



INTANGIBLE CULTURAL HERITAGE AND DIGITAL MEDIA

Portugal - Slovakia Readings

[Coord.]

Milan Konvit

Filipe Themudo Barata

Antónia Fialho Conde

Sónia Bombico



United Nations
Educational, Scientific and
Cultural Organization



UNESCO Chair in Intangible Heritage
and Traditional Know-How: Linking Heritage
University of Evora



Title

Intangible Cultural Heritage and Digital Media: Portugal - Slovakia Readings

Publication coordinators

Milan Konvit, Filipe Themudo Barata, Antónia Fialho Conde and Sónia Bombico

Edition Date

June 2022

Editor

University of Évora | UNESCO Chair in Intangible Heritage and Traditional Know – How: Linking Heritage

ISBN

978-972-778-269-7 (e-book)

Design and layout

Sónia Bombico

Cover image

Blueprint by Peter Trnka. Photo available at www.instagram.com/modrotlac.sk/?hl=sk

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University of Évora, CIDEHUS, Palácio do Vimioso, Apartado 94, 7002-554 Évora (Portugal).



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Project BDIAS – Capturing mechanisms and presentation of intangible cultural heritage with an emphasis on new media use | Financed by the transnational cooperation between Portugal and Slovakia (FCT and APVV), developed in partnership between the University of Évora (CIDEHUS and UNESCO Chair in Intangible Heritage) and the Faculty of Social and Economic Sciences - Comenius University in Bratislava.



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Museums, intangible cultural heritage and digital technologies: exploring interactions

Ana Carvalho

Interdisciplinary Centre for History, Culture and Societies (CIDEHUS) & UNESCO Chair in Intangible Heritage and Traditional Know-How: Linking Heritage, University of Évora
arcarvalho@uevora.pt

Abstract

Digital technologies have been approached as potential tools for museums to expand on how they provide access to and interaction with heritage. A museum that includes Intangible Cultural Heritage (ICH) safeguarding in its mission and strategy will not ignore the potential of new technologies and, thus, the assessment of its capacity to integrate them according to the museum's agenda and its objectives. On the other hand, a museum that is able to address digital transformation strategically will be in a better position to use technologies wisely to foster ICH visibility and awareness, interpretation and interaction. This chapter will focus on the challenges of integrating digital technologies in the Portuguese museum sector and identify the constraints and opportunities. This reflection draws on research conducted within the scope of the Mu.SA project (2016-2020) and the research performed in the Future Museums Project Group (2019-2020). Within the scope of post pandemic recovery plans, it is even more pressing that cultural policies foresee support for museums, namely regarding digital transformation, and ensure that they have the necessary conditions and resources to move forward in a more integrated and sustainable manner. Museums that adopt a more strategic approach to digital transformation will be able to capitalize on their resources to effectively fulfil their mission and goals. Hence, museums will be more effective in increasing access and expanding the means of communicating and supporting ICH safeguarding.

Keywords

Intangible cultural heritage, museums, digital technologies, digital competences, professional development, digital transformation, cultural policies

Introduction

To engage in a discussion on Intangible Cultural Heritage (ICH) and museums, one needs to recognize the influential role of the UNESCO *Convention for the Safeguarding of the Intangible Cultural Heritage* (2003) (hereafter 2003 Convention) in raising awareness of the importance of ICH in our societies, e.g., a living heritage, in constant change, that is part of the identity of groups and communities, and is passed from generation to generation.¹

In simple terms, the 2003 Convention highlighted that ICH deserves our attention, as does also the protection of historic monuments, archaeological sites and cultural landscapes. Furthermore, the underlying assumption is that ICH practices are part of our cultural diversity and identity, thus, they should be cherished as key resources for the development of our societies.

Another underlying assumption of the UNESCO discourse is that many of these cultural practices are rapidly disappearing, for example, as a result of the effect of globalization and the rapid pace of many (and complex) changes that are occurring in our societies today, among other threats. Therefore, the 2003 Convention implies that for the sake of our future, as vibrant and creative societies, safeguarding measures should be implemented to ensure that heritage is continuously and creatively passed down to the next generations.

Museums are implicated in the debate on ICH safeguarding, as organizations that value cultural heritage and are engaged in its enhancement and transmission.

Upon examination of the current ICOM museum definition (2007) and the safeguarding concept adopted by the 2003 Convention, there appears to be familiar interactions with the museum's traditional functions related to documentation, research, communication, exhibiting, and education – which may offer several potentialities to approach or contribute to ICH enhancement, while also bearing in mind the involvement of communities and groups.

Yet moving beyond the museum's functions, which may be understood as the tools they use in their work, there is the question of what museums are or what they can be. It is frequently argued that museums are more than places where objects are exhibited and

¹ This work has been financed by national funds through the Foundation for Science and Technology, under the project UIDB/00057/2020.

conserved – that they are about our identity, our collective memory, our past and our present, and may even help us engage in conversations about our future. Additionally, museums are regarded as spaces of knowledge and learning, of encounter and dialogue and places where cultural diversity can be represented and celebrated. Finally, it is often recalled that museums have a social role to play in society (e.g., UNESCO 2015). Considering all these assumptions, there appears to be a potential interaction around ICH safeguarding and museums' work. Moreover, a museum wishing to activate its social role will want to be involved in telling stories about its communities' heritage. On the other hand, museums may also encourage others to engage in reflecting on the role and importance of intangible cultural heritage in our society, among other potentialities of museum work in ICH safeguarding (see Deric et al. 2020).

Taking the International Council of Museums' (ICOM) discourse into consideration, especially since the 2003 Convention, the term “intangible heritage” has been translated and adopted in several official documents (e.g., museum definition in 2007), calling for some positioning, e.g., for museums to play a more engaging role regarding intangible heritage safeguarding.² The Shanghai Charter (2002) and the Seoul Declaration (2004), which began by acknowledging museums' seat at the table are among such examples.

The more recent document for the museum world – the UNESCO *Recommendation on Museums and Collections* (2015) – does not ignore the interaction between museums and ICH. The Recommendation acknowledges the intangible dimension of heritage in the definition of collection and museum and stresses the importance of the museum's social role in society.

Regarding the role of technologies, the aforementioned documents, whether directly or implicitly, approach them as potential tools that can be used by museums for heritage preservation, in which ICH is also included. Since the 2003 Convention, many projects – both in and beyond museums – involving ICH safeguarding (e.g., identification and

² Nonetheless, in hindsight, before the 2003 Convention, intangible heritage was already considered in museum practice, it was not referred to as “intangible heritage” and it was not embedded in the common discourse as such, - but it was somehow implicated, for example in new museology debates around museums' responsibilities outside their buildings and collections, more in connection with a holistic approach to heritage within the territory and with communities, as argued elsewhere (Carvalho 2011; see also Varine 2015).

documentation³, research, preservation, protection, promotion, enhancement, transmission, namely through formal and non-formal education, revitalization) have been developed with the support of digital technologies (Severo and Cachat 2016; UNESCO 2021).

Experiments with the use of technologies in museums began decades ago. Several studies have demonstrated the possibilities of using technologies in the museum and heritage field (MacDonald 2006; Cameron 2007; Parry 2007, 2010; Drotner and Schröder 2013; Economou 2016; Drotner et al. 2018; Giannini and Bowen 2019; Winesmith and Anderson 2020). Digital technologies' development has been considered a current trend but also a changing factor with significant impact on the museum and heritage sector in the next decade, along with trust and wellbeing, changes in demographics, tourism, participation, and sustainability (Camacho 2021). The COVID-19 pandemic contributed to increasing awareness around the urgency for museums to integrate technologies in order to support their communication and mission. Nonetheless, in pre-pandemic times, digital transformation had already been taken to a strategic level by several leading museums, such as the Tate (Stack 2013) in the United Kingdom, and the Rijksmuseum (Fallon 2018) in the Netherlands, to mention just a few.

Regarding the impact of the COVID-19 pandemic on ICH, and considering post-pandemic recovery, one of UNESCO's recommendations points to the need to take advantage of digital technologies to “support resilience and safeguarding and to increase the visibility and recognition of living heritage” (UNESCO 2021, 4).

While digital technologies may provide new opportunities to interact with ICH, there are also several risks that need to be addressed. On the one hand, there are a number of risks common to safeguarding ICH that may extend to the digital environment. For example, the risk of decontextualization, namely when ICH practices are isolated from their usual context, and the possibility of loss of meaning in that process; the risk of simplification, involving the dissemination of simplified versions of more complex ICH practices, as they are “easier” to communicate; and the risk of commercialization, when

³ One of the most visible impacts of the 2003 Convention has been the launch of many participatory ICH inventory, many of which are available digitally. Sousa (2017) has identified 158 online inventories, from a sample of 198 countries that ratified the Convention, including 24 countries that have not. These figures may reflect some of the impacts of the 2003 Convention, since the majority of the identified inventories were launched after the ratification process of each country, which required drawing up one or more ICH inventories in each State Party (UNESCO 2003, Article 12).

there is misappropriation of ICH digital resources without the benefit of the communities or groups that hold that heritage.

On the other hand, there are other risks and ethical issues to consider, such as copyright issues, and the protection of personal data, privacy or culturally-sensitive information. The ease of sharing data, collections or other ICH-related resources in the digital environment entails the need to understand the limits surrounding the protection of personal data and privacy. Sometimes, privacy issues conflict with the goal of providing full access to digital museum collections or digital resources related to ICH, namely in the case of associated personal data. For example, museum ethnographic objects (or other ICH documentation) are often related to sensitive information, intimate details or references to other persons (or events) made by the ICH practitioners. In some cases, or projects, online access was not originally anticipated, thus, requiring the negotiation and clarification of different levels of confidentiality with the informants (or donors, ICH practitioners). While this is not a new topic, it requires careful attention when considering what content and data can and cannot be made available in the digital environment. In sum, the ethical challenges arising from the digital environment “are far from simple, probably not all yet apparent” (Parry 2011, p. 319). These discussions need to be deepened in the future, since some of these challenges may not be fully evident and, to some extent, it is unclear how they will unfold. Even so, these issues demand an ethical and critical stance regarding the use of technologies from museum and heritage professionals.

It may be argued that a museum that includes ICH safeguarding in its mission and strategy will not ignore the potential of new technologies (Carvalho 2011), and thus, the need to assess its capacity to integrate digital technologies according to the museum's agenda and objectives. Another underlying assumption is that a museum that addresses digital transformation strategically will be in a better position to use technologies wisely to foster ICH visibility and awareness, interpretation and interaction. This chapter will focus on the challenges of integrating digital technologies in the Portuguese museum sector, and identify the constraints and opportunities. This reflection draws on research conducted within the scope of the Mu.SA project (2016-2020) and the research performed in the Future Museums Project Group (2019-2020).

Mind the gap

The project Mu.SA – Museum Sector Alliance (2016-2020) stemmed from an empirical research around museums and digital transformation.⁴ The research was framed in a comparative analysis considering three countries in southern Europe: Portugal, Greece and Italy, in the context of an international consortium led by the Hellenic Open University (Greece), with EU funding (Erasmus +, *Sector Skills Alliance*).⁵ While focusing on professional development as a factor that enables change towards museums' digital transformation, the findings of the Mu.SA project also provided a more detailed picture of how museums are responding to the digital transformation, and identified critical issues and interconnected challenges that need to be overcome.⁶

As for the Portuguese panorama, the research revealed a highly unstructured and limited experience of digital transformation. To some extent, this conclusion was also shared by overall findings in Greece and Italy (Silvaggi 2017). Drawing on the findings of the case of Portugal, the following interdependent critical issues are noteworthy.

The first issue is related to the digitization of collections. In spite of some progress, this is still an under-developed area requiring considerable investment⁷, including the need to improve standardization in managing information systems (e.g., collections, archives, data) and their interoperability. Digitization investment is key in the sense that it can underpin activity in other museum areas and the creation of digital content or resources, and also a culture of sharing, considering the distribution of those resources using a variety of digital channels (e.g., websites, online catalogues, social media, among others) according to their particularities and requirements.

Another of the identified critical issues is the limited use of digital platforms or channels (e.g., websites, online catalogues) and the need to move forward towards more agile, user-friendly, accessible, responsive, updated means, driven by compelling and relevant museum content.

⁴ Mu.SA – *Museum Sector Alliance* (575907-EFP-1-2016-1-EL-EPPKA2-SSA): <http://www.project-musa.eu>

⁵ In this project, Carvalho collaborated as principal researcher for ICOM Portugal (National Portuguese Committee of the International Council of Museums), one of the partners in the Mu.SA consortium.

⁶ The research was conducted from 2016 to 2017, and included desk-based research and qualitative research methods (e.g., 12 face-to-face interviews and one focus group) to grasp how the development of digital technologies was affecting museums, taking into consideration the perception of the community of professionals from a diverse sample of Portuguese museums.

⁷ For a broad overview of museum digitization in Europe see NEMO (2020).

From a more structural perspective, other aspects are related to the limited investment in infrastructure (Information Technology – IT, e-commerce services), including, in most cases, insufficient IT support (and planning) as far as maintenance is concerned. Furthermore, a low level of communication maturity was observed, which means that museums develop their communication in an unstructured manner. In many cases, museums operate with small teams where multi-skilled professionals cumulate a range of functions and roles, including communication. To expand and include digital responsibilities, museums may need to strengthen specialized roles in communication (see Blankenberg 2017, Carvalho and Matos 2020), in other words, committing to digital transformation also involves developing and strengthening museum communication (internally and externally).

Also related to the latter issue is the lack of digital competences and the need to develop them further in the museum workforce; and, on the other hand, insufficient training programmes available to address this issue (e.g., in-house planned training or other types). At the same time, there is also the challenge of filling existing gaps within museums' organisational structures to support digital maturity by creating new job positions according to customised museum needs, considering the demands for new roles and digital responsibilities.

Other aspects are associated with bringing digital transformation to a strategic level. In this regard, the lack of strategy or planning in addressing communication operations (including the digital media) within the museum activities was also observable in most cases. Furthermore, an absence of motivation or attitude was also noted, suggesting the need for leadership awareness to understand the importance of the digital, and responsiveness towards a more active role to lead change by identifying the organization's needs (including staff training), setting priorities and nurturing strategic outcomes.

In short, the role of capacity building and professional development aligned with a committed leadership are key aspects in the adaptation of museums to the challenges of the digital society. Furthermore, it requires an integrated approach that entails museum organizational change and new mindsets, the inputs of new knowledge and competences, without disregarding the role of a national museum policy to promote such effort and resources. In this regard, another challenge consisted of including digital transformation in the agenda of museum policy at a national level. In fact, in 2019, some steps were taken – namely the creation of the Future Museums Project Group – to begin

addressing this issue (among others), since up to then the national policy for museums had not contained guidelines to specifically address and support digital transformation in Portuguese museums.

Bridging the gap

The Future Museums Project Group (2019-2020) was the outcome of a government initiative promoted by the Portuguese Ministry of Culture (Resolution of the Council of Ministers no. 35/2019 of 18 February 2006). The Group, chaired by museologist Clara Frayão Camacho⁸, was in charge of proposing recommendations for a 10-year public policy (until 2030), considering issues of sustainability, accessibility, innovation and relevance in society.

The project focused on the 37 museums, palaces and monuments under the Ministry of Culture.⁹ Based on the empirical research¹⁰ conducted over approximately one year and a half, a final report was delivered to the Ministry of Culture in November 2020 (see Camacho 2021a, 2021b).¹¹ The report underlined 50 recommendations regarding five main themes: museum management, networks and partnerships, digital transformation, collection management and audience engagement. While digital transformation was considered as cross-cutting to all the themes, it was also considered to be developed individually. The aspects of the report concerning the topic of digital transformation are as follows:

⁸ The author was a member of this Group. The Group members were appointed by Order of the Portuguese Minister for Culture, No. 4.527/2019, of 3 May, bringing together eight culture professionals and six representatives from different government areas (Foreign Affairs; National Defence; Economy; Science, Technology and Higher Education; Education) and the Presidency of the Republic. Later, a further two museum directors appointed by the General Council of Museums, Monuments and Palaces, joined the Group.

⁹ Of which 25 are under the Directorate-General for Cultural Heritage (DGPC) and 12 under the responsibility of the Regional Directorates for Culture (DRCs).

¹⁰ It included desk-based research, approximately 30 in-depth interviews, mainly face-to-face (with museum, palace and monument directors, DGPC managers, and national and international experts), museum visits, surveys, among others. For more a more detailed approach see Camacho (2021a).

¹¹ The report mainly targeted policy makers (especially from the Ministry of Culture, in conjunction with other government areas), but it was also intended for the Directors of the Museums, Palaces and Monuments covered by the project.

The 10 recommendations for digital transformation were drawn from the diagnosis regarding the 37 museums, palaces and monuments, and also incorporated the aforementioned Mu.SA project findings.

The reflection was guided by several key-ideas, supporting:

- The use of technologies as cross-cutting to many areas of museum activity, from back-office to front-of-house: from management to communication, education, exhibitions, collection management and audience engagement;
- Digital transformation approached as a process of adaptation and innovation, where the use of technologies should support the museum's mission, and where the integration of technologies should be tailored to each museum's needs;
- The process of digital transformation should put technologies at the service of an integrated management, ensuring museums are more effective, more efficient and agile;
- Technologies are not essentially good or evil. Taking advantage of technologies requires informed and critical thinking, and the need to address technologies as tools, not as an end in itself;
- The use of technologies was foreseen as a means to expand access, improve communication, and to enhance audience experience and engagement. In fact, visitors are more demanding and they expect more from museums, including mediation with digital technologies;
- Finally, the assumption that the digital and the physical should be seen as part of a whole – or, in other words, two sides of the same coin – that should be approached in a more integrated manner.

The 10 recommendations were designed around four main topics, perceived as interconnected issues that may boost digital transformation: capacity building and strategy; infrastructures and digital capacity; digitization and access; and partnerships.

Beginning with capacity building and strategy, digital transformation requires new knowledge, specialization and skills. Thus, gaps in museums need to be addressed in terms of acquiring more specialized staff with digital skills. On the other hand, regular training is also required. Upskilling and increasing digital literacy and confidence are key factors to ensure a more informed, critical and strategic use of technologies.

Furthermore, digital transformation requires sensitivity from museum leaders. It also needs openness to experimentation and risk-taking. Leaders who understand the potential use of technologies are better able to identify a museum's needs, including staff training needs, and integrate technologies to support the museum's mission in a more strategic manner.

The second main topic is related to infrastructures and digital capacity. The analysed museum ecosystem revealed a very limited capacity, both in terms of basic digital infrastructure conditions and insufficient financial investment. In order to increase digital capacity, it is crucial to rapidly invest in upgrading museums' digital infrastructure and guarantee that museums can work with more agility. Furthermore, planning a digital infrastructure that is adaptable and responsive to emerging new technologies is of equal importance. Another recommendation focuses on the need to create a funding programme to support museums' digital transformation, according to their needs, objectives and strategies.¹²

Considering the last NEMO (Network of European Museum Organizations) survey on the impact of the pandemic on museums (NEMO 2021), not surprisingly, infrastructure is highlighted as having played a significant role in limiting museums' digital capacity during the crisis, along with the lack of staff training in digital skills.

A third main topic of the recommendations relate to museum collections' digitization and access. Since it is an underdeveloped area, as previously mentioned, new digitization programmes are key to reinforce the creation of digital content, and, on the other hand, to increase digital access to collections. Another recommendation stresses the need to find new means, with the support of digital tools, of making collections widely accessible through open access policies, and thus create the conditions to share and encourage audiences to re-use, thus stimulating participation, innovation and creativity.

Finally, an equally important topic is concerned with partnerships. The need to improve and reinforce external collaborations that can help museums with different ideas and expertise, such as technology companies, research centres or other partners in the

¹² In 2019, the *ProMuseus* – a government funding program for museums under the Portuguese Network of Museums (RPM) included digital transformation for the first time as one of the four main prioritized areas for funding, along with accessibility and inclusion, internationalization and partnerships (Call no. 7473/2019). However, national museums are not eligible to apply to this programme, and thus, the need to foresee another programme.

GLAM sector (Galleries, Libraries, Archives and Museums). In such context, the importance of developing projects in partnership that explore a wise application of technologies, facilitating knowledge transfer and reaching the audience's needs is paramount.

Although the recommendations in the report “Museums of the Future” were prepared in response to the Portuguese ecosystem pre-pandemic reality¹³, not surprisingly, when considering more global reports (UNESCO 2020; ICOM 2020; NEMO 2021) regarding museums' responses to the pandemic, it is clear that the challenges regarding digital capacity are cross-cutting to most museums everywhere, thus, in tune with many of the topics raised by the Museums of the Future recommendations regarding digital transformation. Invariably, these reports highlight the role of three interconnected resources: digital infrastructure, skilled staff and financial support, and, consequently the need to envisage a strategy that connects all the dots.

Final remarks

The impact of cultural policies can be decisive to enhance (or not) the place of museums in society, their development, reach and relevance. As beneficiaries of cultural policies in each country, museums are influenced by the framework of these policies, their goals and strategies, priorities, mechanisms and instruments for management, control and regulation, as well as the allocated resources (financial and human). Furthermore, cultural policies also play a central role in correcting inequalities. The crisis triggered by the Covid-19 pandemic has widened all sorts of gaps in society and museums are no exception. The inequalities and constraints among museums to take full advantage of technologies soon became evident (UNESCO 2020; ICOM 2020; NEMO 2021), since many of them were already ill-prepared for digital transformation in pre-pandemic times – e.g., lacking a digital infrastructure, skilled staff, financial support and a digital strategy.

Currently, the recommendations in the report “Museums of the Future” have not yet been fully integrated in the Portuguese museum policy measures. In the post pandemic recovery plans, it seems to be even more urgent that governments include support for museums, namely regarding digital transformation, ensuring that they have the

¹³ The Future Museums Project Group completed the study in October 2020, thus, still during the pandemic, but the data collection ended just before the onset of the crisis in March 2020.

conditions and resources required to move forward in a more integrated and sustainable manner. Museums that strategically address digital transformation will be able to capitalize on their resources to effectively fulfil their mission and goals. Thus, museums will be more able to increase access and expand the means of communicating and supporting ICH safeguarding.

References

Blankenberg, N. 2017. "Museum Organization for the Future." In *Manual of Digital Museum Planning*, ed. by A. Hossaini, N. Blankenberg, and G. Dexter Lord, pp. 271–87. Lanham: Rowman & Littlefield.

Call n.o 7473/2019, *Diário da República*, 2.^a série, n.º 83, of 30 April. Opens the call for the program *ProMuseus 2019*.

Camacho, C. Frayão, coord. 2021a. *Grupo de Projeto Museus no Futuro: Relatório Final*. Direção-Geral do Património Cultural. Lisboa. <http://patrimoniocultural.gov.pt/static/data/docs/2021/02/15/RelatorioMuseusnoFuturo.pdf>.

Camacho, C. Frayão, coord. 2021b. *Future Museums Project Group Executive Summary of the Final Report*. [Lisbon]: Direção-Geral do Património Cultural. <http://www.patrimoniocultural.gov.pt/static/data/docs/2021/02/12/Summary.pdf>

Cameron, F., and Kenderdine, S. (eds.). 2007. *Theorising Digital Cultural Heritage: A Critical Discourse*. Cambridge, MA: MIT Press.

Carvalho, A. 2011. *Os Museus e o Património Cultural Imaterial: Estratégias para o Desenvolvimento de Boas Práticas*. Vol. 28. Biblioteca - Estudos & Colóquios. Lisboa: Edições Colibri e CIDEHUS - Centro Interdisciplinar de História, Culturas e Sociedades da Universidade de Évora. <https://doi.org/10.4000/books.cidehus.2476>

Carvalho, A., e A. Matos. 2020. "Digital Competences: Needs and Training in the Portuguese Museum Sector." In *The Future of Museum Professionals in the Digital Era - The Success Story of Mu.SA*, ed. by Achilles Kameas and Panagiota Polymeropoulou, 13–19. Athens: Hellenic Open University Press. <http://hdl.handle.net/10174/29380>

Carvalho, A.; Matos, A. 2018. "Museum Professionals in a Digital World: Insights from a Case Study in Portugal." *Museum International* (Special issue: Museums in a Digital World) (ISSN 1350-0775), 70 (277–278): 34–47. <http://hdl.handle.net/10174/24003>

Deric, Tamara N, Jorin Neyrinck, Eveline Seghers, e Evdokia Tsakiridis, eds. 2020. *Museums and Intangible Cultural Heritage: Towards a Third Space in the Heritage Sector - A Companion to Discover Transformative Heritage Practices for the 21st Century*. Bruges: The Intangible Cultural Heritage and Museums Project.

Drotner, K., and K. C. Schrøder. (eds.). 2013. *Museum Communication and Social Media: The Connected Museum*. New York: Routledge.

Drotner, K., V. Dziekan, R. Parry, and K. C. Schrøder. (eds.). 2018. *The Routledge Handbook of Museums, Media and Communication*. New York, NY: Taylor & Francis.

Economou, M. 2016. "Heritage in the Digital Age." In *A Companion to Heritage Studies*, ed. William Stewart Logan, Máiréad Nic Craith, and Ullrich Kockel, Wiley-Blackwel, 215–28. Blackwell Companions to Anthropology. Malden, MA: Wiley-Blackwel.

Fallon, J. 2018. "How the renovation of a world renowned art museum is inspiring a sector in digital transformation." In *Europeana pro*, <https://pro.europeana.eu/post/how-the-renovation-of-a-world-%20renowned-art-museum-is-inspiring-a-sector-in-digital-transformation>

Giannini, T., and J. P. Bowen, ed. 2019. *Museums and Digital Culture: New Perspectives and Research*. Springer Series on Cultural Computing. Cham: Springer.

Giannini, T., e J. P. Bowen, (eds.). 2019. *Museums and Digital Culture: New Perspectives and Research*. Cham, Switzerland: Springer.

ICOM-ASPAC. 2002. "Shanghai Charter." ICOM-ASPAC. https://icom.museum/wp-content/uploads/2018/07/Shanghai_Charter_Eng.pdf

ICOM. 2004. "Resolutions adopted by ICOM's General Assembly 2004: 'Seoul Declaration of ICOM on the Intangible Heritage'". ICOM. <http://icom.museum/resolutions/eres04.html>.

ICOM. 2020. *Follow-up Survey: The Impact of COVID-19 on the Museum Sector*. Paris: ICOM (International Council of Museums). https://icom.museum/wp-content/uploads/2020/11/FINAL-EN_Follow-up-survey.pdf

MacDonald, L. (ed.). 2006. *Digital Heritage Applying Digital Imaging to Cultural Heritage*. Burlington: Elsevier.

NEMO. 2020. *Final Report: Digitisation and IPR in European Museums*, Network of European Museum Organisations (NEMO). https://www.nemo.org/fileadmin/Dateien/public/Publications/NEMO_Final_Report_Digitisation_and_IPR_in_European_Museums_WG_07.2020.pdf

NEMO. 2021. *Follow-up Survey on the Impact of the COVID-19 Pandemic on Museums in Europe - Final Report*. [n.p.]: NEMO (Network of European Museum Organizations). https://www.nemo.org/fileadmin/Dateien/public/NEMO_documents/NEMO_COVID19_FollowUpReport_11.1.2021.pdf

Order of the Minister for Culture, No. 4.527/2019, of 3 May. Appointment of the members of Future Museums Project Group.

Parry, R. 2010. "The Practice of Digital Heritage and the Heritage of Digital Practice." In *Museums in a Digital Age*. (ed.) R. Parry. London: Routledge, pp. 1-7. Leicester Readers in Museum Studies.

Parry, R. 2011. "Transfer Protocols: Museum Codes and Ethics in the New Digital Environment." In *Routledge Companion to Museum Ethics: Redefining Ethics for the Twenty-First Century Museum*, ed. by J. Marstine, pp. 316–331. Milton Park: Routledge.

Parry, R. *Recoding the Museum: Digital Heritage and the Technologies of Change*. London: Routledge, 2007.

Resolution of the Council of Ministers no. 35/2019 of 18 February. Creates the Future Museums Project Group.

Severo, M, and S. Cachat, (eds.). 2016. *Patrimoine Culturel Immatériel et Numérique: Transmission, Participation, Enjeux*. Humanités Numériques. Paris: L'Harmattan.

Silvaggi, A. (ed.). 2017. *Museum Professionals in the Digital Era: Agents of Change and Innovation (Full Version Report)*. [Rome]: Mu.SA - Museum Sector Alliance.

Sousa, F. 2017. "Mapa dos e-Inventários do Património Cultural Imaterial." *Revista MEMORIAMEDIA* 1. <http://review.memoriamedia.net/index.php/map-of-e-inventories-of-intangible-cultural-heritage>

Stack, J. 2013. "Tate Digital Strategy 2013–15: Digital as a Dimension of Everything". In *Tate Papers*, n.º 9. <http://bit.ly/2nRrLk9>

UNESCO. 2003. *Convention for the Safeguarding of the Intangible Cultural Heritage*. Paris: UNESCO.

UNESCO. 2015. *Recommendation concerning the Protection and Promotion of Museums and Collections, their Diversity and their Role in Society*. Paris: UNESCO. <http://www.unesco.org/new/en/culture/themes/museums/recommendation-on-the-protection-and-promotion-of-museums-and-collections/>

UNESCO. 2020. *Museums Around the World in the Face of COVID-19*. <https://unesdoc.unesco.org/ark:/48223/pf0000373530>

UNESCO. 2021. *Living Heritage in the Face of COVID-19*. Paris: UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000377671.locale=en>

Varine, H. de. 2015. "O Fascínio do Património e dos Museus: Entrevista com Hugues de Varine [interview conducted by Ana Carvalho]." *Cadernos de Sociomuseologia* 5: 145–65. <http://hdl.handle.net/10174/16202>

Winesmith, K., and S. Anderson. 2020. *The Digital Future of Museums: Conversations and Provocations*. Abingdon, Oxon: Routledge.