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Metaverse. Old urban issues in new virtual cities

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Abstract. Recent years have seen the arise of some early attempts to build virtual cities, utopias or affective dystopias in an embodied Internet, which in some respects appear to be the ultimate expression of the neoliberal city paradigm (even if virtual). Although there is an extensive disciplinary literature on the relationship between planning and virtual or augmented reality linked mainly to the gaming industry, this often avoids design and value issues. The observation of some of these early experiences - Decentraland, Minecraft, Liberland Metaverse, to name a few - poses important questions and problems that are gradually becoming inescapable for designers and urban planners, and allows us to make some partial considerations on the risks and potentialities of these early virtual cities.

Keywords: Metaverse; Urban Design; Neoliberal City; Urban Issues; Virtual Cities

1 Metaverse: a virtual oasis in a polycrisis scenario?

On 29 October 2021, after almost two years of pandemic crisis, Facebook Inc., the famous multinational technology conglomerate, announced at the company's annual conference 'Facebook Connect', the immediate change of the corporation name to Meta Platforms Inc. The announcement marks a change of strategy of the first (and still the most important) social network in history, protagonist since 2006 of the Web 2.0 revolution, towards the construction of the 'Metaverse', beginning, de facto, what many consider a further revolution towards Web 3.0.

However, the issue of building virtual 'worlds' was certainly not new. Already by the end of 2021, there were at least 160 companies dedicated to the 'construction' of virtual worlds. However, the change of name of an important multinational as Facebook, as well as the announcements of huge investments in this new technology (software and hardware) had the effect of putting the topic of the controversial 'Metaverse' at the centre of public and academic debate, also in disciplines such as architecture and urban planning.

Although relatively recent, the term Metaverse is certainly not new either. It has been used for the first time by writer Neal Stephenson in his novel *Snow Crash* (1992, p. 35), published in 1992, in the following terms:

"As Hiro approaches the Street, he sees two young couples, probably using their parents' computer for a double date in the Metaverse, climbing down out of Port Zero, which is the local port of entry and monorail stop. He is not seeing real people of course. This is all part of the moving illustration drawn by his computer according to the specification coming down the fiber-optic cable. The people are pieces of software called avatars."

Snow Crash is a post-cyberpunk science fiction novel about a dystopian late-capitalism America, where the Metaverse is an escape route from the "precariousness of being in the world" (Butler, 2013). A situation very similar to the pervasive 'polycrisis' (Zeitlin et al., 2019) that contemporary territories are experiencing today, after a pandemic lasting more than two years, the ever-increasing ecological crisis and growing socio-economic and environmental inequalities. In fact, the Metaverse is seen by many as a glossy refuge¹⁶ for an elite class in an 'end of the world' scenario, a sort of virtual bunker where upper-class can protect itself from the many ongoing crises.

Rather than elitist virtual paradises, the hypothesis of this paper is that many of the most problematic dynamics of neoliberal cities¹⁷ emerge in a radical and extreme way in many of the early experiments of virtual cities. And precisely because of this, they are a privileged observatory in which to investigate certain tendencies of contemporary territories. Although there is an extensive disciplinary literature on the relationship between planning and virtual or augmented reality linked mainly to the gaming industry,¹⁸ this often avoids design and values and precisely for that reason, this paper, found on critical urbanism¹⁹ tradition, attempts to construct a radical critique of virtual cities, with

¹⁶ Perhaps the most popular recent reference point for the Metaverse is *Ready Player One*, the novel by Cline (2011), adapted, in 2018, into a film directed by Steven Spielberg. Cline's Metaverse is symbolically named the "Oasis," an utopian virtual environment the population log into in order to escape the current dystopian real environment.

¹⁷ To further explore neoliberal city issues see: Gilles Pinson (2020), *La ville néolibérale*; Cristina Bianchetti (2016), *Spazi che contano. Il progetto urbanistico in epoca neo-liberale*; David Harvey (2011), *Le capitalismo contro il diritto alla città: neoliberalismo, urbanizzazione, resistenze*.

¹⁸ Cf. Drew Davidson (2007), *Space Time Play. Computer Games, Architecture and Urbanism: The Next Level* and Andrew Hudson-Smith and Moozhan Shakeri (eds.). (2022) 'Gaming, Simulations, and Planning: Physical and Digital Technologies for Public Participation in Urban Planning'.

¹⁹ Cf. Margit Mayer, Neil Brenner, Peter Marcuse (2012), *Critical Urban Theory and the Right to the City*; Bernardo Secchi (2000), *Prima lezione di urbanistica*; Kenny Kupers et al. (eds.) (2022), *What Is Critical Urbanism? Urban Research as Pedagogy*.

the idea that it may be useful to improve urban policies and projects in virtual and non-virtual worlds.

This paper is organised as follows: section 2 focuses on the appearance of new urban issues during the pandemic crisis, including the affirmation of the new virtual cities in the architectural and urban academic debate. Section 3 presents a series of definitions of what is now called Metaverse and how this paper intends to deal with this issue. Section 4 presents old issues of contemporary cities that emerge in some of the new virtual cities investigated in this text. The paper concludes in section 5 with a series of suggestions towards a better design for virtual cities.

2 Crisis and new urban issues: the rise of virtual cities during pandemics

Although the first virtual worlds preceded the Covid-19 pandemic outbreak by more than twenty years (Active World²⁰ and Second Life,²¹ for example), and without wishing to diminish the role played by technological advances, it is evident how the sudden arrival of the pandemic crisis accelerated a process that had been underway for years. The pandemic, and the various lockdowns associated therewith, by increasing social anxiety, fear of contact, and the absolute desire for immunisation (Iman, Smaraki, Rumela, 2022), created the ideal conditions for the take-off of the Metaverse, which allows forms of non-bodily socialisation in conditions of mandatory physical distance. In her poem 'The Fifth Wall', written during pandemic, the German moving image artist Hito Steyerl (2021) writes:

“Pandemia has pushed many people into another dimension of time space – a next level of screen-based extraction. People were shocked to find the walls shutting them in had become means of communication. Their enclosures were laced with cables leading into a maze of plugs, wires and radio connections. A space of strings, proprietary infrastructure and code, separating humans and filtering communication. Fenced off by access codes, log-ins and mandatory isolation pandemic left people little choice but to perform on corporate stages, and in the process become readable and transparent to them.”

²⁰ Active Worlds is an online virtual world, developed by ActiveWorlds Inc., and launched on June 28, 1995.

²¹ Second Life is an online multimedia platform, developed and owned by the San Francisco-based firm Linden Lab and launched on June 23, 2003, that allows people to create an avatar for themselves and then interact with other users and user-created content within a multiplayer online virtual world.

It is no coincidence, therefore, that the topics of virtual and augmented reality, for years neglected by urban planning culture (Hudson-Smith, 2022), forcefully enter the disciplinary debate during the years of the pandemic crisis. In recent years, different positions have emerged on the effects of the pandemic crisis on urban design culture. Some accentuate its generic character, placing it within a broader framework in which various shocks make a state of crisis persistent over time (Doglio, Zardini, 2021). Others argue its exceptionality and profound repercussions on not only social but also ecosystem relations (Latour, 2020). But as Secchi (2013) suggest, crises and urban issues often coincide in history and often bring to light new themes and forms of design, new subjects and new conflicts. With the pandemic, classic issues of urbanism return to the centre of the debate and others, very deep-rooted up to that point, disappear. In this way, new issues such as virtual cities, marginalized before the crisis, are emerging and becoming relevant in the architectural and urban debate.

For sure the violent arrival of the pandemic crisis and its intertwining with the environmental crisis has forcefully brought back to the centre of our disciplines the need to rethink in all its complexity the relationship of the human with the non-human, or the more-than-human, categories that includes an infinity of subjects, from non-human animals to the new digital technologies. On the one hand, the zoonotic origin of the pandemic and, on the other, the emergence of augmented and virtual reality technologies in recent years have put the issue of *coexistence* with companion species and technologies at the centre of the academic debate, an issue that calls for a broad disciplinary reflection that addresses socio-economic, ecological, sanitary and, not least, ethical issues.

In such a perspective, 'virtuality' is not considered in a binary perspective as an 'other' to 'reality' but as an integral part of our everyday life, a very complex entanglement between humanity and technology, a condition that Jessica McLean (2020) calls "more-than-real". The interrelationships between bodies, software and machines, the symbiosis between users and devices, the algorithmic autonomies cancel out the perception of differences between human and non-human (or more-than-human) actions. Data capture and sensory recognition continue to contribute to the construction of a post-human image of bodies, connecting software, hardware, gestures, sounds, natural and artificial dimensions (Patti, 2023). From this point of view, the Metaverse virtual cities are not 'other' but already an integral part of our interconnected cities and territories.

3 What are we talking about when we talk about Metaverse?

This paper looks at the early urban experiments in the Metaverse through the perspective of urbanism without intending to be exhaustive. And although to date there is no single precise definition of what the Metaverse is, it takes this great technological, social, economic and cultural experiment very seriously in order to make a series of considerations on some of the issues facing contemporary cities. In the following paragraphs are quoted a variety of definitions of 'Metaverse' given by several scholars that will guide the choice of case studies which will be critically addressed later in this text.

The Metaverse can perhaps be defined as a digital space with an economic structure, occupied by avatars, sometimes mirroring the real world, but with multiple representations of the physical world and the ability to change time, physics and space (Hudson-Smith, 2022). Radoff (2021) suggests that the Metaverse is based on seven distinct layers: infrastructure (connectivity technologies such as 5G, Wi-Fi, cloud and hi-tech materials such as GPUs); human interface (virtual reality headsets, augmented reality goggles, haptics and other technologies that users will exploit to enter the Metaverse); decentralisation (blockchain, artificial intelligence, edge computing and other democratisation tools); spatial informatics (3D visualisation and modelling frameworks; creator economy (an assortment of design tools, digital assets and e-commerce establishments); discovery (the content engine driving engagement including ads, social media, ratings, reviews, etc.); virtual reality equivalents of digital applications (digital applications for gaming, events, work, shopping, etc.). According to Radoff (2021), the Metaverse is "the collective set of online and connected experiences one can have. The common theme is that the 'player' is connected to an online structure that allows them to change content live, connect to social live, or monetise live. The key word is 'live'. The Metaverse is a living multiverse of worlds."

Ball (2021) for his part defines the Metaverse as an extended network of persistent, real-time rendered 3D worlds, simulations that support the continuity of identity, objects, history, payments and rights and that can be experienced synchronously by an effectively unlimited number of users, each with a sense of individual presence. Robertson and Peters (2021) note that the Metaverse is an aspirational term for a future digital world more tangibly connected to our real lives and bodies.

From these definitions, it is clear that the concept of the Metaverse itself is still under development and there is not yet a complete and definitive implementation. Despite this, the economic pressures from big tech and other large technology companies as well as large investment funds to adopt virtual reality and enter Web3.0 are enormous, and are already colonising the dynamics, imagery and very essence of digital virtuality (Patti,

2023). The advent of the Metaverse represents a fundamental shift in today's notion of digital presence, towards massive interconnectedness, universal interoperability and persistent synchronicity with the creation and populating of virtual environments, a shift that cannot be ignored for long by the disciplines that deal with the design of space.

4 Old urban issues in new virtual cities

In this text, an attempt will be made to examine, without the ambition of being exhaustive, some urban issues that have emerged from the observation of the first experiments dealing with virtual cities and territories, and that approach, in different ways, the concept of the Metaverse, including softwares such as Decentraland, Horizon Worlds, Minecraft, Seoul Metaverse, Liberland Metaverse and Qtopia.

The first consideration concerns the private character of these virtual cities, ultimate expression of the neo-liberal city project. In fact, in these first experiments of virtual cities consolidated urban problems of the contemporary neoliberal city seem to reappear: from the privatisation of public space, to spatial and socio-economic inequalities, redlining, touristification and financialisation processes.

The second issue has to do with the design and its imaginaries, which often re-proposes rooted and hyper-traditional images - despite the potentially high degree of creative freedom of the digital medium - without producing particularly innovative experiments as, for example, the intertwining of architecture, urbanism and cybernetics had generated in the 1960s and 1970s.

A third issue has to do with virtual cities regulatory apparatus, which struggle between the desire for freedom and the need of regulation - that many define as unworkable - potentially undermining norms, rights and values of democracies.

The fourth and final issue has to do with the Metaverse potential to build an infinity of 'multiverses' that could lead to an infinite fragmentation of socio-spatial organisations built around different types of identities in a kind of digital panarchy²²: an exasperation of certain dynamics of socio-spatial fragmentation already present and constantly increasing in the contemporary city (Secchi, 2000).

²² See Gian Piero de Bellis (2017), *Panarchia. Un paradigma per la società multiculturale*.

4.1 Metaverses as private cities: the neoliberal dream

Unlike the World Wide Web or the Internet itself, which were financed by major public institutions, the funding for the development of Web3.0 comes from large private multinationals. The major player in the Metaverse race is clearly Meta, formerly Facebook Inc., which from 2021 will call itself 'a Metaverse company'. But it is not alone. Other big technology companies such as Microsoft (with the VR social network AltspaceVR), Roblox, Decentraland, and Epic Games (the company behind the famous game Fortnite, considered by many to be a potential Metaverse) are also major players in the Web3.0 big race.

The private character of these cities - owned by large multinational technology corporations - seems to be the utmost expression of the neo-liberal project that has been affecting the contemporary city for more than forty years, and enables many problems linked to this paradigm to emerge, sometimes in a radical and extreme way, in these first virtual experiments.

A first issue is related to the strong processes of financialisation that can already be seen in platforms such as Decentraland, where in recent years there has been an incredible increase in the prices of plots sold in the form of NFT.²³ Decentraland is a virtual reality platform powered by Ethereum's blockchain where users can create, experience and monetise content and applications. The grounds of Decentraland are permanently owned by the community, which thus has full control over its creations. Here, users claim ownership of a virtual land on a blockchain-based ledger and land owners control what content is published on their portion of land, identified by a set of Cartesian coordinates (x,y). Land is a non-fungible, transferable and scarce (90,000 plots circa) digital asset stored in an Ethereum smart contract and can be purchased by spending an ERC20 token called MANA (Ordano et al., 2017).

The large increase in the cost of 'land' in Decentraland has recently been the subject of much attention in public and academic debate. While in the early years of the platform (2017) the price per plot was around \$20, today (2023) the cheapest ones are sold for around \$12,000 each, a price increase of about 60 000 per cent in just six years²⁴. In the virtual city of Decentraland, as in contemporary metropolises, centrally located plots have higher prices than peripheral ones. As Goldberg, Kugler, and Schär argue in their paper 'Land Valuation in the Metaverse: Location Matters' (2022) location matters even in a virtual world with negligible mobility costs like Decentraland. For the authors, investors'

²³ NFT stands for 'non-fungible token'. A non-fungible token is a unique digital identifier that is recorded on a blockchain, and is used to certify ownership and authenticity.

²⁴ For example, a company recently made headlines by paying almost one million euro for 259 plots of land for a virtual shopping centre on Decentraland (Howcroft, 2021).

location preferences are associated with plots close to popular landmarks, usually those more centrally located and for plots with more memorable addresses. It emerges how new virtual cities incorporate traditional real estate market dynamics and thus it is no coincidence that virtual real estate agencies have arisen in recent years, such as the very popular Metaverse Properties. This strong ongoing process of financialisation can generate, as in physical cities, increasing spatial inequality, processes of redlining and exclusion of minorities and vulnerable groups, also in the Metaverse.

Other urban issues have to do with virtual cities touristification processes, as in the case, for example, of Seoul Metaverse, the virtual version of Seoul, South Korean capital, launched during the Covid-19 pandemic. One of the main aims of the platform was, in fact, to allow people to 'visit' the city's main tourist attractions in a situation of physical isolation such as that caused by the pandemic, in a kind of virtual touristic experience. A highly extractive vision of cities that recurs in many experiences of the Metaverse.

Finally, issues related to the digital divide posed by the Metaverse diffusion cannot be left aside. Despite the fact that many of these experiences emphasise the potential of accessibility to services even in isolated situations - e.g. the Seoul Metaverse, which provides access to many public services - it is clear that it poses accessibility problems for people without the possibility of acquiring or using hardware and software that allow them to take advantage of the Metaverse experience. Again, this potentially generates dynamics of economic, ableist and/or generational inequality.

4.2 Design imaginaries in virtual cities: the dictatorship of neoliberal realism

The second part of my argument has to do with the design imaginaries of many of the new mainstream virtual cities. From my point of view, there are two trends, which are not mutually exclusive, that highlight the strength of the 'dictatorship of realism' in design practices and imaginaries, even in a situation of potential total creative freedom as in the virtual field. On the one hand, we find imaginaries related to the gaming industry, and we see this in almost all the case studies investigated, from Second Life to Roblox, Decentraland, Horizon Worlds and Minecraft. On the other hand, there are imaginaries drawn from the neo-liberal city, and among the cases investigated the best example is the Liberland Metaverse designed by the Zaha Hadid studio.

Minecraft, described by many as a kind of digital Lego (Olmedo, 2013), is an excellent example of a widespread type of aesthetic in early virtual cities experiments. Minecraft is an open-ended 'sandbox' game designed by Markus Persson and published by Mojang, in which players build textured cube constructions, block by block, in a world with its own physical laws (Overby & Jones, 2015). It is perhaps the best example of player-created urban space in a game environment. Currently owned by Microsoft and available on

multiple gaming platforms, as of April 2021 there were 139 million monthly active players, with 238 copies of the game sold worldwide (Microsoft, 2021).

Liberland Metaverse is exemplary of another type of aesthetic emerging from early examples of digital cities. Designed by the famous Zaha Hadid studio, the forms and spaces of this digital city are not particularly different from the studio's designs in the Far East or the Gulf countries. The forms and spaces are more or less the same (i.e. emphasis on fluidity and continuity of forms), issues and obsessions of contemporary design are repeated (i.e. very traditional techno-ecological scenarios).

Liberland Metaverse is a virtual city created as an extension of the Free Republic of Liberland, a libertarian micro-state founded by right-wing Czech activist Vít Jedlička in 2015 on a swampy plot of land only three square miles in the border between Croatia and Serbia. Not being officially recognised by any nation, the libertarian experiment decided to move to the virtual domain. To date it counts, according to its promoters, more than 700,000 applications for citizenship.

With the grand narratives of the 20th century gone, it would seem that the imaginaries of urban and architectural design are abandoning their utopian instances, "that insolent claim to change the world" of which Hirschmann (1982) speaks, and surrendering to the dictatorship of neo-liberal realism, to the Thatcherian "there is no alternative". The Metaverse virtual cities are very distant from the ideological, formal and spatial tensions of the two great urban models of the Modern Movement, F. L. Wright's 'Boadacre City' and Le Corbusier's 'Ville Radieuse' but also from the radical high-tech architecture experimentations linked to the emergence of cybernetic systems²⁵ in the late 1960s and the beginning of the 1970s.

4.3 Virtual cities regulatory apparatus: between surveillance and anarchy

A third issue concerns the virtual cities regulatory apparatus. The private, undefined and unexplored nature of these virtual worlds challenges established norms, rights and values of physical cities. In the following paragraphs, we will critically describe some current trends based on some recently much-discussed examples.

It is well known that sensitive data management in big tech in recent years has not been particularly transparent (Urman, Makhortykh, 2023). In the case of Web 3.0, commercial targeting could be taken to the extreme, as important biometric data, from retinal dilation to heart rate or gestures, etc., could be collected. In short, surveillance capitalism (Zuboff, 2019) taken to the extreme. The problems of content regulation in social networks - one need only mention the recent events of X, formerly Twitter - are also well known and

²⁵ See: Nicolas Schöffer (1969), *La Ville Cybernétique*.

undermine fundamental issues of liberal societies. These factors are taken to their limits in Web 3.0 where the experience of *immersion* and *presence*, the main neurological parameters that virtual reality brings into play (La Trofa, 2022), are taken to extremes. Regulation here has to deal not only with fake news or hate speech, but with acts, movements, gestures, speech. All in real time.

In this regard, the first cases of sexual harassment on some virtual platforms including Horizon Worlds, one of META's virtual reality applications, caused a major scandal (Diaz, 2022). Due to such scandals, the discourse of regulation in the Metaverse has become central to the public debate, raising numerous questions about the interrelationship between the real and the virtual field. The debate was polarised between those who downplayed the issue - mainly citing gaming experiences where situations of violence are normalized - and those who, from a post-human perspective, where bodies, machines and software become one, have defined it as *real* harassment.

Meta's response to these cases was the creation of the 'safe space', conceived 'as a personal security bubble', which recalls Peter Sloterdijk's anti-modernist metaphors in the Spheres trilogy (1998, 1999, 2004). Andrew Bosworth, Meta's Chief Tech Officer, admitted in an internal memo quoted by the Financial Times (Murphy, 2021) that moderation in the Metaverse "on any meaningful scale is virtually impossible". The report 'Metaverse: another cesspool of toxic content' (2022) developed by the non-profit advocacy organisation SumOfUs shows, among many other alarming data, how regulated spaces on Horizon Worlds are actually very limited.

The idea of building spaces of freedom in utopian worlds - even in the anarchist and libertarian matrix - have always been part of the architectural and urban design culture, becoming spatial manifestos of ambitious ideological instances of change.²⁶ The Metaverse has the potential to become a space of freedom for creative thought and action, but it would seem that in the current mainstream dynamics there is a risk that it will become a place of exclusion and violence for minorities and marginalised groups. News about first Interpol office opening²⁷ in the Metaverse that aims to 'combat online crime of any nature' (2022) would seem to propose a scenario where traditional regulatory apparatus, control and surveillance tools will try to reproduce themselves in the near future, to a greater or lesser extent, also in virtual cities.

²⁶ In this respect as well, the radical architecture of the 1960s and 1970s was emblematic. In France, the G.I.A.P. (Group International d'Architecture Prospective): Paul Maymont, Yona Friedman, Walter Jonas, and Nicolas Schöffer. In Italy, Superstudio and Archizoom Associati. In the United Kingdom, Archigram. In Japan, the metabolism movement including Kenzo Tange and Arata Isozaki.

²⁷ See: Interpol Technology Assessment Report on Metaverse, October 2022.

4.4 On the necessity of a new project for a 'bubble city' scenario

Another scenario, again in response to regulatory concerns, could be the multiplication of meta-worlds created for specific communities as a protective response in an unsafe arena. Is that already the case of Qtopia²⁸ which presents itself as the first Metaverse for the LGBTQ+ community. As stated on their website "Qtopia is the first Metaverse by and for the LGBTQ community (...) the Qtopia Metaverse aims to provide an inclusive virtual space for the LGBTQ+ community, friends and allies to connect, while giving back to LGBTQ+ causes. Qtopia is being created with an emphasis on equality, diversity and sustainability." The Metaverse's potential to create an infinite multiverse could lead to an infinite and fragmented socio-spatial scenario, built over different identities in a sort of a digital identitarian panarchy.

The fragmentation tendency of the contemporary city (and society) is certainly not a new issue for designers and urban planners to deal with. European cities since the last years of the 20th century, when the egalitarian instances of the Welfare State ended, but especially in the last two decades in a situation of continuous crises (economic, financial, demographic, migratory, pandemic, ecological) have experienced a constant and unstoppable process of spatial "fragmentation" also linked to an increase in socioeconomic inequalities, which designers and urban planners have addressed in different ways, from condemnation to acquiescence (Secchi, 2005; Donzelot, 2009). Spatial expressions of this phenomenon are, for example, the gated communities, the new exclusive eco-neighborhoods, the gentrified and patrimonialized city centers, and at the other extreme, the places of exclusion such as the most difficult city suburbs and the informal settlements linked to immigrants, *sans-papiers*, homeless and new nomadic populations.

This bubble-city scenario, taking up again Sloterdijk's metaphor,²⁹ poses yet significant questions to contemporary urbanism, which draws its inheritance from the modern idea of society (and not groups or communities), and democratic and secularly spaces. The question is how such an anti-enlightenment and anti-modernist scenario like this, that virtual cities may exacerbate, could be governed and designed.

²⁸ See: <https://alphaverse.com/qtopia/#>.

²⁹ Sloterdijk (2015), quoting Jakob von Uexküll's reflections on the foundations of theoretical biology, states: "it was a mistake to believe that the human world constituted a space shared by all living beings. Every living creature has its own particular space that is as real as the space proper to human beings. This perspective offers us a completely new view of the universe as something that does not simply consist of a soap bubble that we have inflated to such a size that it goes beyond our horizons, assuming infinite proportions, but rather is made up of millions of distinctly distinct bubbles that overlap and intersect everywhere."

5 Towards a radical project for virtual cities

Contemporary dystopia or utopia, what are these new virtual cities? The construction of better cities and better 'worlds' has always obsessed designers and urban planners. The digital field gives us this possibility but it would seem to re-propose well-rooted imaginaries and problematic issues of contemporary cities.

As Federica Patti (2023) points out, on the one hand, early experiences in the Metaverse highlight the "extrusion and surveillance dynamics at work as well as the intrusive reach of marketing using adaptive algorithms to personalise artificial intimacy, the perpetuation of imaginaries of domination, the emergence of new digital crimes, and the management of privacy, transparency and fakes." On the other, it seems that the "world of finance and big brands is already colonising dynamics, imaginaries and the very essence of digital virtuality." The virtual spaces of the Metaverse pose ethical questions of inclusion and decentralisation, of norms, rights and values, of economic, social, and not least ecological sustainability and equity that need to be addressed immediately. In fact, another inescapable issue is related to the unsustainability - understood in socio-ecological terms - of these virtual cities, which re-propose an advanced extractivist and unequal techno-capitalist vision, without posing the main question that the current state of polycrisis poses - a project for the care of the world.

Such a scenario bring into play academics, practitioners and policy makers dealing with architectural and urban design. At least three issues emerge from this paper that could be useful for the construction of better design strategies for virtual cities. The first recommendation is to strengthen the practices of commoning within the projects of virtual cities, as some experiments on contemporary digital art suggest.³⁰ The goal is to challenge the big digital platforms monopoly on virtual practices and imaginaries through open source infrastructures imagined as common goods accessible to all and not just an upper class elite. The second recommendation advocates a greater focus on digital spatialities within academic research and educational practices in the field of architecture and urbanism. The close intertwining of the digital and non-digital worlds urgently demands that our disciplines pay more attention to the design of an original virtuality as just, radical and experimental spaces. The last suggestion addresses the regulatory apparatus of virtual cities, which needs to find a middle ground between a situation of total anarchy and an absolute surveillance delegation to large multinational technology corporations. It is suggested to empower intermediate regulatory entities - digital citizens, groups and associations - which through agency strategies strengthen our democracies also in the virtual arena.

³⁰ See Federica Patti (2023) 'Performatività posthuman e dinamiche del Metaverso: A Matter of eXperience'.

The advent of the Metaverse, a fundamental shift in today's notion of digital presence, towards massive interconnectedness, universal interoperability and persistent synchronicity, with the creation and populating of virtual environments, calls for serious reflection on the need for new imaginaries on the digital field, a radical 'politics of the imagination' (Didi-Hubermann, 2010). Also in the architectural and planning disciplines.

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