

**upgrade
democracy**

Visions: Democracy and Technology

Part 4

Virtual Worlds and Participation

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Virtual worlds have a strong appeal for many people. They are a reliable feature of science fiction films and novels. The promise of computer-generated environments which one can enter through VR glasses and controllers is that anything is possible there. In virtual worlds, we are not bound by the laws of nature and can place ourselves in any imaginable environment or situation. Virtual worlds thus hold the potential for unlimited expansion of our possibilities – at least in gaming. But can they also have an impact on democracy and participatory processes?

What is it about?

Every interaction with digital technology creates digital replicas of reality that can be altered and specified, thereby imitating, representing, and enriching reality (or realities) – this is also true in virtual realities. However, the term virtual reality is usually more narrowly defined: it is used for technologies that directly augment or overlay sensory perception with digitally created or curated information.

This is particularly symbolised by data glasses. These allow visual impressions to be created that we experience as particularly immersive and comprehensive. In relation to virtual worlds, a distinction is made between augmented reality (AR), which displays content in addition to visible reality, thus enhancing human perception of reality, and virtual reality (VR), in which users immerse themselves in a completely artificial environment.

In recent years, the development of virtual worlds has rapidly accelerated. This is due to several interrelated developments. On the technical-material side, components have become

increasingly smaller, making it easier to conceal the use of technology. Hearing aids, as well as data glasses, are becoming less conspicuous; direct implants or neurological procedures could be the next steps in development.

At the same time, the capacity for computing content and connecting devices has significantly increased. This has improved the graphical representation of virtual worlds – and with it, the possibilities for immersion, i. e., the ability to dive into the artificial environment without perceiving it as such. AI processes are increasingly ensuring that virtual worlds do not have to be prefabricated but can become more reactive, interactive, and thus more customisable. Finally, comprehensive interconnection allows for the further expansion of the availability of virtual worlds and information as well as for the connection of different worlds. The concept of the metaverse has received particular attention in this regard. It refers to a digital space where people can interact with each other via avatars and which has been conceptually monopolised by Meta, the parent company of Facebook.

Depending on the specific technologies and applications that prevail, the use of virtual worlds will have very different social impacts and varying degrees of influence. The central promise of virtual worlds is that we experience them as a real presence, and the experiences we have in them through our avatars are seen as directly relevant to action.

The virtual representatives of a person are flexible and changeable digital replicas. They allow us to move in the digital space in ways that might be completely different and, under certain circumstances, far more extensive than would be possible in the real world.



What are the potentials and risks?

The increased use of virtual worlds has the potential to significantly alter our daily lives – for example, as an interactive learning environment in schools, simulation training in the field of medical technology, or for novice drivers who must first take practice sessions in a virtual world before being allowed to use the motorway. The impact on democracy is more diffuse. Neither state action nor the dynamics of public discourse will be as immediately affected in the near future as might be expected from generative or analytical artificial intelligence. However, in the medium to long term, it is possible to speculate on significant changes in terms of social and political participation.

Protection from discrimination and potential for more self-determination

Virtual worlds allow individuals to present themselves flexibly. An avatar is not an exact replica of a person and may differ significantly in self-perception and external perception from the person it represents. How we present ourselves in the virtual world is self-determined and changeable. This offers the opportunity to reduce discrimination – such as when highly stereotyped groups are given the opportunity to circumvent prejudices, or when physically

impaired people are intensively and comprehensively included in social discourses in which they might otherwise not be able to participate.

Empathy through new perspectives

At the same time, the ability to make the experiences of other positions and life situations vivid and understandable can also be an opportunity for people to broaden their horizons through virtual experiments and to see situations through “other” eyes. For example, a variety of applications in the field of political education can be envisaged, which could increase understanding and willingness to compromise with others, or in which discussions between extreme positions could be enabled in safe virtual spaces.

Equal participation opportunities in virtual worlds

As with all (media-mediated) intensifications of participation and social exchange, it is necessary to examine how real-world differences transfer into the altered environment when it comes to the virtual expansion of communication forms. It is also necessary to examine how disadvantages can be compensated for: Do all people, regardless of their social or economic status, have the same opportunity to participate and be considered? To what extent can design decisions be made that counteract or reduce the exacerbation of inequalities?

Linking analogue and virtual identities

It also remains to be seen to what extent the separation of analogue and virtual identity will be allowed and practised, or what consequences, for example, the unwanted revelation of real identities will have (Digital Identities). The early history of the internet, online role-playing games, and social media already offer examples of how identity negotiation in often pseudonymous virtual worlds can be as dynamic as it can be ambivalent. Experiences of freedom and the ability of smaller groups to find each other and communicate in relatively protected spaces are as well-known effects as hatred and the exploitation of new vulnerabilities.

Active and preventive moderation in virtual worlds is necessary

Virtual worlds, therefore, require relatively strong, i. e., active and often preventive, moderation – especially if they become normalised in everyday life and because the experiences made within them promise a great deal of immediacy. This was illustrated, for example, when Meta had to introduce protection bubbles for avatars in the virtual environment Horizon, which it created and controls, to prevent harassment and sexual assault. With regard to concrete political participation procedures and forms, it is also worth considering that in a virtual environment it is even more difficult to assess how representative participation is and how broad the support for an opinion or position really is – because manipulative

and inauthentic communication also benefits from the lower participation costs and the graphical over-formation of the action environment.

The danger of built-in manipulation and control

Another dimension must also be considered when it comes to the impact of technology on democracy: while the use of virtual worlds from the perspective of individuals has something non-binding and playful about it, their architecture holds a multitude of possibilities for surveillance and manipulation. Regardless of whether a centralised or decentralised version of virtual communication worlds prevails, the creation of these worlds requires, for example, a multitude of biometric data (for identity management, but also for things like gaze direction and natural-looking hand and body movements), as well as the permanent observation and storage of behavioural data, if only to make the worlds sustainable.

Virtuality thus accelerates and solidifies the capture and measurement of our normal living environment, its penetration with sensors and cameras, and the traceability through the recording and analysis of behaviour. Virtual worlds are therefore not anonymous either; rather, they offer numerous points of reference for hierarchies and control. Moreover, the emerging information environments are highly and often one-sidedly configurable. Individual information flows can be recorded and partially directed, with information added or hidden on an individual basis. This makes the emerging public spheres susceptible to influence, and it will be crucial whether these data remain exclusively in private hands, are subject to stricter data protection regulations, or are used by states for surveillance.

In Conclusion

As long as we communicate digitally, digital identity will remain a structural issue – and bring with it a permanent problem of identification and verification. We see that people are communicating less and less in anonymous contexts; this leads to the identification of a person's identity at any time, even retroactively, and increasingly linked to behavioural data. From the perspective of democracy, these effects are ambivalent. What is needed are identity management systems that allow citizens to decide for themselves how and to what extent they share data and make themselves identifiable.

Further reading

- Pierson, Shannon 2023: [Securing the Metaverse: Addressing Harms in Extended Reality](#) // Study by the University of Cambridge focusing on aspects of cybersecurity and governance in virtual worlds.

- Hermann, Isabella 2022: Demokratische Werte nach europäischem Verständnis im Metaverse // *German-language exploratory study that seeks to identify the potential impact of the metaverse on fundamental rights and democratic processes.*
- Ball, Matthew 2020: [The Metaverse: What It Is, Where to Find It, and Who Will Build It](#) // *A collection of blog posts explaining the concept of the metaverse and exploring its effects, which formed the basis of a more extensive book.*
- Kettemann, Matthias C. / Müller, Martin / Böck, Caroline 2023: [Ordnungsansätze für immersive Welten](#) // *A brief German-language analysis of regulatory approaches for the metaverse; part of a larger [research network on Immersive Democracy](#), in which further analyses on specific aspects are published.*

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