

Multiple Perspectives of Cultural Heritage and the Importance of Technology for Its Enhancement

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We are happy to release the Journal of Digital Media & Interaction special number dedicated to the study and reflection of Cultural Heritage, its maintenance and sustainability and the relevance of technology to ensure that these processes happen.

The development of research projects that involve, on the one hand, the use of technology (tools or knowledge to use them) and, on the other hand, cultural heritage of depopulated rural geographical areas is always a challenge. To include these two (or three) dimensions - which then inevitably unfold into many more and more varied, such as population aging, territorial availability and technological personal skills, among others - is to consider that the initial challenge will be related with the way population appropriates the technology. This includes their initial acceptance, as well as the ease with which they later become involved in the project, the technology and its objectives (Almeida, Alves, & Delicado, 2011; Carroll & Reich, 2017; European Commission, 2006; Mahardika, Thomas, Ewing, & Japutra, 2019).

All these factors – aged population; rurality and depopulation – are of increased importance in the context of projects with a high technological dimension and may influence the way in which the tasks are developed and how the population participates in them (in a more active or passive way). Thus, it is concluded that these challenges should be perceived more as opportunities. In other words, they are challenges that will promote the implementation of more interactive and participative co-design techniques, with more moments of joint sharing. This way of carrying out the planned tasks is an excellent contribution to the possibility of the projects' team to get closer to the population, therefore, getting closer to their cultural heritage and knowledge. Additionally, it is a way for the population to feel closer to the projects and to contribute more actively to their development.

This special number presents the multiple perspectives cultural heritage can assume, being tangible and/or intangible, audio, video and/or image, a story or a place, brought by nature or build by humans. And how all these possibilities can be observed, perceived, and discussed, mainly considering the use of technology in doing that.

Cultural heritage is what characterizes people and territories, what distinguishes one territory from another and it is the patrimony which allows people to feel as belonging to somewhere and something, it is part of a personal identity transformed in a cultural identity when shared by a group of people, a community. But Portuguese cultural heritage is at risk, as Jorge Dias states “We, Portuguese people, are not on the eve, but amid losing all that wealth from the past. If we do not run quickly to save what remains, we will be bitterly accused by those to come, for the inexcusable crime of having lost our traditional heritage, showing signs of absolute neglect and ignorance. If we don't, in

two generations we can be a people without character and deeply poor...” (Jorge Dias, cit. in Monteiro, 2001, p. 4).

The sentence can be applied today, twenty years after it has been written, and to all the places, countries and territories that are suffering this loss. Technology, as one may perceive with this special number can help enhance cultural heritage but also contribute to its maintenance. Nowadays, tools like Internet of Things (IoT), Augmented Reality (AR), Virtual Reality (VR), Digital Mapping and many others are frequently used to help mapping and recognizing cultural heritage existence, manage it, make it available to the audience, contributing for its maintenance in the presents’ memory but also for future generations knowledge of its existence.

This special number presents different perspectives of cultural heritage, and that was the major goal since the moment the call was launched. What authors and researchers privileged when they are studying cultural heritage? Which are their starting points? What path do they follow in their researches and what conclusions do they achieve? But also, how can technology help study cultural heritage? And for what purposes can it be used considering the different views of cultural heritage?

As Maksimović and Ćosović (2019) were able to show, technology, specifically IoT has proven to have great potential when it comes to recognize, manage and preserve cultural heritage, being the reference to material or immaterial, movable or immovable elements (UNESCO, 1972).

And this potentiality can be perceived in the papers that are part of this special number. First, the analysis considers the breaking of boundaries that technology allows. Indeed, in this interconnected world, cultural heritage from different parts of the world is now available to whoever wants, from whenever it is situated. One can visit Louvre or the Egypt Pyramids without leaving home. Or the preservation of cultural heritage can be ensured without being near it (Maksimović & Cosović, 2019).

In this boundaries’ breaking it is important to introduce concepts like prototyping or digitalization. These techniques contribute to enhance the knowledge of cultural heritage but brings a new layer to the connection between people and cultural heritage. This new layer can be a playful one, intergenerational (Amaro & Oliveira, 2019a, 2019b), and/or consider the issues related to intellectual property.

Which must make us think: are we part of a technoculture, of a cyberculture? One culture created (among other things) to protect our ancestors and their memories? Borges (2011) considers that “the cyberculture does not implies that everyone will be online, instead that culture is constituted by the growing society digitalization which has implications at all social levels, whether online as offline” (Borges, 2011, p. 115). So, maybe the answer to the previous questions is yes, we are part of a technoculture, and we must accept the advantages that this gives us, understand the disadvantages and contribute to their elimination or diminish their negative effects.

Territories, archives, memories, music, videos, books, cultures, conquers, paintings or any other form of art and cultural heritage are discussed in this special number. And as already said, this discussion involves a technological layer, with the contribution that the tools give to the management, maintenance, sustainability and dissemination of all those elements and artifacts.

The first paper of this special number underline how cultural heritage institutions are converging and collaborating in the World Wide Web, thus the digital world, where bits and bytes are all equal, have widen cultural heritage boundaries.

Then, the second paper proposes some prototyping scenarios to develop co-design sessions which intend to be the base for the development of a Internet of Things system. These sessions will enhance the tourist playful experience and dissemination of cultural heritage activities.

The third paper analyzes how issues that address copyright and author rights in the most recent process of humanity cultural heritage digitization After a review of the historical evolution and fundamentals of copyright laws, it will be seen how museums have adapted intellectual protection laws to scanning and public availability of their collections.

In the next paper the authors bring to the discussion two intersections between the game *Assassin's Creed: Unity* and the Notre-Dame Cathedral, namely: how the game appropriates the materiality of this historical heritage and, from the fire that hit Notre-Dame in 2019, reflect how the idea of (re)construction arises from the game.

The fifth paper discusses an ICT-based project, LOCUS that was designed to sense the territory as an opportunity for the promotion of cultural heritage. LOCUS proposes a prototype Bracelet that is based on smart sensors, through prototype bracelet, it is possible to develop a playful scenario in which the tourist can interact with cultural sites and objects. Moreover, LOCUS project offers Android-based Augmented Reality application that offers textual and visual cultural knowledge.

The sixth paper uncovers the existing problems in the preservation of the audiovisual heritage of the fourth most populous city in China and analyzes its root causes. The authors propose five measures to improve the protection of audiovisual files in Tianjin: the introduction of new specific rules for the protection of audiovisual files and the establishment of comprehensive technical standards for the protection of audiovisual files so that local technical standards can be formulated.

Following the narrative of the digital plataforms usage, the seventh paper discusses the role of digital platforms in preserving memory and in recording information related to film festivals to users. The study is based on the systematization of film festivals that are held on a regular basis in the North and Northeast regions of Brazil and reviews the integrated digital platforms (websites, Facebook pages, blogs etc.) of each festival.

The eighth paper presents a project that was established for the development of an audiovisual production for a video mapping projection that took place in May 2019, as part of the NMSPCAM project. The paper reveals the research and consequent method for storytelling and communicating cultural heritage, in the real context of the project. The video mapping technique is studied on its ability to convey facts and information, exploring its potential to discover and enhance culture to a wider audience.

The following paper analyzes the special collections of archives of feminist organizations accessible in digital repositories, in the libraries of some countries, and is compared with the situation of these specific collections in the Spanish university libraries.

The tenth paper has the aim to host and disseminate the materials concerning the Iberian folk balladry tradition in Brazil. It seeks to promote a deep heritage action for this intangible cultural asset which in Brazil is often confused with the cordel literature. The paper presents the starting framework for this project and some of the conclusions already reached, briefly describing the activities developed so far.

Finally, the last paper closes perfectly this special number, it aims to demonstrate the importance of tiles in an urban context, as well as to emphasize the appreciation of the remaining cultural heritage of Porto city, with a view to its protection and sustainability through technological innovation and digital tools.

The editors of this special number have the expectation that this is perceived as a space of reflection on the importance and on the multiple perspectives cultural heritage can assume. And also on the relevance technology gains with all its features and the possibilities it offers.

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