On the future reality of the past. Material, immaterial and virtual heritage in the 21st century

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The session “On the future reality of the past. Material, immaterial and virtual heritage in the 21st century” was an invitation to propose and discuss new methods to improve the “reality” of the Past, as well as to present current research, which brings new contributions to the 21st century research. It would also discuss the epistemological implications of the new virtual reconstructions of the Past, taking into account the contemporary trends to approach both material and immaterial heritage.

Constantinos Papadopoulos (University of Southampton, Southampton, UK) was the first to speak and presented on “From excavation and recording to 3D visualization: Digital (re)construction as a process of knowledge production”. With his paper he added a piece to the puzzle of knowledge production in digital reconstruction by evaluating strategies and factors that influence perception, depiction, capture and reproduction of real and digitally simulated three-dimensional information; his paper also highlighted and demonstrated through examples the power of this approach as an inseparable element of any fieldwork project, as well as its transformative impact on archaeological sense-making.

Andrea Vianello (Independent Researcher, Sheffield, UK) with his presentation on “Data and interpretation in the digital and virtual worlds” suggested that data should always be clearly presented and distinguishable from any reconstruction or form of enhanced reality; this already happens with restoration works, where original and reconstructed parts are deliberately recognizable with little effort. As digital technologies advance, it will be increasingly difficult to separate between the two and ultimately build on previous work, and this does not apply only to virtual reconstructions. It is necessary to embrace new technologies and engage the public, but archaeologists must be aware that producing fiction is not their task.

Cecilia Gustavsen (Vestfoldmuseene, Sandefjord, Norway) followed with her paper “A virtual reconstruction” and discussed the advantages and drawbacks of virtual presentations in the light of the archaeological site Castrum Tunsbergis in Norway, while Dragos Gheorghiu (Doctoral School, National University of Arts, Bucharest, Romania) gave a presentation on “Augmenting the reality of the material and immaterial past”. He presented a Mobile Augmented Reality (MAR) application inspired from the fractal paradigms, to display layers of augmented information for different archaeological Points of Interest (POI), starting with Virtual Reality (VR) architectural reconstructions and leading up to technological gestures recovered with the help of experimental archaeology; the MAR application can also play an important educative role, by virtue of its ease of navigation via mobile devices.

Gregory MacNeil (Jerry MacNeil Architects Limited, Halifax, Canada) and Sara Beanlands (Boreas Heritage Consulting Inc., Halifax, Canada) then gave us a presentation with the title “Intersecting the professions of archaeology and architecture through a cloud-integrated workflow”. Through applications such as BIMx Hyper-model that can be uploaded to Apple and Android smart devices and represent a unique technology that brings the archaeological site into the dynamic touchscreen environment, the intersecting professions of archaeology and architecture were incorporated through a cloud-integrated workflow, adding to the Cultural Landscape terms such as “research related” and “planning related” a new virtual vantage point.

Cantisani Matteo (Quaternary, Materials and Culture, Department of Geology, University of Trás-os-Montes e Alto Douro, Quinta de Prados, Vila Real, Portugal) and Console Marco (Computer Sciences at Sapienza University, Roma, Italy) presented their paper entitled “A
museum for Alfedena (AQ, Italy) Town of the Samnites. Virtual archaeology and identity management. As Alfedena needs a museum not only capable of endorsing the archaeological regional heritage but also of improving its scientific inquiry, they suggested the creation of an interactive web portal by using a content management system software to charge 2D as well as 3D heterogeneous data. This model shall represent a scientific and didactic tool at once, unconventional and capable of refreshing the coping among the local community and the archaeological and historical local heritage by enforcing archives, studying and consulting tools as well and pointed that local user and researcher will be able to visit, record, catalog and research online using the different types of interactive tools thanks to the content management system software adopted.

Stuart Jeffrey (Glasgow School of Art, Glasgow, UK), Alex Hale (The Royal Commission on the Ancient and Historical Monuments of Scotland, Edinburgh, UK), Sian Jones (University of Manchester, Manchester, UK) and Phil Richardson (Archaeology Scotland, Musselburgh, UK) presented us their paper entitled “Virtual heritage and community co-production: The Accord Project”. The Accord Project, through the co-design and co-production of an integrated research asset that encompasses social value and engages communities with transformative digital technologies, examines the opportunities and implications of digital visualization technologies for community engagement and research through the co-creation of three-dimensional (3D) models of historic monuments and places. Accord is creating a permanently archived open-access dataset of community co-produced 3D digital models of archaeological sites and monuments, integrated with expressions of social value and contextual documentation.

Esther Renwick (University of the Highlands and Islands, Lerwick, UK) presented then “The well-trodden path: Reality and authenticity in heritage presentation”. Her paper was based upon research into the potential of theoretical archaeology to tackle the dichotomy between the experience of the modern visitor and conceptualizations of the experience of the site in the past. Illustrated by a comparison of Google Earth Tours of Stonehenge and Pompeii and other World Heritage Site case-studies, the speaker argued that presentation needs to be taken back to basics and emphasis put on common human experiences and concepts, before adding extra layers of interpretation. A key dimension of the daily human experience is movement and access and this paper postulated that the sequence of encounter and knowledge of controlled spaces play a vital role in creating a more “authentic” and realistic experience, whether actually on the site itself or moving through a virtual world.

Rafal Zaplata (Cardinal Stefan Wyszynski University in Warsaw, Warsaw, Poland) with his paper “Virtual heritage – Different ways of experiencing the monuments” aimed at summarizing experiences connected with the use of virtual reality in presenting, experiencing and researching heritage, since nowadays digital methods are very often the only means of presenting artefacts as digital copies and this might be a cause for concern and reservation. Therefore, a discussion about the meaning and place of digital copies and virtual reality within the cultural heritage sector is needed.

Colleen Morgan (University of York, York, UK) presented on “The life and death of virtual Çatalhöyük in Second Life” and finally Petr Kvetina, Hana Brzobohata, Pavel Burgert, Marketa Koncelova, Ivan Pavlí, Jiri Unger, Jaroslav Řidký, Radka Sumberova and Petr Vavrecka, a nine-member team of the Institute of Archaeology CAS, Prague, gave a presentation on “Virtual 3D museum of Neolithic culture. Artefacts, technology and imagining”. The aim of the paper was to present an ongoing project devoted to the virtual museum of the Neolithic; the goal was to provide a picture of the European Danubian Neolithic Culture, based on the example of the settlement in Bylany (Czech Republic), dating from the 6th-5th millennium BC. The main parameter of the described project was to set up a methodology for recording and presenting ancient artefacts and technology. The basic technology was optical 3D scanning of artefacts that exactly reflects the 3D surface geometry and brings new presentation possibilities. Acquired digital records can also serve for research and educational purposes on all academic levels. The project’s most important output consists in a virtual museum on the web, while this platform will interconnect a classical static approach of exhibiting artifacts in form of an open library of 3D scans with dynamic level,
including videos and interacting features. In this way, both materiality and ancient
technologies will be presented.

There were three more papers that did not finally get announced, but their abstracts have
been included in the 20th Annual Meeting of the European Association of Archaeologists
Abstracts Book. These were the papers of Davide Delfino (Abrantes Municipality, Land and
Memory Institute, Quaternary and Prehistory Group of Geosciences Center Coimbra
University, Abrantes, Portugal) and Luiz Oosterbeek (Polytechnic Institute of Tomar, Land
and Memory Institute, Quaternary and Prehistory Group of Geosciences Center Coimbra
University, Abrantes, Portugal) “Virtual reality and design. Some considerations about
the target and the actors to bridge society and archaeology. Examples from the middle Tagus
Valley, central Portugal”, Anastasia Chourmouziadi (University of the Aegean, Mytilene,
Greece) and Dimitris Sphakinakis (University of Crete, Crete, Greece) “Exhibiting the
intangible: The case of a myth” and Natiq Alishov (Department in Ancient Archaeology and
Ethnography, Azerbaijan National Academy of Science, Baku, Azerbaijan) “Christian
monuments of caucasian Albania”. There was also one poster presentation, that of Robert H.
Tykot (University of South Florida, Tampa, USA) entitled “Advantages and disadvantages of
using PXRF in Europe on ceramics, metals, paintings, stone and bone”.

The session organizers would like to thank all speakers and session participants for
presenting some fascinating new research and engaging in stimulating and thought
provoking discussion. It will be also attempted to publish in the future the papers of this
session. Istanbul provided a wonderful venue for the conference and the organizers and staff
are thanked for making everyone feel so welcome.