

STUDY

EUROPEAN DEMOCRATIC VALUES IN THE METAVERSE

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November 2022

An Exploratory Study

EXECUTIVE SUMMARY: The exploratory study identifies challenges and opportunities for democracy in the metaverse and points out fields for deeper engagement. According to the study, democracy may be endangered in the future by the realisation of a centralised and privatised metaverse in the three areas of fundamental rights, public sphere and democratic processes and procedures. Since the technology is not currently ready for the realisation of a metaverse corresponding to a comprehensive lifeworld, the long-term option is to build our own European structures in the next ten to 15 years. But even in the medium term, in five to ten years, democracy can be secured through standards and regulation. Even today, when setting up and operating metaverses, it seems sensible, firstly, to implement the current EU digital regulation as a framework, secondly, to define one's own democratic processes and, thirdly, to critically reflect on one's own design decisions and community rules. The common thread across all areas of application and time horizons is to strengthen the level of education and competence of citizens for an informed and critical use of this new technology.

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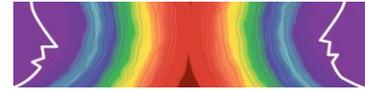
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1. What is the metaverse?

Since Mark Zuckerberg rebranded his company from Facebook to "Meta" in 2021 and has so far invested 36 billion US dollars in the development of the respective "metaverse" (see Dean 2022), a veritable hype has emerged around the term. The metaverse can be described as an extended digital reality (XR) in which virtual reality (VR), augmented reality (AR), cyberspace, the internet and the real physical and mental world merge into one. Zuckerberg speaks of the "embodied internet". On the one hand, it is a social space where people can work, meet friends, play, learn, enjoy themselves and have new immersive experiences; users make contact with each other via avatars. On the other hand, it is an economic space where people shop with cryptocurrencies and make various investments, e.g. in the form of NFTs. Technical gadgets for users such as VR headsets or haptic suits will play a major role, as will technologies such as artificial intelligence (AI), blockchain, internet of things (IOT) or 5G, as they expand and improve the use scenarios in the metaverse.

Nevertheless, the term metaverse is not only considered Zuckerberg's idea, but it is also a general term for numerous technologies and platforms with the above-mentioned characteristics which various actors and companies (e.g. also the US corporations Apple, Google, Microsoft, etc.) are working on, or that have been existing for some time (e.g. the gaming platforms Oasis, Fortnite or Minecraft). We can thus also speak of many "metaverses" in plural form. However, the term metaverse simultaneously stands for the vision of a future comprehensive common digital lifeworld (see Ball 2020). Whether the metaverse will not only remain a phenomenon for certain groups but actually be of relevance as a lifeworld for the general public will only become apparent in the next ten to 15 years: According to experts, this will depend on various technical prerequisites, especially the power of the networks and the practicality of the technical gadgets (see Lobo 2022). But what we know for sure is that companies are investing billions in the development of the metaverse in the wake of the current hype.



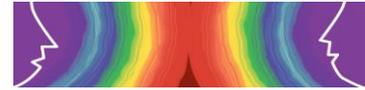
Why should we be concerned with the metaverse, especially against the background of democratic structures? The metaverse is conceived by the big tech companies as a social, commercial and proprietary space in which politics play no or only a subordinate role. Should more and more people use the metaverse in the future to such an extent that it will have an increasing significance in public space, questions of governance will become more and more important. If the technical infrastructure is provided by only a few companies without regulatory or other restrictions, they will determine the rules. This will happen primarily not according to democratic principles, but according to criteria of profit maximisation. Then the metaverse risks becoming a space that is of public importance but organised according to private-sector principles. After all, Zuckerberg borrowed the term from the 1992 science fiction novel "Snow Crash" by Neal Stephenson, in which democratic structures have dissolved, corporations rule the world and people take refuge in the virtual reality of the "metaverse" where things do not necessarily stand for the better.

The exploratory study identifies challenges and opportunities for democracy in the metaverse and points out fields for deeper engagement. In the next section, the relationship between the metaverse and democracy will be discussed. Then three options for action are presented that have an impact in the long term, in the medium term and in the here and now. Finally, there will be some concluding thoughts on further questions and an outlook to the unpredictability of the future.

2. What is the connection between metaverse and democracy?

Closed and centralised metaverses pose a risk to democratic values as we define them in European terms. A centralised metaverse means that it is provided by only one operator who can monitor and track all platforms, apps, tools, transactions and movements. The fact that services come from a single source, makes it difficult for users to switch to other providers, which is called the "lock-in effect". If the business model is based on selling user data to advertisers or using it for other commercial purposes, the metaverse's access, functionality and algorithms are designed in such a way that people produce as much data as possible. The core element here is to control and capture the attention of users. In this way, negative effects that we already know from existing social media platforms could be taken to a new level: In the metaverse, the users' attention can be extracted to a much greater extent through the intended immersion, i.e. experiencing the digital world like the real world:

- Fake news and filter bubbles
- Hate speech and polarisation
- Biases and discrimination
- Mental Health
- Consumer and data protection
- Surveillance, control and censorship
- Targeted advertising



As Thomas Metzinger, Professor of Theoretical Philosophy, outlines, the metaverse could "extract even more resources of attention, further damage mental self-control and thus undermine democracy, which depends on a critical mass of responsible citizens" (translated from Metzinger 2021). The key prerequisite for democracy in this context is respect for basic rights as defined in the European Charter of Fundamental Rights:

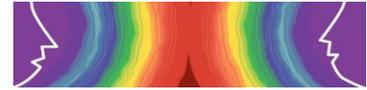
- Dignity
- Freedoms
- Equality
- Solidarity,
- Citizens' rights
- Justice

If fundamental rights of people are systematically undermined by the extraction of their attention, this per se cannot be in the spirit of a democratic understanding that places people as citizens with their autonomy and self-determination at the centre of developments.

Assuming that the metaverse will achieve public importance in the future, but will be run by companies according to the principles of profit maximisation, public discourses could be controlled or undermined. However, according to European understanding, the public sphere has a key role in establishing and securing democracy: the crucial function is the process of forming a collective will, on which the legitimisation of political decisions through public debate is based. The fundament for this is an active, informed and inclusive participation of free and equal citizens. The danger posed by a privatised and centralised metaverse to the democratic public sphere can be seen as an intensification of the discussion about negative aspects of the digitalised public sphere, such as political polarisation and disinformation (see Ritzi 2021, Habermas 2022, Kettmann 2022).

Closely linked to the democratic public sphere are democratic processes and procedures, i.e. free, equal, universal and secret elections as well as institutions in a representative democracy that enable co-determination and citizen participation. With the potential influence on political debates mentioned above, political agenda-setting and voting behaviour can be manipulated on a large scale. Specifically, micro-targeting or voter targeting makes it possible to influence voters individually and manipulate them through misinformation (Zimmermann 2022). Again, the problem can be seen as a further advancement of what has already been discussed with regard to digitalisation and artificial intelligence in the context of democracy (Sowa 2017, Thiel 2022). However, democratic processes and procedures go beyond elections and also extend to the way power is exercised and to institutional accountability. In a privatised metaverse, all political representatives and democratic institutions are simultaneously users and subject to the rules of procedure and thus the business model of the company. They have neither political power nor are they per se accountable in the digital world

In summary, a private sector metaverse with the business model of data extraction appears problematic for three areas in particular: fundamental rights, the political public sphere and



democratic procedures and processes. But even if we do not assume that the metaverse will develop a general relevance for the public, but only offer individual applications for specific interests, questions still arise about rules and a technical structure that meets European value standards. So how can we ensure that democratic values are embedded in the metaverse according to European understanding?

3. How can we ensure democracy in the metaverse?

Competence and education are needed in dealing with new technologies and their impact on democratic processes. Enabling and promoting this is not only important because it is a fundamental right of the "freedoms" in the European Charter of Fundamental Rights. It is also important for society as a whole, as it forms the basis for citizens to participate in an informed deliberative process.

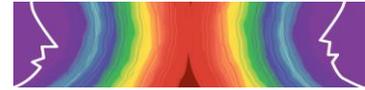
Furthermore, in the following I would like to classify different measures in three time horizons of degrees of effectiveness, namely those with a longer time horizon of ten to 15 years, with an intermediate time horizon of five to ten years, and those with immediate effect.

a) What can we do in the long term? (10-15 years)

Building a long-term democratic metaverse structural measures are necessary that require strategic political commitment. It should be seen as an opportunity that technology is not currently ready for the realisation of a metaverse corresponding to a comprehensive lifeworld. Even though companies are currently investing billions, from a purely technical point of view, a comprehensive metaverse only seems realistic in a time frame of ten to 15 years. This period can be used from now on to build European structures and promote European companies. This also raises central questions about Europe's digital sovereignty, understood as technological independence from non-European countries. The European Commission has announced a metaverse initiative for the coming year to put people at the centre of developments according to European values and rules (Kabelka 2022). Therefore, it is important to develop positive and desirable visions for a metaverse that demonstrate how a European and common good-oriented metaverse could be concretely shaped. For Europe to shape the metaverse, we must not only define what we do not want. We also need to show what a desirable vision of the future that motivates action could look like. To this end, it would be advisable to build a network of experts from different disciplines, institutions and companies who pool their knowledge and develop concrete recommendations and measures for a democratic metaverse that is in line with the European canon of values. In this sense, we move from a problem-centred to a solution-centred approach, which not only averts threats to democracy, but also opens up ways to promote and improve democracy.

Long-term measures:

→ Build and promote European structures and enterprises, develop positive and desirable visions for the future



b) What can we do in the medium term (5-10 years)?

With a medium-term impact of five to ten years, measures can now be taken that also complement the longer-term strategies mentioned above. Here, the definition of technical standards and certification models of providers and operators play a crucial role, creating spaces of opportunity for interoperability. If it were possible to easily switch between different metaverses, lock-in effects could be mitigated and ideally such players could also exist alongside the large tech companies whose models are not or less based on data extraction – as has already been proposed for the major platforms (Doctorow 2020) and can be found to some extent in the new EU Digital Markets Act. After all, common technical requirements are commonplace in the tech industry, but they depend on the self-commitment of companies that weigh up between compliance with standards and their business interests. Here, the fundamental problem from the discussion on artificial intelligence can be transferred to the metaverse: "In future, with regard to the role of technical standardisation in AI, in view of the potential social impact of AI systems, it must first be clarified which areas can be covered by voluntary self-regulation and where standardisation embedded in democratic processes is needed" (translated from Beining 2020). Thus, part of the discussion has to be which and whether new European regulation will be necessary, or whether existing EU digital regulation can be expanded or improved. This applies not only to the Digital Markets Act, but also to the Digital Services Act, which will soon come into force, and the Artificial Intelligence (AI) Act.

Medium-term measures:

→ Technical standards, interoperability, new and improved regulation

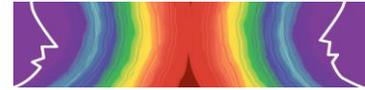
But beyond the larger political processes that need to be initiated and already are by various actors, all providers and operators of metaverse platforms can start working concretely on a democratic metaverse in the here and now. After all, there are already a multitude of metaverse applications in a wide range of fields, from maintenance support for industrial machines to collaborative work environments and various educational services that are continuously being developed.

c) What can we do right now?

Regardless of future relevance and future regulatory scope, democratic values can be secured and promoted in the metaverse here and now by respecting the basic principles of EU digital legislation, defining own democratic processes and reflecting design decisions and community rules.

Comply with European digital legislation

In addition to the applicable General Data Protection Regulation (GDPR), which deals with the processing of personal data and thus aims to protect the data of EU citizens, two regulations currently in the process of adoption are particularly noteworthy in the context of



the metaverse: the Digital Markets Act (DMA), which deals with competition law aspects, and the Digital Services Act (DSA), which deals with societal issues. The AI Act, which could be passed in 2023 or 2024, is also relevant. These regulatory approaches are particularly aimed at the large platforms Google, Facebook and Amazon and do not apply directly to an emerging metaverse. However, they could be applied or expanded:

"The labelling requirements of social bots and deep fakes from the Artificial Intelligence Act, for example, must also apply to AI systems in the metaverse. In this internet world, it must be clear whether real people are acting or an artificial intelligence. The Digital Services Act contains rules for the access and retention of content on platforms. These are primarily aimed at equal opportunities and non-discrimination and can also be made fruitful for metaverse platforms. If certain services of metaverse platforms develop into gatekeepers, the ex ante competition law rules of the Digital Markets Act must also be considered, for example with regard to the interoperability of content. Of course, the rules of the General Data Protection Regulation are also applicable in the metaverse." (translated from Kalbhenn/Heet 2021)

In the spirit of democratic values, it seems a sensible strategy, both normatively and practically, to follow, as far as possible, the already existing and envisaged EU regulatory frameworks when building metaverse platforms, even if they do not (yet) claim any validity for the metaverse, for example:

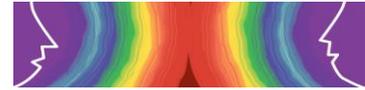
- Mandatory labelling of bots and deep fakes
- Equal opportunities and non-discrimination
- Measures to combat illegal products, services and content on the internet, including clearly defined procedures for its removal
- Interoperability and data portability requirements
- Free choice of apps and services
- Facilitation of user complaints and transparent handling of online advertising

Define your own democratic processes

The metaverse offers all actors who want to build or run an according platform the opportunity to test and create their own spaces of democratic engagement. Here, too, existing recommendations from the field of artificial intelligence can be useful, for example the "Algo-Rules" (Bertelsmann Stiftung, iRights.lab 2019). Basic requirements for this include:

- Set transparent goals

It must be made transparent what overt and covert goals are being pursued so that risks to society and individuals can be assessed and avoided. This includes, for example, the collection and sale of data to manipulate users for commercial or political purposes. Increasing immersion can make it increasingly difficult to detect intentional influencing and disinformation.



- Ensure accountability

It must be clear and openly communicated who bears what kind of responsibility in which position. The responsible persons must be reachable and responsive.

- Provide opportunities for participation

Aiming at a democratic process, forms of co-determination should be defined that make different voices heard and thus lead to more diversity and inclusion. Here, the discussion about "platform/social media councils" in Germany and elsewhere is relevant; in Germany, the establishment of such councils was announced by the federal government in the coalition agreement of 2021.

The above requirements also allow for a competent handling of the metaverse as a socio-technical system. After all, technology, whether in development or in application, does not stand by itself, but is always embedded in a socio-technical system that dynamically emerges from the interaction of technology with the social context. Regardless of how the technology is designed, there will always be negative and positive unintended consequences to reckon with. Thus, it is quite conceivable that new forms of mobility in the metaverse will open up for people with physical disabilities, but efforts to include these groups in the physical world could diminish as a result. Or in terms of working life: A purely digital work environment could also have a positive effect on labour mobility, but at the same time physical and psychological well-being could decline without real human contact (Bernstein/Mehnert 2022: 14).

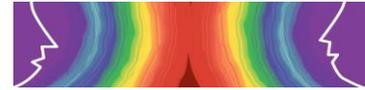
Reflect on design decisions and community rules

Against the background of EU regulation and the importance of democratic processes, there are design aspects and community rules that need to be set for the respective metaverse and play a crucial role in a democratic space.

Basically, what is allowed in the metaverse should be oriented towards criminal law, which should prohibit and sanction all forms of assault (e.g. insults or harassment) or make it impossible from the outset (e.g. killing an avatar). With regard to violent acts, however, further regulations are needed as to where and when demarcations from game contexts must be made. Overall, there will likely be grey areas that need to be negotiated depending on the context, e.g.:

- Protection against undesirable behaviour
- Avatar design and abilities
- Creation of safe spaces

When it comes to design decisions and possibilities for action in metaverse environments, it seems worthwhile to draw on the knowledge and creativity of game developers as well as to acquire know-how yourself when certain skills are missing. A successful experience and



interaction in the metaverse can be positively influenced by design decisions and social rules of behaviour.

The metaverse also offers opportunities in particular for the active participation of people with physical and mental disabilities. In these sensitive areas, a combination of professional expertise, social competence as well as exchange with those affected is essential.

Measures with immediate effect

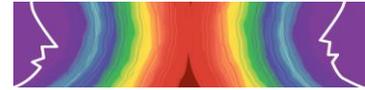
→ Take into account current European digital legislation; define democratic processes; reflect on design decisions and community rules

4. Democracy in the metaverse: further questions

As this exploratory study has shown, the metaverse poses risks to democratic values as we understand them in Europe. These risks arise mainly from the tech corporations' data extraction business models favouring a centralised metaverse. This is dangerous if the metaverse actually becomes a comprehensive public lifeworld and takes on the character of an infrastructure. But a non-centralised metaverse also offers the chance to rethink and promote democracy. Because in the spirit of a basic understanding of democracy, new technologies should always serve to strengthen citizens' self-determination and not lead to its weakening. This is a task for society as a whole, which concerns not only the regulatory authorities, but also the economy, civil society, educational institutions and the media.

With this paper we want to lay a first cornerstone for a systematic further engagement with the topic. In doing so, the points mentioned are neither exhaustive nor completely dealt with. Further questions are the opportunities and risks of a possible shift of public services or even democratic processes such as elections to the metaverse. Would this be a step forward or a step backwards for democracy in practice? Given the essential importance of the metaverse, would access and the necessary technical equipment then have to be regarded as services of public interest and made available with state support? In addition, the similarities and differences between governance structures in digital gaming culture and a more public metaverse should be worked out. Where and when do different standards apply and with what justification? Do the spheres blur, as is already the case with the game engine Fortnite? In addition, climate change and high energy costs place sustainability demands on a metaverse that becomes more and more energy-intensive with increasing performance. Sustainability issues are relevant to democracy because they directly affect solidarity between social groups and intergenerational justice.

In all these considerations, it is important to note that the future is not determined. On the one hand, this means that we can imagine different futures and shape them positively. On the other hand, it also means that the unforeseen and previously unimaginable can happen. The company Meta, for example, receives much attention because of its declared goal of building a metaverse, but is also causing amusement and ridicule because of Zuckerberg's babyface



avatar in front of a children's book-like backdrop. It is possible that the metaverse will emerge somewhere else and in a completely different way than we can currently imagine - and then raise completely new questions. Perhaps it is precisely new technologies with different structures that offer the chance to reinvent democracy and make it more equitable and inclusive (see Zarkadakis 2020). After all, there are other stories besides "Snow Crash" in which we manage to develop technology together and use it for the common good - we just have to write and read them.

I would like to express my sincere thanks to the experts who made themselves available for a discussion on the topic:

Dr. Julian Jaurisch: Project Manager "Policy/Platform Regulation", Stiftung Neue Verantwortung, Berlin.

Prof. Dr. Matthias C. Kettmann, LL.M. (Harvard): Head of the research group "Global Constitutionalism and the Internet", Humboldt Institute for Internet and Society, Berlin.

Wenzel Mehnert: Futurologist, Austrian Institute of Technology (AIT), Vienna, and co-founder of the Berlin Ethics Lab, Technical University Berlin.

Rainer Rehak: Researcher and doctoral candidate in the research groups "Quantification and Social Regulation" and "Digitalisation, Sustainability and Participation" at the Weizenbaum Institute for the Networked Society, Berlin.

Prof. Dr. Volker Wittpahl: Director of the Institute for Innovation and Technology (iit), Berlin.

The views expressed in the text do not necessarily reflect those of the experts mentioned.

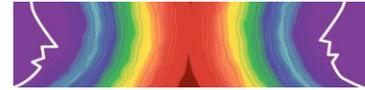
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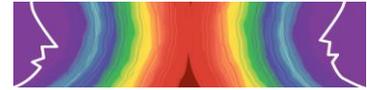
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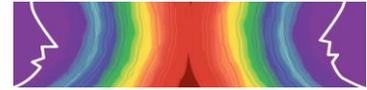
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This paper is the result of a collaboration between the Stiftung Zukunft Berlin and the Foundation Metaverse Europe.

Imprint © November 2022

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Cover image: ooceey/Pixabay

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