

Chapter 18

The Importance of Being Honest: Issues of Transparency in Digital Visualization of Architectural Heritage

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ABSTRACT

The chapter presents a reflection on the concept of transparency in digital modeling and visualization of Architectural Heritage. Moving from topics of transparency and from the experiences in using paradata in different fields to state model's source, the degree of reliability of virtual re-constructions, and to made the digital model testable by other professionals, transparency and paradata are studied and declined for a dedicated application to historical buildings. In fact paradata is useful for model's design, use, management, diffusion, archiving, and interoperability. This according to an aim of model's intellectual transparency, and scientific computing and visualization of historic buildings. Follows issues about: the relationship between physical and digital heritage, the design of the digital 3D model and the database, the communication of transparency through spatial visualizations and multiple windowed representations, the transparency as possible methodological workflow for scientific analysis.

INTRODUCTION

Etymologically, transparency derives from the Latin “Trans” & “Pareo”, i.e. being able to show what lies behind. This arises two questions: What there is behind (the reality, the scholar, the digital system, etc.) and how an interpretative model can be transparent.

In the Digital Age, the ICT growth, the decreasing cost and the ease of use of digital tools have made the most advanced technologies available to a large number of users, thus favoring their practice and experimentation. Digital representations and information systems have become powerful tools for the study and communication of tangible heritage, in particular allowing the interrelation of information, the scientific representation of research's hypothesis, the simulation of complex systems. At the same

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time, the multiplication of data and the diffusion of participatory cultural approaches raised questions of analysis, computing, sharing, and management of data and information. Follows issues on metadata and paradata.

In particular – considering the fields that deal with tangible heritage – archaeology first looked to computer based visualization as scientific methodology and, thus, posed questions of philological interpretation of digital reconstructions of the past. It could be a reference for virtual reconstruction of buildings that no longer exist or have been only designed: All these studies are based on the critique interpretation of heterogeneous archival materials (old drawings, historical photographs, descriptions, yard or competition documents, etc.). Similarly occurs in the definition of past configurations of existing buildings where, however, the archival apparatus have to be reflected on the reality, i.e. the physical architectural document.

But the study, surveying, modeling, and visualization of architectural heritage highlight new issues that are related to the whole process of surveying and critical historical analysis, to the visualization of past configurations, to the re-construction of constructive systems, also with the aim to declare the degree of reliability. Transparency allows the scholars to retrace critical decisions and test conclusions on colleagues' work of and on own research.

LOOKING THROUGH: THE BACKGROUND

Why Transparency?

The title of the well know book “The Transparent Society” (Vattimo, 1989) evokes the critical topic of “interpretation”, typical of the postmodern culture, where a leading role is played by technology and media. Day by day digital tools have changed and are still changing media, according to a dimension of pervasive and continuous interrelation between reality and “digitality” (wording coined by Negroponte in 1995). In our current “on line” life (The Onlife Manifesto, 2015), the concepts of “digital natives” and “digital immigrants” (Prensky, 2001) blurs (Jenkins, 2007). “Hyperreality” (Baudrillard, 1976) has grown, becoming simply a component of reality, and people have become shrewder in their relation with the sort of state of “augmented reality” that involves us. The relationship with technology renews: Its outcomes are constitutive of reality and of our culture, and therefore they requires knowledge, understanding, and assessment. The claim for digital heritage preservation (UNESCO, 2003), and the statement of digital heritage as common heritage ratifies the value and cultural importance of this new kind of artifacts, and consequently their significance in our post-postmodern condition.

The philosophical line of new realism (Ferraris, 2012) is not unrelated to this context: New realism roots on postmodern lesson and hermeneutics, but at the same time reckon with reality and perception; the characteristic of perception of being “opaque”, requires the need to be represented, i.e. interpreted.

In this context the claim for transparency follows. And a request for transparency underlies also the “European Charter of Rights of Citizens in the Knowledge Society” (aka “The Charter of eRights”) of 2005.

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