Chapter 13
Toward Smart Heritage: Cultural Challenges in Digital Built Heritage

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ABSTRACT

The concept of cultural heritage has evolved over time. In relation to a context where digital technologies and ICT are changing our everyday lives and the way to visualize, experience, and think, the growth of digital heritage poses new issues in the conceptual and operative relationship with real contents. The chapter reflects on the concept of tangible heritage, presents issues in heritage digitalization, and highlights the new relationships that the real dimension and the digital sphere of heritage establish, according to advanced frontiers of mixed heritage. Pressing topics are the matters of interpretation and presentation of heritage, the transparency of digital communication, and the participation of people in cultural content through digital content production, sharing, re-elaboration.

INTRODUCTION: DIGITAL BUILT HERITAGE

The growing of computing capabilities, the development of Information and Communication Technologies, the opportunity offered by digital heritage for different purposes, and the diffusion of non-expensive – often free – software and apps of easy use has made digital tools ever more affordable for everyone and used indifferently and simultaneously in dissimilar research fields. Consequently, there is a constant ever rising of digital products, and a wide overlapping and mixing of tools, methodologies, and research object and aims made by different kind of scholars, such as computer scientists, topographers, surveyors, archaeologists, architects, engineers.

The Charter on the Preservation of the Digital Heritage (UNESCO, 2003a), points out that the Digital Heritage is not something special, out of the ordinary, but it is a ‘Common Heritage’. It can be constituted by: “cultural, educational, scientific and administrative resources, as well as technical, medical and other

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kinds of information created digitally, or converted into digital form from existing analogue resources. It includes different kinds of products such as texts, databases, images, audio, graphies, software and web pages”. In particular, the Charter claims for maintenance, management, and access.

In 1999, on UNESCO’s “World Heritage Magazine”, Stone defined Virtual Heritage as: «the utilization of technology for interpretation, conservation and preservation of Natural, Cultural and World Heritage» (Stone, 1999).

Unlike Stone’s definition of Virtual Heritage, in the Charter the Digital Heritage tends to assume an independent connotation and value. This qualification of digital heritage is favored by the diffusion of digital products and by the growth of tools, technologies, and methodologies that today are ineludible and pervasive for each field.

The digital objects assume a new meaning of “real”, but in digital heritage from real contents, conceptually this real meaning cannot be related with the physical content, from which it derives. In this kind of digital heritage, there is not visualization without a prior reality and, in a philological study of a digital model, we cannot forget its real reference from whom it is born. Therefore, the issues related to data and information grow to include the relationship with history and materiality.

A double condition of the digital model of built heritage descends: On one side the ‘relation with the reality’, on the other side its ‘digital nature’. The wording “heritage” implies that the digital resources presents own values, but indirectly related to the physical content.

As pointed out by Digital Heritage Charter (UNESCO, 2003a), we can see the digital historical objects independently by human creativity, according to a status of object in its own right. Being a critical product of a creative-interpretative act, the model is a knowledge contribution and, therefore, it becomes a new document: Centofanti (2010) writes: “The representative and restitutive model of an architectural heritage is an integral part of historical knowledge and an autonomous text that can be subjected to further analysis and interpretations. Indeed the model provides a series of useful information on the architectural significant [...] In turn, the model lends itself to be historicized and studied no more, and not only for its relationship with the presented object, but as a document itself in relation to the historical and cultural context that produced it” (p.47). Moreover, being equipped with values, digital heritage has to be safeguarded. Therefore, we remember the recommendations of the Charter on Digital Heritage (UNESCO, 2003a) about the guarding against loss of heritage, the need for action, in particular related to the lifecycle of information, and the development of strategies and policies.

ON TANGIBLE HERITAGE

A deep reflection on heritage conservation and protection moved from the rise of a critical consciousness of the past. At the beginning, it originated from the archaeological findings of XVIII century, and it has grown especially from the XIX century – let us remember the works of Viollet Le-Duc in France and John Ruskin in England –, with important consequences in the culture, documents and laws of different countries. Without retracing the well-known history of conservation and protection, it is useful to develop the discourse from the consideration made in the second half of the XX century.

The Convention for the Protection of Cultural Property in the Event of Armed Conflict (1954), adopted soon after the WWII, is the first international treaty on heritage safeguarding with a worldwide vocation. It focuses on the protection of cultural heritage in the event of armed conflict and “It covers immovable and movable cultural heritage, including monuments of architecture, art or history, archaeological sites,
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