

Looking Closely Through the Digital Mirror

by Gianluigi Castelli, Severino Meregalli*



Digital reality, encompassing virtual reality, augmented reality, and digital simulations, can mirror many aspects of physical reality, but these realities are not identical. The fundamental distinction, although it may seem trivial, is that digital reality is created using technology, while physical reality is the tangible world we inhabit. There are numerous examples of this digital mirror of physical reality, they have multiplied over the years, and their number is constantly growing.

Among the examples that have appeared recently, but are not necessarily all equally promising as we will see later, we can consider the world of virtual simulations ranging from the medical field for learning and practicing the use of robotic equipment to virtual tours of physical spaces, offering users a realistic and engaging experience of the physical space, or even digital art that can be created to mimic the appearance and feel of physical art and be shared online.

Overall, while digital reality can imitate and enhance some aspects of physical reality, it is important to remember that they are distinct entities with their specific strengths and limitations.

This opens up a wide range of possibilities for the use of digital technologies to create worlds to explore and employ as extensions and parallel environments of our physical reality.

* *Gianluigi Castelli is an Associate Professor of Practice of Information Systems at the SDA Bocconi School of Management and Director of the DEVO Lab (Digital Enterprise Value and Organisation Laboratory).*

Severino Meregalli is an Associate Professor of Information Systems at the SDA Bocconi School of Management and Scientific Director of the DEVO Lab.

FOCUS The Artificial Era (but not too much)

In the face of this further opportunity that digital technologies offer us, it is essential to gain awareness of what awaits us in these new worlds. We must understand and anticipate what awaits us on the other side of the mirror because immersing ourselves in these parallel digital realms requires consciousness and a mature approach. Without these conditions, we risk taking a leap into the void, or worse yet, doing so unknowingly, with potential negative consequences both socially and economically. Recent history has already provided us with a first repertoire of uncalculated explorations, driven more by the wave of trends than by technological knowledge and economic rationality.

The most striking and visible case is the trajectory of companies controlled by Mark Zuckerberg, who, in order to take a leading role in the metaverse trend, changed the name of Facebook to Meta in 2021. This name change was followed by a series of emphatic statements about the impact of the metaverse as a source of revenue and value creation. The bet on the metaverse has, at least for now, proven to be a risky move in terms of the dissemination of related services and products (such as virtual reality headsets), with obvious consequences on the overall economic performance of the Meta Group.

To better understand why critical aspects for real value creation have been trivialized and underestimated, just think about the fundamental prerequisite to access a metaverse, which is the need to represent oneself through an avatar: a three-dimensional digital portrait of oneself. For example, one of the major telecommunications companies has incorporated into its video conferencing system the possibility of holding virtual “in-person” meetings among avatars of the participants, created by themselves using a graphic tool. How nice it is to interact with almost real people instead of the usual two-dimensional busts that endless video conferences have accustomed us to! Or maybe not? Many studies have demonstrated that the choice of characteristics for one’s avatar is anything but neutral and simple, and instead of improving communication, it creates a long series of problems. It turns out that some individuals, in their Avatar versions, become thinner and have more hair; choosing the shade of skin color becomes a very complex problem; and instead of having a meeting among colleagues, there is an encounter between representations of the participants that are projections of a complex mix of aspirations and social conventions that heavily interfere with the ultimate purpose of the tool: to communicate. Before someone proposes an entity to certify the authenticity of their avatar, it would be better to pause and understand that, once again, we need to study, reflect, and not trivialize

complex technologies by indulging in superficial and often childish considerations.

Another example is the cryptocurrency sector, the parallel universe of traditional finance, which has been plagued by numerous crises essentially characterized by the same causes: the trend effect, the lack of understanding of the underlying technologies, the appearance of unskilled operators, and the difficulty of finding a proper compromise (if one exists at all) between regulated markets governed by central entities and a movement that finds its strength in a regulatory anarchy, but one that is based on strict algorithmic logics.

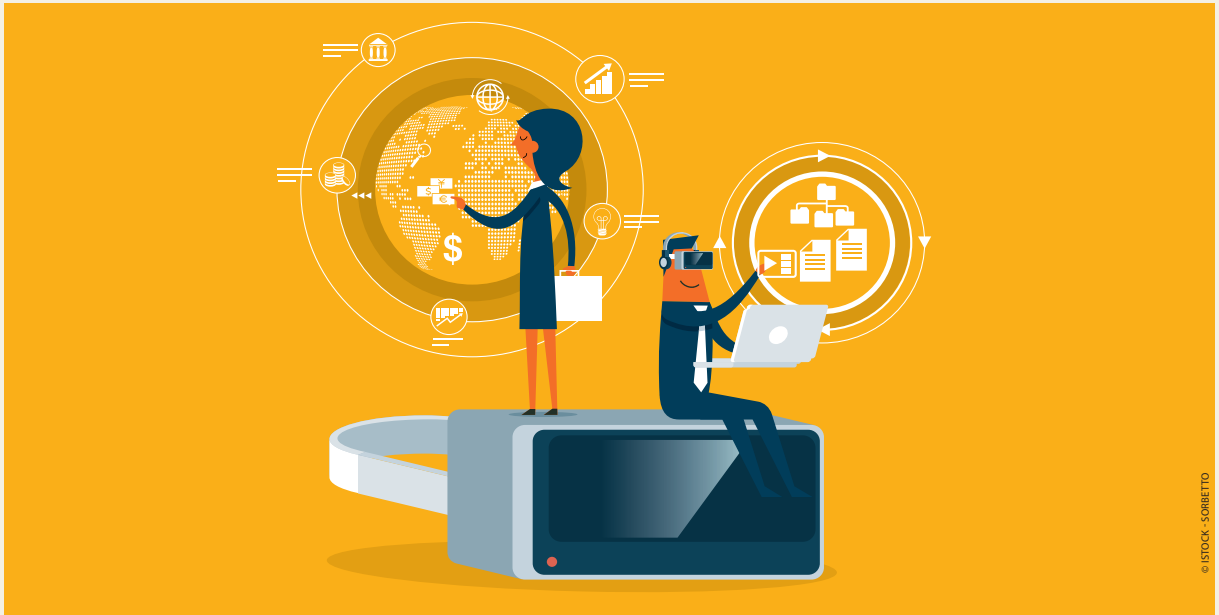
The list of leaps into the void beyond the digital mirror could go on for a long time, but the purpose of this collection of contributions is not to demonize the expansion of our physical boundaries into virtual worlds, but rather to offer some food for thought and some guidance for use.

The choice to use emerging digital technologies always follows, and dare we say unfortunately, a rather unprofitable curve in terms of their effective adoption: a very rapid ramp-up of unrealistic expectations, followed by a quick disillusionment, and then a slow building of awareness of what can actually be achieved in terms of value creation. In doing so, however, time is always lost, money is often wasted, and opportunities are sometimes missed.

The case of digital realities is not escaping this path, despite the numerous examples that are evident to all. Therefore, we must not confuse the ease with which we can access these parallel digital worlds with the generation of value for companies and society as a whole.

Therefore, it is more necessary than ever to develop critical thinking, even while being immersed in the mainstream, capable of anticipating and managing issues related to challenges and opportunities. Digital





realities do not represent an escape from physical reality, but rather a natural extension of it, and as such, they cannot escape its rules.

Since its creation, the DEVO Lab SDA Bocconi has aimed to analyze emerging technologies, providing guidelines and evaluation criteria to avoid falling into the trap of the aforementioned hype, and over the years, enabling or blocking factors that influence their adoption have been identified.

Digital reality influences many aspects of physical reality and changes its scenarios at a surprising speed, but it cannot evade the specific rules of physical reality, whether they are regulatory or normative, economic/financial, organizational or process-related, or as some recent tragic cases are demonstrating, individual emotional and psychological factors.

It is necessary, therefore, once again if not more, to have respect for the digital world because, behind the sensationalism, there is a lot of substance, and it

is certainly not by acting as pseudo experts who are merely exposed as users to many digital technologies over time that we can keep the promise of creating new value. Despite their wide availability and accessibility, the necessary skills are neither widespread nor easily accessible. For everyone, but especially for companies, it is better to ask the right questions rather than act based on wrong assumptions.

The recent history of the first explorations into parallel worlds has taught us a series of lessons that are a valuable guide to succeed in exploiting these new opportunities. Beyond the digital mirror, we must carry with us the enthusiasm of the explorer, but also the wisdom and awareness of those who know that unexplored territories must be conquered with professionalism and the right equipment of knowledge and critical thinking. Only by combining these two attitudes can we generate value for businesses and individuals in the metaverse.

SYNOPSIS

- There are semantic and substantial differences between physical and digital realities that it is important to know before investing in products or services that may turn out to be unsuccessful. Often, there is a tendency to confuse the ease of access and use of digital technologies with the real value they can bring to businesses and society as a whole.
- It is therefore necessary to maintain a critical approach to costs and benefits, real opportunities, and potential risks before blindly following what may prove to be a mere “fad” of the moment.
- The first awareness, which acts as a guiding light for those approaching the digital world, is that the virtual world cannot escape the rules of the real one, whether they are regulatory, financial, or organizational in nature.