

# Of smoke and mirrors

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BY CARLO CORCIONE

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Crypto people say they're building it. Gamers might already be living in it. The art world is cashing in on it. Web veterans are trying to save it. As all that sounds too heady, is it a Metaverse?

Artist illustration of digital human interaction through VR goggles.

**W**ith more potentially far-reaching consequences than any technological innovation before it, Metaverse might revolutionize how people meet, integrate and organize. It might spread financial innovation and trading beyond traditional regulated structures. Ultimately, it might redefine our understanding of reality. But it doesn't even exist yet.

Three decades ago – when the Internet as we know it today did not even exist – an almost unknown American writer, Neal Stephenson, wrote a book called *Snow Crash*. In it, Stephenson depicts the real world, owned by private billionaires, devastated by inflation and viruses, and a parallel, virtual world, which he named the Metaverse.

The term has become common parlance in recent years, but few seem to truly grasp what it means. Jigar Patel, digital and e-commerce expert and director of Paripus Ltd, puts it in simple words. Patel explains that the Metaverse is a multitude of digital worlds, in which participants utilize immersive devices and avatars as digital characters or representatives. As such it is part of the emergent phenomenon known as Web 3.0.

If Web 1.0 refers to an Internet made up of static websites with non-editable content, and Web 2.0 is characterized by a steady stream of user-generated content from, for example, social networks, then Web 3.0 points to an Internet in and through which users are able to interact most fully. Instead of simply engaging as consumers or creators of 'content', such as blogs





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**Metaverse avatars allow new concepts such as digital meetings**

and social media posts, users of Web 3.0 can interact with platforms, services and other participants not simply as viewers of a page but through the creation and exploration of truly immersive experiences. Patel asks us to “consider the potential of using virtual environments, digital twins and simulation of real objects for demonstration, testing and much more. The conceivable richness of learnings: data analysis, alternate scenarios, and system performance within these shared 3D environments can be explored remotely and with far greater depth and empathy”. According to his explanation, these developments are not brand new, so much as an extension of what is already happening within the gaming ecosystem and around non-fungible token (NFT) enthusiasts and speculators. Though entirely virtual, these NFTs are bought and sold for real money, often quite a lot of it. A piece by the artist Pak, entitled “The Merge”, recently sold for \$91.8 million.

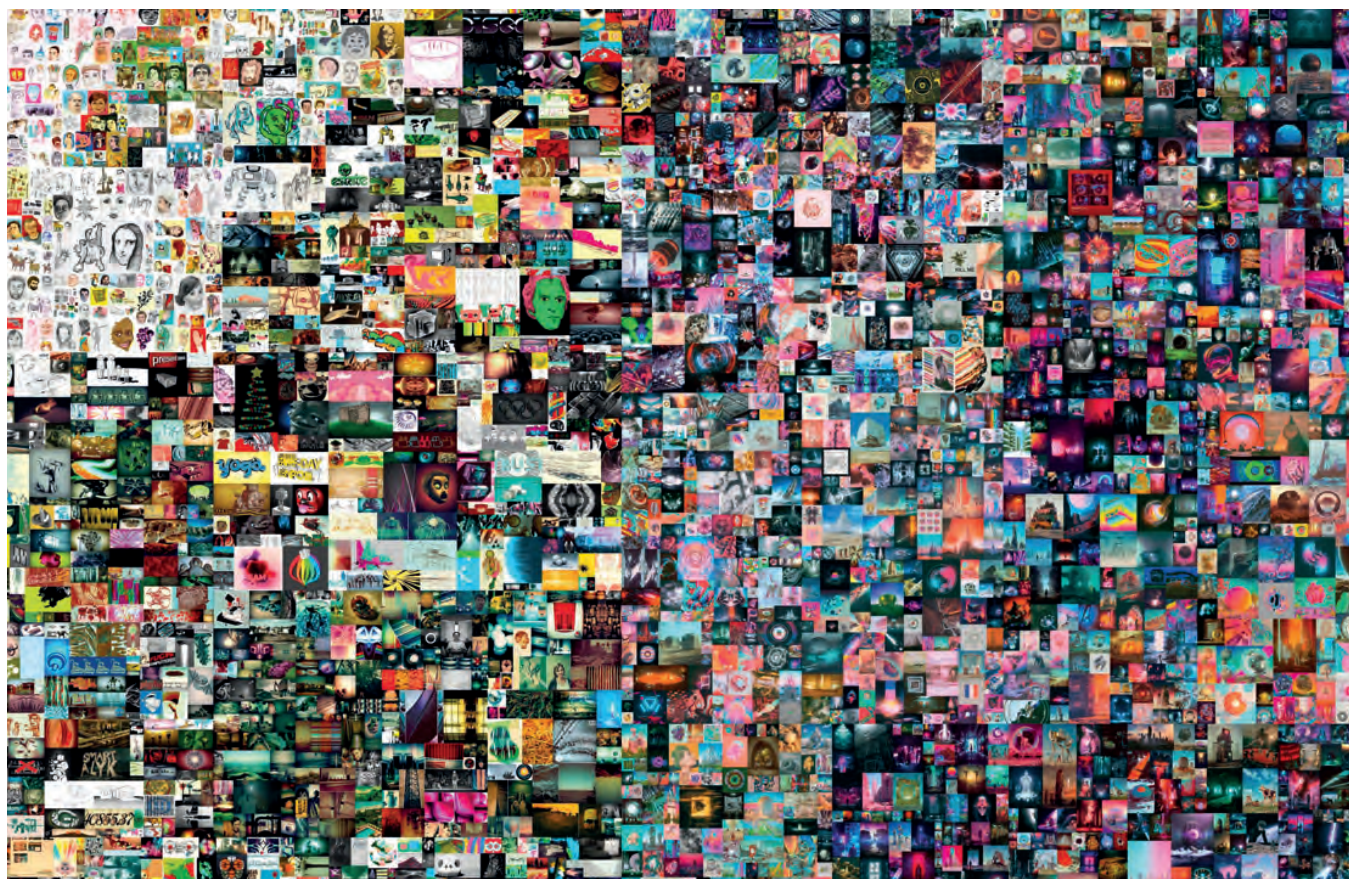
Assuming we can wrap our collective head around what the Metaverse actually is, we are faced with a deeper question: what can we do with it?

First, the Metaverse allows us to e-meet one another

with a level of interaction far beyond what digital tools have offered us so far. The availability of immersive experiences and developed avatars takes all the normally remote activities we have come to know – meetings, lectures, professional training, presentations and more – to a whole new level.

Second, the new virtual world gives us the means to visit places that would otherwise have remained out of reach, due to constraints on financial or logistical resources. No need to limit ourselves to two-dimensional photographs or videos, however skilful their creation or impressive the impact on the viewer.

In social terms, the Metaverse seems to promise a step towards equality and inclusion. Via their avatars, people from all walks of life would be able to enjoy immersive travel and sporting experiences – a Volcano tour in Iceland, a gorilla safari in Rwanda, playing football or even skydiving – regardless of their age or health. These virtual trips will almost certainly have a lesser impact on the environment than genuine travel. These avatars (perhaps made most famous by James Cameron’s 2009 film “Avatar” where the disabled protagonist, Jake Sully, operates a 10-foot-tall, blue-



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skinned avatar on a moon in the Alpha Centauri star system, to assist in a scientific exploration of the area) are virtual proxies for their 'real' counterparts and can allow users to undertake not only leisure activities but also far-flung and dangerous work. Noble ideals notwithstanding, any progress towards inclusion and equality is likely to form part of an economic trade-off, with infrastructure and user interfaces prohibiting access to those with insufficient means.

Third, the Metaverse heralds a substantial upgrade to modes of learning and understanding. Rather than simply reading material in a passive, spectatorial fashion, users of the Metaverse will be able to immerse themselves in the topic, perhaps by walking across a prehistoric plain populated with dinosaurs, or by travelling down a blood vessel to see how the heart works from the inside. Shopping for a new car could take on a completely different meaning: we could literally walk in and take a ride, open the hood, and interact with accessories.

Crucially, the Metaverse offers a degree of repeatability not found in the real world. According to Mark Zuckerberg social media company Meta (previ-

ously Facebook), surgeons "will be able to practice as many times as needed in the Metaverse before laying their hands on a real patient". I discuss this with Francesco Corcione, Professor of Surgery at University of Naples Federico II and expert in Laparoscopic and Robotic Surgery. He fully embraces the advances that technology has made possible in surgery; laparoscopic (also known as 'keyhole') technology allows surgeons to perform substantial surgery through the most minor of incisions, and developments in robotics allow surgeons to undertake remotely, delicately, and precisely what would previously have needed a pair of hands inside the body. But Corcione cautions that no virtual training, however close to reality, can replace real experience in the operating theatre. He argues that the context affects user psychology, and likens it to the difference between driving a car simulator, and driving during an F1 Grand Prix. The professor admits to being fond of technology and the innovation it offers, and says he will in principle encourage his students to test in the Metaverse for training, but he does not think that it will become, in any way, able to substitute real surgery life experience.

**The web artist Pak sold his digital collage NFT titled *The Merge* for \$ 91,8 million**



THE SANDBOX

**The Sandbox is a virtual world that allows players to create their own gaming experiences with the ability to retain ownership and collaborate with others.**

Appreciating that even the Metaverse, as anything, has its limits, fair queries are how big the Metaverse is now and how big it can get in the near future. I pose these queries to Vincenzo Basile, Assistant Professor in Economics and Business Management at University of Naples Federico II who has recently carried out some major research around the Metaverse. Basile explains that, at the moment, the Metaverse market is worth around \$30 billion US dollars, but that figure is likely to increase tenfold to \$300 billion in the next five years. Financial transactions within – and relating to – the Metaverse are going to require regulation. According to his analysis, cryptocurrencies will fulfil this role, serving as a bridge between the real and virtual worlds. But it is not all positive. Basile highlights some potential pitfalls of the Metaverse, with his concerns about privacy and age-appropriate access to services. He stresses that, currently, the Metaverse is nothing more than theory, a view well expressed by Matthew Ball, author of the best-selling book “Metaverse” and a partner at Makers Fund, the largest investment fund dedicated to gaming and entertainment. Somewhere between here and the fully-fledged Metaverse, concludes Basile, cer-

tain technologies are going to need dramatic improvements. Software, hardware, and connectivity are currently insufficient or inadequate to sustain a permanent and pervasive virtual world. Thus, the rate of improvement in these areas will, to a greater or lesser degree, dictate the extent to which the Metaverse infiltrates daily life and the speed with which that infiltration happens.

The all-encompassing Metaverse of our collective imagination, does not yet exist. Instead, there are several, nascent Metaverses – Sandbox, Decentraland, Roblox, VRChat, Somnium Space, Dvision Network – where billions of dollars have already been spent on ‘land’ transactions. Despite its current high profile, Facebook Meta is likely to become one of these many metaverses, which, at the moment, are not related or connected to each other in any meaningful sense.

Much like the burgeoning industry of space commerce and tourism, the driving forces behind the development of the Metaverse are not governments or nations, but private individuals. In this sense, the Metaverse marks a shift not only from a real to a virtual world but also a move away from the public domain to-



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wards private enterprise. Critics fear that left unchecked, this shift takes us inexorably away from traditional capitalism, for all its flaws, and toward something perhaps more sinister. ‘Technofeudalism’ is the enormous concentration of economic power – which, in the modern world, typically flows from the large-scale extraction and exploitation of user data – in the hands of a few tech companies: Amazon, Apple, Netflix, Meta, and Alphabet (formerly Google). These companies have access to such expansive and fine-grained data about their users that the tech-aristocracy at the helm has the ability to shape society and control culture in a way usually reserved for governments. A recent advert for Meta says that whilst the Metaverse might be virtual, the impact will be real. Thus a key question then is whether this real impact will be positive or negative.

Conjecture and prediction aside, it is safe to say that the existence of the Metaverse owes a great deal to the online gaming industry. Luigi Caputo, leader of the Italian Esports Observatory and the creator of the first Urban Metaverse in Italy, explains that the world of the Metaverse is deeply interconnected with gaming. Currently, video games represent the closest manifestation

of what we think of as the Metaverse. Games including Fortnite, Minecraft, and Roblox already offer the ability to interact with other users online in a virtual world. However, he argues that a lack of awareness among users and people more broadly is impeding progress. According to a study conducted by Caputo and his research team, even though one Italian out of every three has some general knowledge about the Metaverse, only 3% of the population has had any meaningful interaction with it, and confusion about the Metaverse abounds. The best way to overcome this confusion, Caputo says, is to arrange physical fairs – which he refers to as Urban Metaverses – that exhibit Metaverse products and related technologies, such as NFTs, blockchain, gaming and esports. Such exhibitions allow people to experience augmented reality and other digital interactions, in order to give them a better understanding of the future scenarios that await us in the Metaverse.

But what are the legal ramifications of such development? Who better to ask than Professor Massimiliano Musi, transportation law expert and coordinator of the Social Sciences courses of the University of

**Facebook’s new image and logo haven’t been enough to make a successful transition to the Metaverse.**



**ROBLOX has become a video game titan, in recent years dominating the world of kids' gaming and earning \$454 million in revenue last quarter alone.**

Bologna's Future Earth, Climate Change and Societal Challenges PhD programme. For Musi, it is clear that the success of the Metaverse hinges upon the interoperability of different spaces within the Metaverse. Users must be able to move their avatars between platforms without losing their distinctive identity or being restricted in any way. Users of a fully interoperable Metaverse would be able to migrate their avatars, digital assets, and associated data from one application, program, or world to another, even if the latter are owned or operated by different enterprises. There will be many elements to creating this interoperability, but blockchain technologies offer a viable means of protecting and unifying a user's data and assets. Musi adds that for broader issues relating to digital and data security, intellectual property, and the financial technologies required to keep the wheels of the Metaverse turning, legislators and regulators are likely to face similar questions to those posed by the Internet as it stands today: conflicts across territories and jurisdictions that are likely to be even harder to resolve for a world predicated on even greater user involvement

and interaction.

There remains a lot to be done before the reality of the Metaverse catches up with our collective cultural conception of it. At the time of writing, the road to success seems to be quite long and turbulent. Meta stock price has recently fallen 80% from just over a year. However in the world of technology, developments require a certain amount of time. About 30 years ago, there were as few as 15 million people in the entire world with access to the Internet; today that number stands at around 5 billion. Assuming these obstacles can be navigated, and the Metaverse does come to some sort of fruition, it is likely to blur the boundaries between the real world and the virtual world.

But do we want that? Are we looking for a parallel life? It seems entirely possible that a fully functional Metaverse might have positive knock-on effects for the real world. Perhaps directing our attention to activities in the Metaverse might pause our assault on the Earth's natural resources and climate. Perhaps the virtual consumption of goods and services in the virtual world might diminish the consumption of the same in



the real world. It seems equally possible, however, that people might become so enthralled by and committed to their virtual life, that they begin to neglect their responsibilities for and contributions to the real world.

Stephenson's Metaverse is, for his inhabitants of Earth, a place to shelter from the collapsing world around them, in which countries sell themselves to private individuals to avert existential crises. These individuals, however, do not have the world's collective best interests at heart, and the results are far from positive. As if we needed more evidence of Stephenson's prescience, he rather accurately predicted the ascendancy of cryptocurrency in his 1999 book "Cryptonomicon". Pretty concerning then that his most recent book, "Termination Shock", set a little more than a decade from now, sees people being forced to wear special suits to protect themselves from the sun and extremely high temperatures brought about by climate change.

Unlike Stephenson, perhaps, we cannot see too far into the future but we must still, for better or for worse, deal with the present. In "War & Peace", the great Leo

Tolstoy nails the concept that there are only a few people who control the world at any given time, invariably heads of state. If those world leaders do not know what they are doing, as seems to be the case today, then the world is likely to face trouble. Yet, the tech-aristocracy is poised to exert more control than ever, and perhaps provide an escape route from – or peaceful oasis in – the midst of a stormy world. Richard Branson and Elon Musk are doing their best to get humanity into space; Bill Gates and Mark Zuckerberg are attempting to bring us in the Metaverse; Jeff Bezos is attempting both, just in case. Let's hope they know what they are doing.

**Chinese players are venturing into new virtual worlds with a speed to match Silicon Valley's. There have already been 16,000 metaverse-related trademark applications filed**

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