

Preface

Francesca Fatta

When in January 2020 Roberta Spallone with Andrea Giordano and Michele Russo proposed a seminar with the complex acronym REAACH-ID to involve a larger group of Augmented Reality scholars, I realized that the time had come to define the context of our initiatives on virtual representation, looking also to the sphere of science that deals with Artificial Intelligence. Their proposal did not want to follow the trend, but rather to respond to the need for methodological relationships and cross competences aimed at promoting a dialogue between human and hard sciences.

The starting point consists in the single and shared researches of the scholars involved in the organization of this symposium, they are all teachers of Drawing who have been engaged for years in the creation and analysis of drawings, images and models that represent the evolution of existing realities over time or purely designed entities. Moreover, when the Italian teachers of Drawing reorganized the declaration of the sector (UID May 2021), they agreed that the scope of our SSD (Scientific Disciplinary Sector) research: “[...] therefore concerns the geometric–descriptive–configurative domains, graphic–visual–synaesthetic, informational–computational features, as well as the related historical, epistemological, semantic, technological and applicative aspects. [...] the modeling, including informative modeling, prototyping and visual communication [...]”.

The question concerns the definition of the relationships between a physical, real, tangible reality and an intangible spatiality defined with the help of Artificial Intelligence, increasingly able to trigger specific reading processes of complex contexts, which can be represented in a way similar to human thought with amazing space–time simulation effects.

Mario Rasetti's prestigious speech performed for the opening of REAACH-ID symposium indicated how Artificial Intelligence may show new possibilities in the world of representations, underlining the links between AI and Engineering, Information Technology, Cognitive Sciences and Philosophy.

During the symposium the scholars asserted several times that reality means everything that is concrete and material, therefore something natural and changeable, but the advent of Artificial and Virtual Reality offers a new version of reality in itself. It cannot be considered anymore as pure vision, but as a participation of all the senses, even of the whole body, thanks to effects created by the digital tools which are so likely that they are accepted by an observer as a real experience.

It has been noted that artificial reality is the most advanced form of interaction between man and machine. Inside this deceptive reality everything that is perceived is generated by a computer that responds to our movements with images and sounds designed to give us the illusion of a virtual world that breaks the laws of physics projecting our self in a free space-time. Artificial Reality represents the realization of an invention, a trespassing tool towards a new kind of utopia.

If it is true that Artificial Reality involves all the senses with illusory messages, nevertheless visual messages have the upper hand over all the others; it is precisely for this reason that during the symposium the scholars have exalted the world of Artificial Reality as a real opportunity for exploring and visual communicating. The user, wandering without constraints into a new world, becomes an experimenter of new models of thought and technologies. Furthermore, researchers in our disciplinary sector often study cultural heritage resorting to digital technologies that increase their reading and interpretation in the process of its analysis, design and enhancement. For over fifteen years, the Italian teachers of Drawing have already made use of a fruitful intertwining between Artificial Intelligence and Augmented Reality thanks to the new possibilities of identification and connection between digital products and physical consistencies, in a mix of real and virtual world.

The way of acting, according to the methodological profile of our research, which starts from physical space, has found in the digital world and Artificial Intelligence those tools for expanding the reality (for this reason called "augmented") aiming at redefining the way to share cultural heritage, or the way to enhance it through innovative systems of community participation.

The success of REAACH-ID encouraged Roberta Spallone, Andrea Giordano and Michele Russo to organize a second symposium. For this I feel the need to thank them for the good work produced in this volume, which collects the results of the open discussion and the scholars' research presented during the first symposium, as well as for what they are preparing in the next future meeting.

UID president
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