

PRESS RELEASE

'Expanded world: Between the physical and the virtual' can be seen on the 4th floor of the Espacio Fundación Telefónica; admission is free until 5 May 2024

ESPACIO FUNDACIÓN TELEFÓNICA ADDRESSES THE IMPLICATIONS AND LIMITS OF A HYBRID REALITY IN THE EXHIBITION 'EXPANDED WORLD: BETWEEN THE PHYSICAL AND THE VIRTUAL'

- Through 80 pieces, including historical objects from the 18TH and 19TH centuries, immersive installations, video games, augmented reality applications and reflections on the metaverse by various artists from this country and abroad, the exhibition explores the background to our drive to inhabit simulated worlds and the current relationship between physical and virtual reality, as well as some of its ethical and philosophical, legal, social and economic implications.
- Artists such as Marc Lee, Cao Fei, Solimán López, Eva and Franco Mattes, Theo Triantafyllidis, Johanna Jaskowska and Ines Alpha will address questions about the migration of our identity to a space in which corporeality doesn't exist, the repercussions of creating digital alter egos and their impact on work, health, leisure and culture and the challenges and concerns of a society that lives between the physical and the virtual worlds, encouraging us to reflect on the rules and ethical codes that should govern digital citizenship.

Madrid, 22 November 2023 The exhibition addresses the limits of physical reality and digital simulation, and explores the effects on our lives of the explosion of virtual worlds. We are increasingly living in digital environments, environments that determine and even condition our physical reality and whose borders are becoming increasingly blurred. Spaces that allow us to be interconnected but at the same time push us to adapt to this new reality in which both worlds converge. On a personal level, this hybrid environment has changed the way we interact, shop, work, learn and have fun.

The term 'cyberspace' appears to have become obsolete, unable to reflect the omnipresence of the virtual world in our everyday lives, and we now talk about new and more immersive forms of digital experiences that will enable us to deploy essential parts of our lives outside physical reality. For the first time in the history of humanity, the drive to generate simulated worlds has culminated in the possibility of leaving our natural environment and immersing ourselves in a different one.

The exhibition, which can be visited free of charge at the Espacio Fundación Telefónica from 23 November 2023 to 5 May 2024, provides a journey through eighty pieces, ranging from 19TH-CENTURY cycloramas to augmented reality and the Second Life phenomenon. What might it mean to migrate our identity to a space where corporeality does not exist? What impact can being

part of a community that lives between the physical and the virtual have on society? What rules and codes should regulate digital citizenship? This exhibition explores the background to this world, the current relationship between physical reality and virtual reality, and addresses some of its ethical, philosophical, legal, social and financial implications.

A hybrid reality

The exhibition opens with the interactive work *10,000 cities in movement, the same but different* (2010) by the artist **Marc Lee**, which synthesises this coexistence between the physical and virtual worlds, putting the focus on an evolution towards a more experiential and sensorial internet. Based on data obtained in real time from social networks, the piece consists of a videomapping that recreates the buildings of a contemporary city, on whose façades the digital content of a geographical point selected by the visitor is projected. The work explores the effects of cultural globalisation and places us in a hybrid space where real and virtual layers overlap, while presenting a three-dimensional model for visualising information that invites us to imagine what the immersive internet of the future might look like.

The immersive revolution

This area takes us into the human yearning to generate and inhabit alternative worlds, presenting simulated experiences prior to the digital revolution and the history of immersive technologies, from the optical box to the metaverse. But long before these advances, human beings already aspired to conceive of an alternative world to the real one, where they could project and expand their experiences, possibilities and capabilities. One of the first major milestones was the appearance of geometric perspective in the 15TH century by Filippo Brunelleschi, who finally succeeded in depicting a three-dimensional space on the surface of a painting, causing a powerful immersive sensation in the public of the time.

This section traces a journey through historical reproductions and objects from the 18TH and 19TH centuries that explore the phenomenon of three-dimensionality, such as the optical box, the diorama, the panorama and stereoscopic cameras and viewfinders, among others. Twenty pieces on loan from the collector **Jesús Fernández** (FOTICOS Collection) are particularly noteworthy. Also included is the iconic film *The Arrival of the Train* (1896) by the **Lumière brothers**, which shows the revolutionary contribution of cinema to the achievement of more immersive experiences.

Ivan Sutherland's invention of the *Sketchpad* (1963) was another major milestone in the history of technology. It was a computer program that allowed the user to interact with the computer through a graphical interface. He thus became the forerunner of the computer drawing systems that we know today and that have contributed to the creation of virtual worlds. Sutherland also patented what is considered the first virtual reality system in 1968, the "Sword of Damocles". Alongside this, this section shows the evolution of virtual reality technology to what the metaverse could mean, with an infographic showing the technological deployment it will require.

Another world under construction

This area revolves around the spatial dimension of virtual worlds and the importance of video games as a starting point for reflection on what the metaverse and the 3D internet could become in the coming decades. Video games have continued to offer higher quality graphics, increasingly realistic environments and even the possibility to build the scenario in which the game takes place. In turn, they have inspired developers and technologists in other industries, and spurred numerous artists and creators, who are working to generate and explore other possible worlds beyond the limitations inherent in physical reality.

In this section, the viewer moves through some milestones in the history of video games, which have set precedents as generators of parallel worlds. They range from *Maze Ware* (1973), considered the first network video game to feature a 3D virtual world and a first-person space perspective, to *SimCity* (1993), *Minecraft* (2009) or the hyper-realistic reproduction *Flight Simulator* (2020), which show various ways of exploring new virtual worlds. Another highlight is *RMB City* (2007) by Chinese artist **Cao Fei**, who recreates her own imaginary virtual world in *Second Life* as a reflection of the spectacular transformation of Asian cities. Following Cao Fei's approach, the exhibition includes three immersive artistic proposals for the creation of virtual worlds: *Undream* (2018) by **Sabrina Ratté**, *Seamless* (2017) by **Theo Triantafyllidis** and *Signals* (2017) by **Nicolas Sassoon** and **Rick Silva**.

Passing through screens

Three-dimensional scanning solutions - which for years have made it possible to digitise 3D models of any person, space or object - together with advances in supercomputing, are making it possible to create digital replicas with an astonishing level of detail and precision: "digital twins". At the same time, the possibility of a three-dimensional internet is beginning to emerge. The challenge lies in developing ways to enable a corporeal experience that integrates sensations other than sight and allows us to implement what some call the "internet of the senses".

Through the interactive installations *Virtual Mob* (2015) by Korean artist **Seonghoon Ban** and *Bounding Box* (2019) by **Solimán López**, this section explores research into this transfer from the physical to the virtual world and the sensory experience that is generated. We also delve into the phenomenon of virtual corporeality and the perception of space with *Sight Lines* (2016) by **ScanLAB Projects**, an audiovisual piece presented alongside images showing scanned views of the city of London; *Virtual Humans* by the **Barcelona Supercomputing Center**, where a virtual human is recreated to research scientific and medical advances; and *Tuvalu Metaverse* (2022), the Pacific nation that has created a version of itself in the metaverse to preserve its heritage and legacy in the face of the threat of disappearance due to rising sea levels.

Digital beings

Reflection on the impact that technologies are having on shaping our psyche and defining our essence as human beings, capable of extending their existence beyond the physical body, is part of an unprecedented paradigm shift. The role of video games and social networks in the construction of new virtual identities, together with the rise of artificial intelligence, the feedback between both realities and the emergence of avatars or alter egos, have transformed not only the way in which we are perceived by others, but also the way in which we forge our own identity. Examples of this are the works *Portraits* (2006) by **Eva and Franco Mattes** -

portraits of avatars from *Second Life* - or the interactive installation *Augmented Reflections* by the artists **Johanna Jaskowska** and **Ines Alpha** - in which they show how augmented reality filters alter the image of people, giving rise to new standards of beauty.

How will this virtual corporeality and the emergence of digital twins affect our perception of space, our sense of self and our relationship with other people? The study by a team of neurosurgeons at the **University of California** constitutes a scientific breakthrough in the interaction of the two worlds. The experiment shows how through an implant and AI algorithms, a woman with cerebral palsy, deprived of speech and facial movement, can communicate and transmit a limited range of facial expressions to her husband through a digital avatar, animated by her neural impulses.

Virtual community

We work, are educated, shop and play online; we meet people and search for partners on social networks; we spend much of our free time on the internet and it is there that we store our memories, our memory, and show ourselves as we want to be seen. In this section we look at how people interact, relate and behave in this virtual and real world, from consumption and work to leisure and governance. In *Metaverse Landscapes* (2023), the artist **Simon Denny** presents a series of oil paintings that reproduce screenshots of internet platforms where virtual lots are sold, in which he explores the use and purchase of virtual space and the limitations it recreates, similar to those of the real world.

This transformation is also generating new ways of working and consuming that have been accelerated by the pandemic. Through the interactive installation *2065*, **Laurence Lek** reflects on work and presents us with a fictitious world where AI allows human beings to stop working and devote their free time to leisure and culture. In this section, we also find the work *Hand Hacked Bouquet #6* (2023) by American artist **Jill Magid**, who creates NFTs of digital flower bouquets - drawing from the world's most popular virtual platforms - to address the question of interoperability, i.e. the ability of different virtual worlds to connect and communicate with each other.

Social media have become privileged platforms where we can collaborate with others, share our ideas and fight for them; but we have also seen how these and other technologies can be used to misinform, harass or manipulate public opinion. An example of this is *The Council on gender sensitivity* (2016) by multimedia artist **Angela Washko**, who adopts a female character to enter *World of Warcraft* - a space often hostile to women - in order to reflect on the oppressive and sexist ways in which the game is played.

While it is clear that digitalisation is improving our lives in many ways, technology also entails certain risks, as it can reproduce the dangers and inequalities of the real world and even generate new ones. The challenge posed by this hybrid world - digitised and hyper-connected - will require a profound reflection on new forms of governance that will allow us to safeguard our humanity. In *Radicalization Pipeline* (2022) Greek artist **Theo Triantafyllidis** explores how digital environments can influence the real world. To do so, he builds immersive worlds that explore the capabilities and ethical implications of technology in the real world.

Cultural Dissemination Activities

The exhibition will be accompanied by an educational programme that will take place between 23 November 2023 and 5 May 2024. These are parallel activities aimed at schools, families and the general public, as well as complementary materials for consultation such as the practical guide the easy-to-read guide and the audio guide.

For schools and colleges, the in-person workshops *Hasta la pantalla más allá* (To the screen and beyond) for Primary School and *BeVirtual* for Secondary Schools and Baccalaureate have been organised, both on-site and online in digital Expo: *Expanded world: Between the physical and the virtual*, aimed at primary and secondary schools. For family audiences, the *Urbanistas del Pixel workshop* has been organised, aimed at children from 6 to 12 years old accompanied by adults, on 14, 21 and 27 January; 3, 17 and 25 February; 2, 10, 17 and 24 March and 7, 13, 21 and 27 April. There will be guided tours for the general public on the *Espacio* website from 28 November 2023, from Tuesday to Friday at 12 pm and 5 pm and Saturdays and Sundays at 11:15 am. Guided tours can also be booked by appointment for groups with a maximum capacity of 30 people.

For more information, bookings, and registration for activities:<https://espacio.fundaciontelefonica.com/>

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