**Online workshop: the significance of 3D reproductions**

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Currently there is limited literature on 3D reproduction – both digital and physical – (e.g. by using 3D modeling, AR, VR and 3D printing) of art and the ethical consequences of these new techniques in general. Most texts and information about these new technologies focus on either the technical aspects or how the quality of the replications can be altered to perfection. Studies that discuss issues that go beyond the technical aspects of 3D reproduction technology, such as the significance of 3D reproduction for restoration, conservation, participation, education, art history and our ethical beliefs, do not exist.

Besides studying the advances and challenges for massive 3D reproduction and digitization of cultural heritage, the literature review showed some existing models and frameworks for museum visitors’ experience and the perception of artworks. Even though these models and frameworks are useful for evaluating a specific aspect of the use of technology, they do not provide a complete picture of the impact of technology on museums or cultural institutions. A 2016 report from the Economist Intelligence Unit commissioned by google, by evaluating several institutions, explored the progress that the cultural institutions have made towards implementing “digital” to improve their services. Based on the past experiences, recently the MUSETECH model was introduced. This framework has served as the starting point for us to develop an experience model specifically for 3D digitization.

By combining a literature review with the qualitative analyses of data collected through various methods (interviews, questionnaires, workshops), this research proposes ways of using 3D digitized and printed reproductions for enhanced cultural experience. The research is a collaboration between the MuseumFutures Lab in the Delft University of technology, Politecnico di Milano and Leiden University. A workshop and creative sessions are being organized involving all actors in this research. The aim of these activities is to theorize the design factors for augmenting experiences with the digital heritage. These design factors will serve as evaluation criteria for enhancing experiences with 3D digitization and the possible introduction of 3D printed reproductions in museums. Furthermore, there will be a comparison between the visitors interaction with digital vs physical reproductions and the differences in interaction/reaction. Additionally, as this study also involves the ethical side of art, this research includes questions regarding authenticity and the role of reproductions. How is the original artwork experienced outside of the museum walls and through a reproduction? Is there a difference between encountering reproductions in museums vs in a different location?