

Visualizing the Past through the Virtual Image

Virtual Reconstitutions as interpretations of knowledge

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Knowledge of the Past and Cultural Heritage in the Digital Age

The Digital Age, characterized by technological development and the virtually unlimited dynamization of information flows, is changing the way humans construct knowledge. "If the human knowledge is rapidly migrating in digital domains and virtual worlds, what happens to the past?" (Forte, 2014, p. 113). Faced with this new approach, a Digital Cultural Heritage (Carvalho, 2016), it is necessary to adopt a memorial practice that conditions / informs innovation, without nostalgia of the past and that rejects the various forms of museification (Choay, 2015, p. 227).

The creation of augmented and virtual realities, with different forms of interaction, reveals new forms of visibility and visuality, with the screen acquiring a great cultural relevance (Matoso, 2017, p. 127). With the emergence of the avatars of the historical monument (Choay, 2015, p. 37), the question is how to put the technologies at the service of visualizing cultural contents and to contribute to the visualization of the past and the interpretation of virtual reconstitution hypotheses. M. Forte tells us that the past can not be reconstructed but simulated (2010, p.10). The limits between reality and simulacrum tend to fade, and may lead to phenomena of substitution (Solà-Morales, 2016), in a new way of apprehending the world.

In an approach to the concept of cyberarchaeology, M. Forte underlines the idea of "potential past" as more appropriate to the classification of the process generated by the coevolution of information resulting from human evolution and the cyber-interaction generated by different worlds, with a knowledge validated by the relationship between the present and the Past (2010, p. 10).

Digital Reconstitution Processes

Throughout history, discourses about the image and the ways of producing and thinking it have changed (Marques, 2006, p. 11). However, doing an image of an object or building means extracting all its dimensions successively: weight, depth, space, time, continuity and meaning (Medeiros, 2007). Thus, their results will not only be visual because they result from a multimodal and multisensory interaction (Forte & Pescarin, 2012, p. 2), syntheses of complex research processes, on themes such as spatial experience, or its relation with the surrounding.

The processes of digital reconstitution are presented as a feasible, non-intrusive, versatile and completely reversible solution in the means of knowledge of the built heritage, in its diachrony and synchrony. They also seek to dilute the barrier between scientific research and its interpretation and presentation to civil society, and it is possible to elaborate three-dimensional models that evolve parallel to and even surpass the research phase. They should be characterized by transparency, not only from a validation point of scientific method, but as a dynamic process that brings the theoretical neutrality of information to the higher level of knowledge (Forte & Pescarin, 2012, p. 11).

If, in a certain sense, the level of reality has been measured by the degree of iconicity or abstraction of a representation, it is important to undo the misconception that, as Massironi enunciated, its purpose is depleted in a plausible reproduction of reality (Marques, 2006, p. 40).

Objet of Study and Methodology

The questioning here enunciated has been tested in the building complex known as Convent of Monchique (Porto, Portugal), and results have already been presented in international scientific meetings (Cruz, 2017, 2018a & 2018b). This convent is referenced by its cultural interest in the architectural, historical and artistic

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fields, reflecting values of memory, antiquity and authenticity. Due to the profound formal and functional changes that it has undergone over time, even before its foundation in the sixteenth century and up to the present, it is an ideal example for our exercise of interpretive visualization of the past. Selected by its nature, scale and urban meaning, the Convent of Monchique study allows us to question how digital methodologies and tools enable us to better understand a lost or transformed urban environment while diffusing its knowledge. By extension, they allow us to question how these strategies are used to reinscribe the absent / transformed historical city in its multiple layers within the contemporary environment and about the connection of civil society with its (in) visible inheritance.

The process is based on the principles set out in international charters and doctrines, such as the "London Charter" (2006 and 2009), the "Seville Principles" (2011), the "Berlin Charter" (2015) the ICOMOS Charter for Interpretation and Presentation of Cultural Heritage Sites "(2008) and the" ICOMOS Charter on Cultural Tourism" (1999), responding to the need to guarantee the methodological rigor of computer-based visualization. In parallel, are taken into account realized models that atmore to the value and validity of these methodologies in interdisciplinary processes of study and digital reconstruction of built heritage, such as "Visualizing Venice" or "Lx Convents".

Through a thorough historical and bibliographical research and a systematization and analysis of existing archival, cartographic and iconographic documentary material, it is possible to reach the identification, recognition and documentation of the stratigraphic layers of the building and the urban spaces.



Fig. 1. Stratigraphic reading of one of the sectors of the convent. Photomontage and elevations. Self elaboration. 2019.

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