstances enabling cultural practices. The Committee on Economic, Social and Cultural Rights in General Comment No. 21 identifies institutional, linguistic and knowledge-transmission structures as essential components of the effective enjoyment of Art. 15, without which the right to take part in cultural life cannot be effectively realised[38].

Human-rights bodies have emphasised that States must safeguard: (i) access to the material and immaterial resources on which protected practices depend - including ceremonial sites or ritual artefacts - as repeatedly affirmed by the Human Rights Committee under Art. 27; (ii) the spatial and functional characteristics of culturally significant areas, whose alteration may compromise the exercise of cultural practices, a point underscored by the Inter-American Court of Human Rights in cases such as *Yakye Axa v. Paraguay*[39] and *Kaliña and Lokono Peoples v. Suriname*[40]; and (iii) intergenerational transmission mechanisms, identified as prerequisites for the effective enjoyment of Art. 15.

Secondly, the human-rights framework has progressively limited the discretion traditionally associated with heritage governance. Measures affecting heritage now fall within the scope of rights-based scrutiny, requiring States to demonstrate that any restriction on cultural practices or access to cultural resources pursues a legitimate aim, follows due process and satisfies tests of necessity and proportionality. This evolutionary development shows how cultural heritage is governed through legal standards that generate reviewable obligations. Finally, the emergence of a rights-holder-centred perspective has reconfigured the position of communities within heritage regimes: they now hold legally protected interests relating to identity and transmission[41]. This includes the right to be consulted, to influence decisions affecting their heritage, and to contest measures that materially alter or decontextualise the cultural resources on which their practices depend.

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[37] General Comment No. 23 of the Human Rights Committee of 8 April 1994, *Article 27 (Rights of Minorities)*, CCPR/C/21/Rev.1/Add.5, p. 3.

[38] General Comment No. 21 of the Committee on Economic, Social and Cultural Rights of 21 December 2009, *Right of everyone to take part in cultural life (Article 15, para. 1 (a)*, E/C.12/GC/21, p. 12.

[39] IACtHR - Inter-American Court of Human Rights, *Case of the Yakye Axa Indigenous Community v. Paraguay*. Judgment of June 17, 2005, Merits, Reparations and Costs, p. 81. The case concerned the longstanding inability of the *Yakye Axa* Community to regain access to its ancestral lands, following their transfer to private ownership and the State's failure to ensure restitution or effective territorial protection. As a result, the community was forced to reside in a precarious roadside settlement without access to the resources and spaces necessary for its cultural and subsistence practices. In para. 50.15, the Court observed that the relocation to *Estancia El Estribo* did not remedy these conditions and, critically, prevented the community from freely conducting its cultural practices. It held that the new settlement lacked the environmental, territorial and resource conditions required for cultural continuity, thereby affirming that the protection of cultural integrity is inseparable from securing effective access to traditional lands and the material context enabling the exercise of protected cultural practices. See also K. ZOMBORY, *The Right to Cultural Identity in the Case Law of the Inter-American Court of Human Rights: A New Global Standard for the Protection of Indigenous Rights and Future Generations*? in *Journal of Agricultural and Environmental Law*, vol. 18, 2023, pp. 171-191.

[40] IACtHR - Inter-American Court of Human Rights, *Case of the Kaliña and Lokono Peoples v. Suriname*. Judgment of November 25, 2015 (Merits, Reparations and Costs), p. 48. The case concerned the longstanding failure of Suriname to recognise and protect the traditional territories of the *Kaliña* and *Lokono* peoples, including areas of ceremonial, spiritual and subsistence significance. The Court noted that the concession of mining, logging and nature-reserve projects within indigenous lands had been authorised without adequate consultation and had resulted in the degradation of sites essential to cultural identity and transmission. See also L. LIXINSKI, *Case of the Kaliña and Lokono Peoples v. Suriname*, in *American Journal of International Law*, vol 111, 2017, pp. 147-154.

[41] L. LIXINSKI, *International Heritage Law for Communities: Exclusion and Re-imagination*, Oxford, 2019.

These developments have expanded the reach of cultural rights beyond the protection of individual expressions to encompass the broader normative environment in which heritage is produced, maintained and transmitted.

3. *Cultural heritage and human rights in the digital age*

In the digital age, the intersection between cultural heritage, human rights and emerging technologies has acquired a greater complexity. Key issues as the essence of cultural rights, preservation of collective memory, and utilisation of AI to safeguard the multicultural heritage of mankind emerge as the technological revolution refigures the way we interact with heritage. Digitisation and AI are both an opportunity and a source of tension for heritage protection, particularly in relation to data governance and the risk of reproducing dominant epistemologies in digital cultural ecosystems[42].

The digital transformation generates unprecedented benefits for accessibility and conservation but simultaneously intensifies existing human-rights concerns[43].

Cultural heritage is the physical expression of our shared human past as tangible artefacts, intangible traditions, languages, rituals, and knowledge passed down through generations[44]. UNESCO provides the legal framework for understanding cultural heritage in its twofold nature: according to the 2003 UNESCO Convention heritage encompasses «the practices, representations, expressions, knowledge, skills […] that communities, groups and, in some cases, individuals recognise as part of their cultural heritage»[45].

This definition confirms that heritage extends beyond monuments and artefacts to encompass linguistic practices, rituals, oral traditions. In doing so, the 2003 Convention broadened the focus of earlier UNESCO instruments - most notably the 1954 Hague Convention and the 1972 World Heritage Convention[46]- which were primarily centred on the protection of tangible cultural property and monumental heritage.

Given this shift, intangible cultural heritage has become a central field of legal and digital intervention, after the 2003 Convention elevated the safeguarding of traditional

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[42] F. A. RASO, H. HILLIGOSS, V. KRISHNAMURTHY, C. BAVITZ, L. KIM, *Artificial intelligence & human rights: Opportunities & risks*, in *Berkman Klein Center Research Publication*, 2018.

[43] E. RISSE, *Human Rights and Artificial Intelligence: an urgently needed Agenda*, in *Human Rights Quarterly*, 2019, pp. 1-16.

[44] I. SALSANO, *La tutela giuridica internazionale del patrimonio culturale intangibile dei migranti*, in *Eunomia. Rivista di studi su pace e diritti umani*, vol. 13, 2024, pp. 187-212.

[45] J. BLAKE, Safeguarding Intangible Cultural Heritage, in F. FRANCIONI, A. F. VRDOLJAK (eds.), *The Oxford Handbook of International Cultural Heritage Law,* Oxford, 2020, pp. 347-370.

[46] In addition, early UNESCO and UN-system instruments adopted between the 1960s and 1990s consolidated a predominantly State-centric approach to heritage. Resolutions of the UNESCO General Conference (e.g., 1964 Recommendation on the Safeguarding of Beauty and Character of Landscapes and Sites, 1976 Recommendation on Participation of the Public in Cultural Life) framed heritage protection as a matter of administrative conservation rather than rights-based entitlement. Similarly, the 1982 World Conference on Cultural Policies advanced a developmental reading of culture as a factor of national identity and economic progress but did not yet articulate the community-centred or rights-holder logic later embraced by the 2003 Convention. These instruments collectively illustrate the pre-2003 paradigm: heritage conceived as an object of management by States, rather than as a domain of legally protected community agency.

knowledge and oral practices to an international obligation[47]. The boundary between tangible and intangible heritage has, however, become increasingly opaque in the digital age: heritage arises from the interaction between communities and their environments, producing manifestations ranging from languages and rituals to buildings and movable objects[48].

The 2003 Convention expressly acknowledged this interdependence, and later the Faro Convention further repositioned people at the normative centre of heritage governance[49].

The spirit of a place, recognised by the International Council on Monuments and Sites[50], includes the tangible and intangible elements that constitute the values related to a specific *locus*. This holistic understanding of cultural heritage is essential for addressing contemporary challenges[51]. Cultural heritage functions as both a material and immaterial repository of collective memory and identity; its protection therefore extends beyond preservation *stricto sensu* and engages substantive human-rights obligations.

In this perspective, safeguarding heritage constitutes a prerequisite for the effective enjoyment of cultural rights, which explains the progressive recognition of cultural heritage interests within the *corpus* of international human-rights law. A glance at the International Bill of Rights, as shown in par. 2.1., confirms this trajectory, as both ICCPR and ICESCR have progressively been interpreted in a manner that incorporates heritage-related interests into the scope of cultural rights[52]. Within international human-rights law, the full realisation of cultural rights requires a tripartite structure encompassing access to cultural resources, participation in cultural life, and the enjoyment of cultural expressions[53].

A core component of this triad is intergenerational cultural memory, through which communities transmit, reinterpret and preserve their histories[54]. Its protection is essential for the exercise of cultural rights and for the maintenance of collective identity in contemporary societies[55]. Cultural memory, however, is increasingly shaped by digital processes.

What once relied on material repositories and community-based transmission is now mediated by digital infrastructures determining how cultural narratives are stored and accessed[56]. Digital technologies, initially employed for documentation, have evolved into systems that influence the transmission and interpretation of collective memory[57].

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[47] Y. HOU, S. KENDERDINE, D. PICCA, M. EGLOFF, A. ADAMOU, *Digitizing intangible cultural heritage embodied: State of the art*, in *Journal on Computing and Cultural Heritage*, 2022, pp. 1-20.

[48] D. H. R. SPENNEMANN, *ChatGPT and the generation of digitally born knowledge: How does a generative AI language model interpret cultural heritage values?*, in *Knowledge*, 2023, pp- 480-512.

[49] B. ROUHANI, *Ethically digital: contested cultural heritage in digital context*, in *Studies in Digital Heritage*, 2023, pp. 1-16.

[50] ICOMOS from now on.

[51] S. PANSONI, S. TIRIBELLI, M. PAOLANTI, F. DI STEFANO, E. FRONTONI, E. S. MALINVERNI, B. GIOVANOLA, *Artificial intelligence and cultural heritage: design and assessment of an ethical framework*, in *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, 2023, pp. 1149-1156.

[52] S. EKERN, W. LOGAN, B. SAUGE, A. SINDING-LARSEN, *Human rights and World Heritage: preserving our common dignity through rights-based approaches to site management*, in *International Journal of Heritage Studies*, 2012, pp. 213-225.

[53] F. LENZERINI, *Intangible Cultural Heritage: The Living Culture of Peoples*, in *European Journal of International Law*, 2011, pp. 101-120.

[54] G. NEGLIA, M. ANGRISANO, I. MECCA, F. FABBROCINO, *Cultural heritage at risk in world conflicts: Digital tools contribution to its preservation*, in *Heritage*, 2024, pp. 6343- 6365.

[55] Y. DONDERS, *Cultural heritage and human rights*, in F. FRANCIONI, A. F. VRDOLJAK (eds.), The *Oxford Handbook on International Cultural Heritage Law*, Oxford, 2020, pp. 379-406.

[56] N. MOHAMAD BA'AI, A. ARIS, *AI and cultural heritage: Preserving and promoting global cultures through technology*, in *Nanotechnology Perceptions*, 2024.

[57] I. SILIUTINA, ET AL., *Cultural preservation and digital heritage: challenges and opportunities*, in *Amazonia Investiga*, 2024, pp. 262-273; see also F. HASSANI, *Documentation of cultural heritage; techniques, potentials, and constraints*, in *The*

The rapid development of digital technologies has expanded their function beyond documentation and conservation, integrating them into interpretive processes and heritage management. These tools enable the structured collection and verification of cultural data, support integrity controls, and provide advanced scanning and modelling capacities essential for risk mitigation and restoration. Such technical infrastructures create unprecedented possibilities for preserving and transmitting cultural memory in digital form, across both geographical and temporal boundaries, thereby reshaping how heritage is accessed and managed[58]. These developments have also led to the emergence of large digital platforms acting as governance infrastructures for cultural data. Platforms such as *Europeana*, which allows users to explore European cultural heritage through online browsing of more than 58 million artefacts[59], the UNESCO World Heritage List Portal[60], or similarly, the Time Machine project[61], are a step forward in making cultural heritage available to a large audience of stakeholders[62]. Their role is particularly relevant for diasporic or disabled groups, for whom digital access may constitute the primary or sole means of reconnecting with cultural resources. Advanced digitisation techniques, including 3D scanning, photogrammetry, augmented-reality interfaces and AI-assisted restoration tools, enhance the capacity to document and safeguard endangered cultural materials[63]. AI systems expand accessibility by enabling multilingual search, automated description, and adaptive interfaces, thereby broadening participation in cultural life and facilitating exposure to diverse historical narratives[64]. From a legal perspective, these platforms also operate as normative infrastructures: their metadata schemes influence how cultural works are classified and circulated. While digital infrastructures significantly expand the potential for access to cultural heritage, their democratising promise remains unevenly realised[65].

Large-scale digitisation and AI initiatives are often designed and funded by Global North institutions, which exercise control over technical standards, metadata schemas and classificatory logics. Source communities, particularly in the Global South, may have limited influence over digitisation priorities, contextual information or conditions of reuse[66].

International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 2015, pp. 207-214; D. H. HAUX, A. MAGET DOMINICÉ, J. A. RASPOTNIG, *A cultural memory of the digital age?*, in *International Journal for the Semiotics of Law - Revue internationale de Sémiotique juridique*, 2021, pp. 769-782.

[58] S. ALLEGREZZA, *L'intelligenza artificiale applicata alla digitalizzazione del patrimonio culturale*, in *Il cinquantenario della Convenzione UNESCO a tutela del patrimonio culturale (1972-2022): percorsi multidisciplinari*, 2022, pp. 9-16.

[59] B. CARAMIAUX, *The use of artificial intelligence in the cultural and creative sectors – Concomitant expertise for INI report*, in *Research for CULT Committee*, 2020.

[60] A. É. GFELLER, J. EISENBERG, UNESCO and the shaping of global heritage, in P. DUEDAHL (eds.), *A history of UNESCO: Global actions and impacts*, London, 2016, pp. 279-299.

[61] A European research initiative that develops computational models and AI-assisted tools to reconstruct, map and analyse historical data across centuries. By integrating archives, museum collections and geospatial datasets into interoperable digital infrastructures, it enables long-term preservation and cross-disciplinary access to cultural heritage resources.

[62] I. DI LENARDO, F. KAPLAN, *Venice Time Machine: Recreating the density of the past*, in *Digital Humanities 2015*, 2015.

[63] A. M. SULLIVAN, *Cultural heritage & new media: a future for the past*, in *J. Marshall Review of Intellectual Property Law*, 2015, pp. 605-645.

[64] P. K. YU, *Cultural relics, intellectual property, and intangible heritage*, in *Temple Law Review*, 2008, pp. 434-506.

[65] L. IACOVINO, *Shaping and reshaping cultural identity and memory: maximising human rights through a participatory archive*, in *Archives and Manuscripts*, 2015, pp. 29-41.

[66] L. LIXINSKI, *Digital heritage surrogates, decolonization, and international law: restitution, control, and the creation of value as reparations and emancipation*, in *Santander Art and Culture Law Review*, 2020, 65-86.

This produces structural asymmetries in authorship and benefit-sharing, as collections are digitised and integrated into transnational platforms without adequate consultation or control over downstream uses[67]. Against this background, these questions arise: who controls the metadata and taxonomies by which cultural materials are classified? Who determines which sources are treated as authoritative for contextualisation?

To what extent are cultural expressions protected when they are removed from their social environment and recast as digital assets or training data?[68]

These asymmetries have prompted a body of soft-law instruments specifically addressing the legal implications of AI and digitisation for cultural-heritage governance.

At the international level, the Council of Europe's "Guidelines given the latest technological developments, such as AI, complementing Council of Europe standards in the fields of culture, creativity and cultural heritage"[69] constitute the first attempt to translate existing CoE cultural-rights standards into operational requirements for the design, deployment and oversight of AI systems in the cultural sector[70].

The Guidelines explicitly complement the Council of Europe's *acquis* on cultural diversity and democratic participation, requiring member States to: (i) ensure transparency for algorithmic tools used for heritage classification, curation or access; (ii) conduct *ex ante* and ongoing risk assessments addressing algorithmic distortion; (iii) secure effective community participation in decisions concerning metadata; and (iv) establish accountability and redress mechanisms, including traceability obligations, provenance documentation against the decontextualised use of cultural datasets in training AI models.

The Guidelines frame digital heritage as a domain that requires rights-based regulatory oversight rather than purely technical management[71]. At the EU level, the European Parliament's Resolution of 19 May 2021 on Artificial Intelligence in education, culture and the audiovisual sector sets out sector-specific normative expectations for AI systems used in cultural contexts, stressing that they must respect the Union's commitment to cultural and linguistic diversity under Artt. 2 and 3 TEU and Art. 167 TFEU and highlights the risk that algorithmic systems and content-ranking mechanisms may amplify dominant cultural products while marginalising minority expressions[72].

The Resolution therefore calls for human oversight on cultural-sector use cases, as well as safeguards against exclusionary practices in automated curation.

It also underlines the responsibility of platforms and cultural intermediaries to ensure that AI-enabled tools do not undermine the diversity of cultural expressions or the rights of authors and communities[73]. The EU Commission Recommendation 2021/1970 on a

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[67] R. GRIFFIN, *Rethinking rights in social media governance: human rights, ideology and inequality*, in *European Law Open*, 2023, pp. 30-56.

[68] D. GIGLITTO, L. CIOLFI, C. CLAISSE, E. LOCKLEY, *Bridging cultural heritage and communities through digital technologies: understanding perspectives and challenges*, in *C&T 2019 - Proceedings of the 9th International Conference on Communities and Technologies: Transforming Communities*, New York, 2019.

[69] Adopted on 13 December 2024 by the Steering Committee for Culture, Heritage and Landscape.

[70] E. C. DIAZ GALAN, *The Legal Regulation of Artificial Intelligence (AI) in Europe: Two Decisive (but Insufficient) Steps of the Council of Europe and the European Union*, in *Cuadernos Derecho Transnacional*, vol. 17, 2025, p. 366.

[71] C. NARDOCCI, *Artificial Intelligence at the Crossroads between the European Union & the Council of Europe: Who Safeguards What & How?*, in *Italian Journal of Public Law*, vol. 16, 2024, p. 165.

[72] E. H. MORAWSKA, Council of Europe standards and activities related to AI: towards a Framework Convention on AI and human rights?, in M. BALCERZAK, J. KAPELASKA-PREGOWSKA (eds.) *Artificial Intelligence and International Human Rights Law*, Cheltenham, 2024, pp. 25-44.

[73] F. P. LEVANTINO, F. PAOLUCCI, *Advancing the Protection of Fundamental Rights Through AI Regulation: How the EU and the Council of Europe are Shaping the Future*, in *European Yearbook on Human Rights 2024,* 2024, pp. 3-37.

common European data space for cultural heritage establishes a governance framework for the lawful processing, interoperability and reuse of digitised cultural resources.

It invites member States and cultural heritage institutions to develop data infrastructures that facilitate access and reuse while complying with data-protection, intellectual-property and cultural-heritage norms[74]. The Recommendation identifies risks arising from the deployment of AI models trained on cultural datasets, such as the loss of provenance information and potential misappropriation of community-specific materials.

To address these risks, it urges States to adopt mechanisms ensuring provenance integrity and rights-compliant data-sharing practices and stresses the need for open and verifiable data architectures capable of supporting scrutiny and community participation in the digital heritage management. These instruments shape the environment within which States must reconcile AI-enabled heritage practices with their obligations under international human-rights law, articulating a set of culture-specific normative parameters for algorithmic governance and regulatory approaches grounded in cultural rights and in the protection of cultural memory.

4. *Ethical dilemmas and normative frictions in AI-driven cultural heritage practices*

While AI becomes increasingly integrated into heritage practices through digitisation, interpretation and simulation, profound normative conflicts related to authorship and authenticity are compounded[75]. AI reconstructions, for instance, realised with generative algorithms and neural rendering, can now virtually bring to life destroyed ancient monuments[76]. Such efforts often claim to restore memory, but they raise critical legal and ethical issues[77]. Who owns the reconstructed model? Is it a neutral act of remembrance or a new form of appropriation? Who decides which version of the past is digitally recreated?

The issue of digital authenticity emerges forcefully here.

When AI reconstructs missing architectural elements or produces art representations, it does so through probabilistic inference, training data, and algorithmic pattern recognition.

The output is not a genuine *facsimile* of lost heritage but a machine-authored assumption, based on developer choices and institutional agendas, revealing how the appearance of objectivity is often illusory as algorithms encode value judgments, assumptions and exclusions[78]. When AI is deployed in metadata generation, artefact classification or interpretive interfaces such as chatbots and interactive museum guides, its outputs reflect the

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[74] P. FORADORI, P. ROSA, *Guardian of culture: the European Union's quest for actorness in the protection of cultural heritage in conflicts and crises*, in *European Security*, 2025, pp. 1-22.

[75] S. COLLEY, Ethics and digital heritage, in T. IRELAND, J. SCHOFIELD (eds.), *The ethics of cultural heritage*, New York, 2014, pp. 13-32.

[76] E. L. THOMPSON, *Legal and ethical considerations for digital recreations of cultural heritage*, in *Chapman Law Review*, 2017, pp. 153-176. See also Z. MANŽUCH, *Ethical issues in digitization of cultural heritage* in *Journal of Contemporary Archival Studies*, 2017, pp. 1-17.

[77] B. ROUHANI, *Ethically Digital: Contested Cultural Heritage in Digital Context*, in *Studies in Digital Heritage*, vol. 7, 2023, pp. 1-16.

[78] G. GUARINO, *Intelligenza artificiale generativa e memoria storica: la problematica del revisionismo tra condiscendenza e allucinazioni*, in *Futuri*, 2025, pp. 251-264.

biases embedded in the training data, that privilege hegemonic cultural models - Western art canons, colonial classificatory systems - and flatten minor histories[79].

Moreover, AI systems often lack transparency and when they misclassify a sacred object or misinterpret a traditional practice, affected communities have little recourse, legally or symbolically, even though technical correction alone is not sufficient[80] and their human input is crucial[81]. As AI becomes more embedded in heritage contexts, ethical adequacy depends less on technical accuracy and more on interpretive empathy and cultural sensitivity: human beings possess a depth of contextual and emotional interpretation that no algorithm can provide, namely, the ability to value the symbolic, spiritual and social forms of heritage[82].

Digitisation also exposes enduring power imbalances: many collections originate from colonial seizure or unconsented acquisition, and their cataloguing and digital representation should reflect historical context and source community perspectives[83].

Cultural heritage is a living set of historical, spiritual and communal relationships and when AI systems simulate cultural expressions without the free, prior, and informed consent of the concerned communities, they risk enabling a new form of digital dispossession[84], especially in cases of indigenous knowledge[85]. Treaties like the UNESCO Convention on intangible heritage recognise the supremacy of community participation but are poorly situated to regulate algorithmic intermediation. Declarations like the UN Declaration on the Rights of Indigenous Peoples enshrine indigenous peoples' rights to their cultural manifestations but provide no lead on the implications of AI-automated curations[86].

The 2021 UNESCO Recommendation on the Ethics of AI is non-binding and does not engage with culture-specific algorithmic risks; likewise, the EU AI Act and the EU framework on trustworthy AI contain no provisions targeting heritage-related harms[87].

This normative gap leaves cultural heritage vulnerable: increasingly digitised and AI-mediated yet insufficiently protected by legal and ethical safeguards. Communities are often excluded from the design and deployment of AI systems that reshape their cultural presence online. If cultural heritage is to sustain continuity and identity, AI must operate within a framework that treats cultural rights as non-negotiable, and this requires adapting existing instruments to the digital sphere and encouraging communities' participation in governance

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[79] G. MANCINI PALAMONI, *Lo sviluppo sostenibile del patrimonio culturale tra emergenze e tecnologie digitali*, in *Rivista italiana di informatica e diritto*, 2022, pp. 1-12.

[80] A. FOKA, G. GRIFFIN, D. O. PABLO, P. RAJKOWSKA, and S. BADRI, *Tracing the bias loop: AI, cultural heritage and bias-mitigating in practice*, in *AI & SOCIETY*, 2025, pp. 1-13.

[81] K. GHAITH, *AI integration in cultural heritage conservation-Ethical considerations and the human imperative*, in *International Journal of Emerging and Disruptive Innovation in Education*, 2024, pp. 1-10.

[82] P. AHRWEILER, *Towards Culture-Sensitive, Responsive, and Participatory AI*, in P. AHRWEILER (eds.), *Participatory Artificial Intelligence in Public Social Services: From Bias to Fairness in Assessing Beneficiaries*, Cham, 2025, pp. 277-306.

[83] K. PRAŻMOWSKA-MARCINOWSKA, *Misappropriation of Indigenous cultural heritage - intellectual property rights in the digital era*, in *Santander Art and Culture Law Review*, 2020, pp. 119-150.

[84] B. J. MARY, *Artificial Intelligence, Cultural Heritage, and International Relations: The Ethical and Political Dimensions of Digital Conservation*, University of Kingston.

[85] R. BALLARDINI, I. TUOMINEN, and D. GIRARDI, Digital Indigenous cultural heritage - Reconciling intellectual property rights, human rights and Indigenous worldviews through proactive approaches and engagement, in MD. J. HOSSAIN BHUIYAN, M. RAFIQUL ISLAM (eds.), *Business, human rights and sustainable development*, Leiden/Boston, 2024, pp. 406-431.

[86] D. CAMBOU, The UNDRIP and the legal significance of the right of indigenous peoples to self-determination: a human rights approach with a multidimensional perspective, in D. SHORT, C. LENNOX, J. BURGER, J. HOHMANN (eds.), *The United Nations Declaration on the Rights of Indigenous Peoples*, London, 2020.

[87] J. LAUX, *Institutionalised distrust and human oversight of artificial intelligence: towards a democratic design of AI governance under the European Union AI Act*, in *AI & society*, 2024, pp. 2853-2866.

models. The ethical issues raised by AI - ownership, representation, cultural autonomy - expose the limits of current legal tools and reveal a broader normative deficit in international cultural heritage law: the emergence of digital dispossession as a new form of cultural erosion, which exposes the limits of existing human-rights protections and underscores the need to recognise a collective right to memory in the digital environment.

In this light, the digital transformation of cultural heritage must be approached not merely as a technical advancement but as a normative evolution that reshapes the epistemic foundations of heritage preservation and representation[88].

Choices in training data and metadata may reinforce historical imbalances and epistemic asymmetries unless subject to clear regulatory constraints.

The absence of apt legal standards raises fundamental questions: who defines the meaning of algorithmically mediated heritage, how can distortions or exclusions be challenged, and what forms of redress are available when cultural histories are altered by digital infrastructures? Given the current lack of authoritative guidance, AI-driven heritage practices require a human-rights-informed framework to ensure their legal and ethical legitimacy[89] against epistemic displacement[90]. This invites a broader rethinking of legal protections for cultural communities in the digital age: one that recognises not only the materiality of heritage, but its symbolic, participatory, and collective mnemonic dimensions as an emerging legal imperative[91].

5. *From cultural erosion to legal recognition: towards a right to collective memory in digital heritage governance*

As AI increasingly mediates cultural heritage processes, whether through digitisation, classification, or generative reconstruction, it not only reorganises memory access but reshapes the very ontological structures that sustain it.

What emerges is a juridically significant transformation: cultural memory, long protected as a diffuse interest under cultural rights regimes, is now structurally exposed to algorithmic distortion and institutional asymmetries. The ongoing digital transformation of heritage governance is reshaping the relationship between communities, their memories and the mechanisms through which cultural meaning is preserved and transmitted.

Large AI models operate as memory agents, absorbing vast bodies of cultural knowledge, while technology companies increasingly position themselves as primary gateways to information across widely used platforms[92]. This process can be understood as "digital dispossession", marked by the erosion of community agency over their cultural

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[88] K. CHAINOGLOU, S. KATSIOS, Threats to Cultural Heritage: Normative Developments on AI and Cultural Heritage, in N. KOUTRAS, N. SELVADURAI (eds.), *Recreating Creativity, Reinventing Inventiveness*, London, 2024.

[89] L. M. RAFANELLI, *Justice, injustice, and artificial intelligence: Lessons from political theory and philosophy*, in *Big Data & Society*, vol. 9, 2022.

[90] A. P. STEFANIJA, Power asymmetries, epistemic imbalances and barriers to knowledge: the (im) possibility of knowing algorithms, in S. LINDGREN (eds.), *Handbook of critical studies of artificial intelligence*, Cheltenham, 2023, pp. 563-572.

[91] L. CONTI, Understanding Culture, Cultural Identity, and Cultural Heritage in the Post-Digital Age, in I. MUENSTERMANN (eds.), *Belonging in Culturally Diverse Societies-Official Structures and Personal Customs: Official Structures and Personal Customs*, London, 2025, pp. 65-76.

[92] J. SCHUH, *AI As Artificial Memory: A Global Reconfiguration of Our Collective Memory Practices?*, in *Memory Studies Review*, 2024, pp. 231-255.

narratives, given that algorithmic mediation determines what gets preserved and how it gets interpreted[93]. Unlike traditional forms of cultural expropriation, which have historically involved the displacement of material artifacts, digital dispossession operates through subtler, data-driven logics: cultural expressions are extracted, standardised, and recontextualised by AI systems whose design and training often exclude the voices of the very communities to whom such heritage belongs. Memory becomes datasets, traditions are codified into algorithms and historical narrative is managed by infrastructures aligned with institutional agendas[94]. The result is a displacement of representational sovereignty, as communities lose the capacity to shape, contest or even recognise the digital representations affecting them. Existing international instruments are insufficient to address these dynamics.

Art. 15 ICESCR recognises the right to take part in cultural life, and CESCR General Comment No. 21 emphasises identity and participation, but both were formulated in a pre-digital context. They do not regulate algorithmic mediation and provide no specific safeguards against the appropriation of intangible cultural data or the distortion generated by biased training *corpora*. Similar limitations arise in instruments with broader cultural scope.

The UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions focuses primarily on cultural policy and does not regulate the digital reinterpretation of cultural expressions. Overall, these frameworks remain largely silent on issues such as non-consensual digitisation, generative simulations and other AI-driven processes that may alter cultural narratives. The legal foundations for protecting cultural memory can be identified within existing international instruments, but these require substantial development to address contemporary challenges, particularly as the social dimension of cultural heritage has gained prominence in international law.

In this normative gap, the notion of a right to collective memory emerges as a necessary extension of cultural human rights: it should be recognised as a substantive legal interest that communities are entitled to exercise and defend[95]. Collective memory is the communal matrix through which groups build meaning, maintain identity and pass on values from one generation to the next[96] and cultural heritage grants its preservation because it shapes community's shared past[97]. Therefore, cultural memory is not an ancillary interest but a condition for human dignity and self-determination, requiring protection beyond individual rights frameworks. Such protection must include the participatory conditions under which memory is produced and transmitted[98], recognising it as a dynamic and inherently collective process[99]. In virtual spaces, this procedure is increasingly mediated by AI infrastructures whose processes are not neutral: settling what is visible, whose past is archived, and how

[93] R. PEETERS, M. SCHUILENBURG, The algorithmic society: An introduction, in R. PEETERS, M. SCHUILENBURG (eds.), *The algorithmic society*, London, 2020, pp. 1-15.

[94] S. MERRIL, Hybrid Methodologies for Studying Social and Cultural Memory in the Postdigital Age, in Q. WANG, A. HOSKINS (eds.), *The Remaking of Memory in the the Age of the Internet and Social Media*, Oxford, 2024, pp. 241-257.

[95] M. HALBWACHS, *On Collective Memory,* Chicago, 1992.

[96] P. NORA, *Between Memory and History: Les Lieux de Mémoire*, in *Representations*, vol. 26, 1989, pp. 7-24.

[97] J. V. WERTSCH, H. L. ROEDIGER, *Collective memory: Conceptual foundations and theoretical approaches*, in *Memory*, 2008, pp. 318-326.

[98] P. Y. S. CHOW, *Culture as collective memories: an emerging concept in international law and discourse on cultural rights*, in *Human Rights Law Review,* 2014, pp. 611-646.

[99] V. APAYDIN, *Critical Perspectives on Cultural Memory and Heritage: Construction, Transformation and Destruction.* London, 2020.

cultural sense is encoded[100]. This normative filtering of memory risks displacing communities from the very narratives that define their identity, as algorithmic logics privilege certain representations while obscuring others. In response to this profound asymmetry of interpretive power, a human right to collective memory would answer to this challenge by suggesting a model under which groups of people have decision-making power over the digital representation and circulation of their cultural stories.

Such a right would encompass access to digital heritage and co-determination over its creation, interpretation and governance, requiring participatory design of AI heritage systems, clear data-governance arrangements and remedies for cultural misrepresentation or algorithmic erasure. Conceiving cultural memory as a human right requires a concrete legal articulation capable of addressing the challenges posed by AI-driven heritage governance, thus rendering a collective memory right essential for ensuring accountability and justice under algorithmic mediation[101]. Such a right would not require the creation of a new normative order *ex nihilo*. It would instead extend the logic of current cultural-rights frameworks to address the epistemological challenges introduced by digital infrastructures, while aligning with emerging debates on digital rights.

Recognising a right to collective memory would thus enrich the current human-rights architecture by bridging the gap between the cultural specificity of heritage and the structural transformations driven by AI technologies. This right must be operationalised through concrete legal norms: transparency obligations in algorithmic design, consent and co-determination rights, and institutional provisions to guarantee cultural representational sovereignty. This shift requires heritage governance to be reconsidered as an arena of democratic participation, recognising a right to collective memory as necessary to ensure that digital heritage does not reduce to an impersonal archive but remains a living domain of meaning, identity and continuity.

6. *Conclusions*

The intersection of AI and heritage management requires a recalibration of the normative frameworks regulating culture protection and human rights.

Digital technologies have reshaped the ways in which cultural memory is produced and accessed: heritage, once materially situated and rooted in a community, is now increasingly curated by algorithms that risk reproducing historic asymmetries and sideline minority voices.

This evolution towards digital governance has exposed significant normative frictions between preservation and reappropriation and between community participation and technological mediation. When cultural narratives are recontextualised without the participation or consent of the communities to which they belong, heritage ceases to function as a vector of identity and becomes instead a dataset, legible only through algorithmic logics.

International human rights law, while recognising the right to participate in cultural life and the importance of intangible heritage, remains largely silent on the algorithmic challenges posed by AI, creating a normative gap between the growing influence of AI over cultural

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[100] M. S. DE CLIPPELE, *Does the Law Determine What Heritage to Remember?*, in *International Journal for the Semiotics of Law*, vol. 34, 2021, pp. 623-656.
[101] D. GUANGYU, *Cultural Heritage Rights and Rights Related to Cultural Heritage: A Review of the Cultural Heritage Rights System*, in *Santander Art and Culture Law Review*, 2023, pp. 167-190.

heritage and the capacity of international law to protect the memory and self-representation of cultural groups. To address this gap, the article proposes a human right to collective memory, grounded in the architecture of cultural human rights yet adapted to the participatory and epistemic needs of the digital era. Such a right would not depart from existing legal traditions but extend them, giving normative recognition to community agency in algorithmic mediation.