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Two Metaverse Dystopias

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Abstract
In recent years, the metaverse—some form of immersive digital extension of the physical world—has received much attention. As tech companies present their bold visions, scientists and scholars have also turned to metaverse issues, from technological challenges via societal implications to profound philosophical questions. This article contributes to this growing literature by identifying the possibilities of two dystopian metaverse scenarios, namely one based on the *experience machine* and one based on *demoktesis*—two concepts from Nozick (*Anarchy*, *State*, *and Utopia*, Basic Books, 1974). These dystopian scenarios are introduced, and the potential for a metaverse to evolve into either of them is explained. The article is concluded with an argument for why the two dystopian scenarios are not strongly wedded to any particular theory of ethics or political philosophy, but constitute a more general contribution.

Keywords Metaverse · Dystopia · Experience machine · Demoktesis · *Anarchy, State, and Utopia*

Introduction

The term *metaverse* originally comes from the science fiction novel *Snow Crash* by Stephenson (2003), where people interact with each other, as avatars, in virtual environments. More recently, however, the concept made it into the vernacular when Facebook revealed its change of name into Meta in October 2021, reflecting its plans to build such a metaverse (Zuckerberg 2021). Broadly speaking, the metaverse is envisioned as some form of immersive digital extension of the physical world, using virtual reality (VR) or at the very least augmented reality (AR) technologies (sometimes jointly called extended reality—XR). Instead of experiencing the web through a browser on a computer or a smartphone, it can be experienced visually

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and acoustically in more immediate ways (however, as pointed out by Floridi 2022, current metaverse technologies offer little support for flavors, fragrances, or skin experiences, though this could change in the future). The metaverse is often portrayed as the 'next iteration of the internet' (van Rijmenam 2022) and as a vast opportunity.[1] Undoubtedly, the large investments made and the rapid development of the requisite technologies will have large impacts. However, it is far from clear that the visions of Meta, or its competitors, will come to fruition. 'It is pure hype, without a product—except for some hypothetical "building blocks"' says Volpicelli (2022) about the metaverse, and Meta's poor quarterly earnings have been attributed to a loss of focus, where the metaverse bet makes the profit-turning social media business suffer (Levy 2022).

Whether business opportunities and visions will materialize or not, scientists and scholars have increasingly turned their attention to metaverse issues in the past few years on topics ranging from healthcare (Wang et al. 2022) via marketing (Hollensen et al. 2022) to cybersecurity (Falchuk et al. 2018). This is not the place to review this extensive and constantly growing metaverse literature, but some recent reviews and research agendas—with somewhat different perspectives—include Dwivedi et al. (2022), Park and Kim (2022), and Dincelli and Yayla (2022). It is not difficult to see that the (possibility of the) metaverse, and its underpinning technologies, also raises interesting philosophical questions, related to, e.g., ethics, philosophy of mind, political philosophy, and ontology. Some examples of recent philosophical treatments include Chalmers (2022) and Turner (2022).

The purpose of this article is to identify and explain the possibilities of two dystopian metaverse scenarios, namely one based on the *experience machine* and one based on *demoktesis*—two concepts from Nozick (1974). Though these two dystopias are not intimately connected *per se*, it turns out that they represent two endpoints in an interesting dimension ranging from individualism to collectivism.

The rest of this paper unfolds in a straightforward manner, introducing the dystopian scenarios and the potential for a metaverse to evolve into either of them in Sects. 'The experience machine metaverse dystopia' and 'The demoktesis metaverse dystopia', respectively, before concluding in Sect. 'Conclusions'.

The Experience Machine Metaverse Dystopia

Nozick famously introduces the experience machine in *Anarchy, State, and Utopia*:

[1] For an instructive example of panegyrics, consider van Rijmenam: 'The metaverse will enable the Imagination Age, where content creators will be able to monetize their work and contribute to a rich, vibrant, and magical immersive internet. [...] As a result, the metaverse will be an infinite blue ocean of opportunity similar to the original internet. [...] In the coming years, it will become easier to build immersive and augmented experiences, especially if we manage to create the "constellation of standards" required to run the metaverse smoothly. If we do, the metaverse could add trillions of dollars to the global society. The estimates vary, but PWC released a report in 2019 estimating that VR and AR have the potential to boost GDP globally by up to $1.5 trillion in 2030, up from a projected $476.4 billion in 2025' (van Rijmenam 2022, Chapter 1).

> Suppose there were an experience machine that would give you any experience you desired. Superduper neurophysiologists could stimulate your brain so that you would think and feel you were writing a great novel, or making a friend, or reading an interesting book. All the time you would be floating in a tank, with electrodes attached to your brain. Should you plug into this machine for life, preprogramming your life's experiences? (Nozick 1974, p. 42)

Nozick later noted that '[w]ith virtual-reality devices and their foreseeable future development, actual reality seems to have caught up with my thought experiment in *Anarchy, State, and Utopia* twenty-five years ago' (Nozick 2001, p. 364, note 1).

Now, Nozick argues that we should not plug in, and that there is a lesson to be learned from this: 'Perhaps what we desire is to live (an active verb) ourselves, in contact with reality' (Nozick 1974, p. 45). The thought experiment of the experience machine is most often interpreted as offering some kind of counterexample to hedonistic utilitarianism, and it is as such that it regularly features in ethics textbooks (see, e.g., Tännsjö 2002, p. 24). For closer analyses of the argument, carefully distinguishing different interpretations and criticisms, see Feldman (2011) and Bramble (2016).

However, our purpose here is not to dissect the experience machine example in detail. It is rather to identify and explore its dystopian qualities in connection to the metaverse. Admittedly, similar observations have been made before. For example, many authors, such as Sinnott-Armstrong (2021) and Blackford (2017), invoke the experience machine in analyses of the dystopian blockbuster movie *The Matrix* (1999). Indeed, the experience machine passage from *Anarchy, State, and Utopia* is reprinted in one of the appendices to the book *Philosophers Explore The Matrix* (Grau 2005).

These Matrix analyses highlight parallels with the experience machine, but also important differences. For example, Buscicchi (2022), points out that in the Matrix, the simulation is malevolently used to enslave humanity for battery power, whereas the experience machine is run by benevolent neurophysiologists. Vasiliou (2005) further observes that in the Matrix you are interacting with other human minds, whereas the experience machine is all about individual experience. Hanley (2005) makes the same distinction between *solitary* and *communal* matrices—in the former case, you are the only avatar and all others are simulacra, whereas in the latter case, each and every one is an avatar.

In fact, these points are in line with Nozick's own reflections when later returning to the experience machine in his philosophical meditation on *Happiness*:

> No doubt, too, we want a connection to actuality that we also share with other people. One of the distressing things about the experience machine, as described, is that you are alone in your particular illusion. (Is it more distressing that the others do not share your "world" or that you are cut off from the one they do share?) However, we can imagine that the experience machine provides the very same illusion to everyone (or to everyone you care about), giving each person a coordinate piece of it. When all are floating

> in the *same* tank, the experience machine may not be *as* objectionable, but it is objectionable nevertheless. Sharing coordinate perspectives might be one criterion of actuality, yet it does not guarantee that; and it is *both* that we want, the actuality *and* the sharing. (Nozick 1989, p. 107, emphasis in original)

This point leads us towards our contribution here—the question of how a metaverse could evolve into the experience machine dystopia. The answer is twofold, corresponding to Nozick's actuality and sharing, respectively, to be explored below.

Actuality

First, the dystopian scenario with respect to actuality: You would stay in the metaverse for increasing periods of time and become decreasingly interested in disconnecting regularly. Such behavior would be consistent with observations of social network site addiction, where addicts 'spend much more time social networking than was initially intended, feeling an urge to social network more and more in order to attain the same level of pleasure' (Andreassen 2015), though it should be stressed that addicts seem to be a minority (Błachnio et al. 2016), and that the literature shows mixed findings on the relationship between time spent on social media and mental health problems (Keles et al. 2020). It would also be consistent with reports about social media platforms prioritizing user engagement—staying on the platform—very highly (see, e.g., Hao 2021; Edelman 2021),[2] This mechanism would increasingly remove you from actuality.

Here, it makes sense to pause and ask whether this is really dystopian. In particular, Chalmers (2022) has recently argued that it is not; briefly summarized in the claims that '[l]ife in virtual worlds can be as good, in principle, as life outside virtual worlds' and that 'VR can be much more than escapism. It can be a full-blooded environment for living a genuine life' (Chalmers 2022, p. xvii). He also engages at length with Nozick's experience machine example, especially in Chapter 17 (pp. 311–330), though it should be stressed that he is mostly concerned not with solitary but with communal virtual worlds (and introduces, on p. 311, the term 'reality machine' for a kind of communal experience machine).

This is not the place to give a full review of Chalmers's book or a detailed analysis of his arguments (for some reviews, see, e.g., Lassiter and Kagan 2022; Osler

[2] In an interesting passage of the polemically named book *Wasting Time on the Internet* Goldsmith (2016, p. 122) invokes the myth of Narcisuss and Lacan's theory of the 'mirror stage' to explain why 'we can't stop self-googling or try as we might, we can't leave Facebook. There's too much of *us* reflected in it to walk away from'. While this analysis should be taken with a grain of salt rather than as a literal truth, there seems to be something to it. It is also noteworthy that similar predictions were made well before the advent of social media. Bremner (1998, p. 24) makes the following bleak prediction in a characteristic of our 'karaoke culture': 'Again, taken to extremes, this means that such is our obsession with documenting our own everyday lives that in future television programmes will be replaced by cameras in every room so that we can watch ourselves endlessly on television'.

2022; Agatonović 2023). However, it is important to note that Chalmers (2022) is not Panglossian; he does not deny the dystopian possibilities:

> I'm not saying that virtual worlds will be some sort of utopia. Like the internet, VR technology will almost certainly lead to awful things as well as wonderful things. It's certain to be abused. Physical reality is abused, too. Like physical reality, virtual reality has room for the full range of the human condition—the good, the bad, and the ugly. (Chalmers 2022, p. xvii)

That Chalmers does not dismiss the dystopian possibilities is also illustrated by the artwork on p. 8, depicting Mark Zuckerberg running 'Plato's cave in the 21st century'. Thus, from one perspective, the identification of metaverse dystopias—our broad purpose in this article—is fully compatible with Chalmers's argument. This observation applies without reservation to Sect. 3 below. But our concern here—the removal from actuality—is not compatible with Chalmers (2022), because he claims that dystopian virtual worlds 'won't be dystopian merely *because* they're virtual' (Chalmers 2022, p. 17, emphasis added), and this is precisely what the removal from actuality is about.

On a closer reading, however, Chalmers himself identifies a few things missing in the virtual world and admits that '[i]t's not unreasonable to think that long-term VR could be impoverished by the absence of nature, history, and perhaps birth and death. They are all valuable or at least meaningful aspects of life in physical reality' (Chalmers 2022, p. 326). Thus, Chalmers's argument is not that there are no disadvantages to life in a virtual world, it is that 'these missing benefits can be weighed against new benefits arising from the many new forms of life and other possibilities that VR offers' (Chalmers 2022, p. 326).

Having clarified Chalmers's position, its relation to the experience machine dystopia now becomes clearer. *In principle*, even if Chalmers is broadly right, so that it is indeed possible to lead a meaningful life in a virtual world, it may be that he underestimates the value of nature, history, and birth and death (or other things which we lack the knowledge or imagination to identify), and that these values make life in the physical world—at least potentially—even more meaningful than that in the virtual. For example, consider nature. The term may evoke the value experienced by interacting with nature in a non-systematic everyday manner, and this value may indeed be great. However, there may also be considerable instrumental and intrinsic value in interacting with nature in systematic and scientific manners, i.e., in the natural sciences. If we largely came to inhabit virtual worlds, such advances may come to a halt. Of course, this does not mean that great discoveries such as evolution, the periodic table, or the theory of relativity would somehow be reversed and forgotten. But it could mean that equally profound future discoveries would not happen, if not living in the physical world diminishes our curiosity about it. While this may not amount to a full-blown dystopia, it is at least a cause for concern.

In practice, even if Chalmers is exactly right in principle, it may be that we are hindered by various forms of fallibility and short-sightedness—individual as well as collective—from building the kind of metaverse that supports life which is more meaningful than life in the physical world. The prize may indeed be there, but it may too hard to reach it. Many of the arguments given at the beginning of this

subsection allude to such fallibility of the individuals partaking in a metaverse. To that list we may add concerns about the fallibility of those designing a metaverse. In particular, though human institutions are 'in a sense man-made, i.e., entirely the result of human actions, they may yet not be designed, not be the intended product of these actions' (Hayek 1944, p. 29), suggesting that we may be overconfident when attempting to redesign or replace such schemes. Related to this, it may also be that we overestimate our capacity for rationality—and thus for the rational planning of a metaverse—but that our rationality is in fact limited and bounded (Simon 1957). The risk that Chalmers does not treat practical concerns—broadly construed to include both real-world technology and real-world institutions—seriously enough is in line both with the criticism of his idealized treatment of hardware, software, and VR by Lassiter and Kagan (2022) and with the questions asked by Osler (2022):

> One wonders if Chalmers rather misses the mark about what people's concerns about technology are really centered upon. Are people really worried about virtual reality not being "real" or are they worried about what kind of realities technology offers when we think about who has the power, money, and control to create and manipulate such worlds? (Osler 2022)

To summarize, even if Chalmers (2022) is broadly right in principle, he may go wrong by underestimating the value of nature, history, and birth and death, thus leaving some room for the experience machine dystopia (or at least to normatively undesirable scenarios falling short of dystopias). Furthermore, even if he is exactly right in principle, he may go wrong by underestimating the practical obstacles to building the kind of metaverse conducive to leading a good life in a virtual world. Finally, of course, Chalmers (2022) may be far from right—in a recent survey of professional philosophers, only 13.3% would enter the experience machine, whereas 76.9% would not (Bourget and Chalmers 2023), though it is not clear if the predominant reason is the removal from actuality, or something else, such as the lack of sharing in Nozick's original scenario, to which we now turn.

Sharing

Nozick's second objection concerned sharing; being in the same world as others. The corresponding dystopian scenario is that you would increasingly orient yourself toward tailor-made experiences where other individuals would not necessarily participate, thus increasingly transforming the metaverse from a communal into a solitary one, in Hanley's terminology.[3] A technical precondition for such a development is the increasing capability of computer systems such as DALL-E to

[3] Lanier (2018, pp. 75–77) argues that existing social media has desiccated commonality in general because they make us see the world through a tunnel vision in a way that ultimately ruins our capacity for empathy. This is another polemical account—not surprising in a book called *Ten Arguments for Deleting Your Social Media Accounts Right Now*—but one which cannot be dismissed out of hand. It is especially poignant in the metaverse context, as Lanier (2018) himself 'started talking about VR as a tool for empathy back in the 1980s' (p. 76).

generate intriguing imagery or of ChatGPT to engage in conversation (see, e.g., Knight 2022; Murati 2022; Hutson 2022), so that other humans are not necessary for non-trivial interaction. Indeed, it is now meaningful to evaluate how well large language models fare in Turing tests, and it is far from obvious that the limits discovered—especially their tendencies to generate falsehoods (Sobieszek and Price 2022)—would prevent you from engaging with them (AI influencers exist and are used in marketing for a reason; see, e.g., Thomas and Fowler 2021; Sands et al. 2022). Indeed, the opposite may be the case: flatter from simulacra may seem preferable to hard truths from avatars of other people.[4] This mechanism would increasingly remove you from sharing. Recall the reflection above about how human fallibility may constitute important practical limitations on the position defended by Chalmers (2022). The process described here is one such example, which could—disturbingly—make Chalmers's (communal) reality machine more like Nozick's (solitary) experience machine.

Concluding the Experience Machine Metaverse Dystopia

In the limit, the two processes identified above would lead to the experience machine metaverse dystopia—an individualist, even solipsist, dystopia, where you continuously live in a simulation without contact with other people. Revisiting the experience machine a few years after its original conception, Nozick (1981, p. 595) makes precisely this point: 'The experience machine, though it may give you the experience of transcending limits, encloses you within the circle of just your own experiences'. This pertains to the case where both processes play out. However, as argued above, cases where merely one of them plays out may also be problematic, even if falling short of being full-blown dystopias. Now, actually reaching the experience machine dystopia does not seem probable at present. But again, dystopias rarely do. However, the two processes—though far from their limits—seem real enough, suggesting precisely the kind of relevance that a dystopia can reasonably be expected to have.

The Demoktesis Metaverse Dystopia

Just like the experience machine, the demoktesis scenario is introduced by Nozick (1974) in *Anarchy, State, and Utopia* (1974). However, compared to the experience machine, it has received far less attention in the literature.[5]

[4] Though speculative, it may be useful to turn to the arts to understand how this psychological process could work. In an episode of *Star Trek* (1990), the unfortunate Lieutenant Barclay suffers from holodeck addiction, spending ever more time inside a holographic simulation with versions of his crew-mates who are more to his liking. This seems like an instance of 'karaoke fame', a phrase coined by Amis (2001): everyone is famous, but only in their own minds.

[5] For example, 'demoktesis' does not even feature in the index of *The Cambridge Companion to Nozick's Anarchy, State, and Utopia* (Bader and Meadowcroft 2011).

The demoktesis scenario is a hypothetical history. Nozick (1974) famously offers one such hypothetical history of a minimal state in Part I of the book, and the demoktesis scenario is a kind of counterpoint to this: 'a hypothetical description of how a more extensive state might arise, a tale designed to make such a state quite unattractive' (Nozick 1974, p. xii). However, despite its unattractive design, the demoktesis scenario—just like its parallel in Part I—unfolds 'via only legitimate steps which violate no one's rights' (Nozick 1974, p. 276). It is precisely the fact that legitimate steps lead toward an unattractive end-state that gives the scenario the dystopian quality that is our concern here.

In short, the hypothetical history of demoktesis—'ownership of the people, by the people, for the people' (Nozick 1974, p. 290)—is as follows: Under the auspices of the minimal state, which enforces private property rights, some people start giving away or selling some of their personal rights, such as 'the right to decide which occupation he would have a try at making a living in, the right to determine what type of clothing he would wear, the right to determine whom of those willing to marry him he would marry, the right to determine where he would live, the right to determine whether he would smoke marijuana, the right to decide which books he would read of all those others were willing to write and publish, and so on' (Nozick 1974, p. 282). Some rights are retained; some end up being owned by others, whether as gifts or as goods sold. Though sellers and buyers each may have their own private reasons to go through with these transactions, the aggregated result is that large volumes of shares are bought and sold, and that as time passes just about everyone sells off some rights in themselves, though they keep—perhaps for sentimental reasons—at least one share in each right as their own so that they can attend stockholders' meetings.

However, the volume of such meetings entails substantial inefficiencies, as people cannot find the time to attend all the meetings their ownerships entitle them to. Thus the profession of stockholder representative emerges—people who spend all their working hours in meetings, representing owners. Furthermore, reform movements of two kinds increasingly consolidate shareholders' meetings in two directions: consolidated person-meetings, where one question at a time pertaining to a particular individual are decided upon and consolidated right-meetings, where one particular right is voted upon, one individual at a time. Though in each vote only those owning shares in that particular person on that particular right are eligible to participate, some efficiency is gained because in the first case, many owners own several rights in the person, and in the second case, many owners own the same kind of right in many persons. Still, there is not enough time to meaningfully exercise ownership, and as people try to sell off shares prices drop, leading to ever more diluted ownership: 'People are no longer under the thumb of *one* another. Instead almost everybody is deciding about them, and they are deciding about almost everybody' (Nozick 1974, p. 285, emphasis in original. Observe, by the way, the similarity of this description—intentional or not—to the famous cover illustration of Hobbes's *Leviathan*, displaying the great sovereign composed of many small individuals).

To remedy this chaotic and time-consuming situation, a great consolidational convention is held, and after three days of negotiation, everyone owns exactly one share in each right in everyone (theirself included). Now, at the grand stockholders' meetings,

decisions can be made in general rather than discussing each individual one at a time. Though initially everyone can attend, this also becomes too unruly, and in the end only those who can gather the consent of at least 100,000 votes on behalf of their fellows may be present. To include new people—children—without just *giving* away stocks, a splitting procedure is introduced, balancing the retired stocks of the dead with the ones newly emitted by people incorporating themselves. Only by signing over all one's stock in oneself can one get one's shares in everyone else. And so Nozick arrives at what is 'recognizable as a modern state, with its vast panoply of powers over its citizens. Indeed, we have arrived at a *democratic* state' (Nozick 1974, p. 290, emphasis in original).

As pointed out by Lomasky (2002, p. 65), the demoktesis scenario is in one sense 'wildly implausible' since 'the transformative steps are highly artificial', yet highly plausible in the sense that the institutions it generates closely resemble the institutions of modern democratic states. Now, our concern here is not to evaluate this claim from the perspective of political philosophy. However, we make a parallel observation in the realm of the metaverse: even if the transformative steps of the demoktesis scenario do not occur *exactly* as in Nozick's tale—and of course they will not—a metaverse could still evolve into a demoktesis dystopia, with institutions resembling the demoktesis institutions. How could this happen? In the following, we offer an explanation consisting of four observations.

The Importance of Personal Digital Data

We first observe that our digital data is not merely some unimportant technological aside. In modern society, digital data has become an important part of our identities. For example, Park and Abril (2016) remark that '[s]ocial media interactions are often an extension of the self', Floridi (2011) argues that information and communication technologies are 'egopoietic technologies or technologies of self construction, significantly affecting who we are, who we think we are, who we might become, and who we think we might become', and Chisnall (2020) argues more precisely for the existence of *self-constituting personal data*:

> We increasingly recognize that for many people the world that the body-subject inhabits includes the virtual world, enabled by the information and communication technologies (ICT) we call the Internet. Indeed, some people are said to "live online". We form emotional relationships, fall in love, hate, explore, learn and become fascinated by this virtual world. All this online body-subject activity has a physical existence in digital storage farms throughout the Internet. Like the electrochemical neural pathways of the brain the data storage farms track, and mostly retain digitally, bit by bit, the body-subject's memory, behaviour, relationships and travel in this virtual world. (Chisnall 2020)

For our purposes here, however, we do not need all of the details of egopoietic technologies or self-constituting data. We may just, together with more empirically oriented scholars from consumer research, note that something like this—a digital *extended self*—seems to exist:

> There are many new possessions and technologies through which we present and extend our self, and they operate quite differently than in predigital days. They also create different ways through which we can meet, interact with, and extend our aggregate selves through other people while experiencing a transcendent sense that we are part of something bigger than us alone. (Belk 2013)

This does not necessarily mean that *all* digital personal data is egopoietic or self-constituting or self-extending (simplifying somewhat, we will just say 'self-constituting' in the following). Some such data is certainly trivial. But it is enough that some of it has, or just potentially could have, such properties for the demoktesis scenario to be feasible, i.e., for people being able to transfer rights to such potentially self-constituting data.[6] Decision rights such as those listed by Nozick (1974) in the demoktesis scenario are largely related to digital personal data already today. It is important to understand that this does not only refer to 'data at rest' in some kind of persistent storage, but equally to 'data in use' in various software services which may be used more or less continuously. In this sense, how you (may) look may depend on rights to data on Instagram, what you (may) read may depend on rights to data on X, and with whom you (may) interact may depend on rights to data on Facebook or LinkedIn. Furthermore, it is reasonable to assume that in a metaverse, more rather than less personal data would be self-constituting, compared to existing social networks and other digital platforms (precisely the fact that not only vast volumes but also new *kinds* of data would be electronically stored in the metaverse is one reason for the concerns over metaverse cybersecurity voiced in the literature; see, e.g., O'Brolcháin et al. 2016; Falchuk et al. 2018). *In the limit*, if you always inhabit a virtual world, such as Chalmers's reality machine described above, all social aspects of yourself depend on personal digital data. In this sense, decision rights such as those listed by Nozick (1974) in the demoktesis scenario are intimately connected to rights to personal digital data.

The Transfer of Personal Digital Data

Second, we observe that the transfer of ownership rights to personal data is indeed happening on a large scale. (Recall that ownership rights in this context are appropriately viewed as a bundle of rights to make a great many smaller decisions—it is larger or smaller subsets that are transferred, not the entire bundle.)

[6] Chisnall (2020, p. 492) does not only argue that (i) there is self-constituting personal data, but also following Radin (1982, 1996) (ii) that such data is property which 'could be reasonably alienable within a doctrine of "human flourishing" which benefits the owner', i.e., sold or given away, and (iii) that '[w]hen this data is acquired by governments or corporations, legally or illegally, through obscure and lengthy contract, trickery, manipulation or just plain theft, the body-subject is enslaved in an ownership sense'. While all three claims are clearly in the spirit of the demoktesis scenario, it is not clear that they are all strictly needed in order to demonstrate the dystopian potential of the demoktesis metaverse. In particular, we may suspend judgment about the evaluative aspects of (ii) and (iii), content to note that transfers do happen, whether some transfers can be legitimate or not (with respect to ii), and whether illegitimate transfers constitute slavery or mere fraud, theft, robbery, etc. (with respect to iii). Denying (i), on the other hand, would rob the dystopia of much of its dystopian qualities.

Typically, such transfers are stipulated in the terms and conditions of the various digital services which we use in everyday life.[7] Just like in the demoktesis scenario, individuals sign over their data—and to the extent that this data is self-constituting, this means signing over actual if individually small shares in themselves in the demoktesis sense—for all kinds of reasons, not necessarily reasoned or explicitly articulated. ('It becomes a fad to give another person gifts of ridiculous stock, either in oneself or in a third person' Nozick 1974, p. 282.) Indeed, most users never click to read terms and conditions, or do click but end up merely skimming the text (Steinfeld 2016).[8] Perhaps it is only with hindsight that it is possible to see the full magnitude of the consequences—this would be consistent with the 'mosaic theory', under which '[d]isparate items of information, though individually of limited or no utility to their possessor, can take on added significance when combined with other items of information' (Pozen 2005). From the metaverse perspective, there is no sign that existing metaverse projects or visions would be fundamentally different from existing social media or other digital platforms—whose practices have polemically been dubbed *surveillance capitalism* by Zuboff (2019)[9]—in this respect.

Conflicts Over Personal Digital Data

Third, we observe that though the transfers of rights to personal data often happen almost imperceptibly (in the words of Schneble et al. 2021, the 'click, consent, and forget at your peril' model), such transfers do have consequences and sometimes entail conflict. For example, Park and Abril (2016) list four representative cases from the US, where employees and employers have gone to court to settle ownership disputes about social media accounts on platforms such as Twitter, Facebook, and LinkedIn. Conflicts are not limited only to overall control (should the password be handed over upon resignation?) but also to partial control of various aspects of personal data and how it is used on social networks. One example is the decision by Facebook to ban the posting of breastfeeding pictures under an obscenity clause, which sparked protests both offline and online, highlighting questions of public and private spaces and who gets to establish and enforce social values and

[7] For an analysis of Facebook's contractual agreements, see Valtỳsson (2018). The bundle-of-rights perspective on ownership is particularly illuminating here, because 'Facebook's statement of rights and responsibilities explicitly states that even though users own all content and information they post on Facebook, they still "grant us a non-exclusive, transferable, sub-licensable, royalty-free, worldwide license to use any IP content that you post on or in connection with Facebook"' (Valtỳsson 2018, p. 261). Under a bundle-of-rights perspective on ownership, this *does* mean that some rights have been transferred. For a broader analysis of terms and conditions from several social media platforms with a special focus on informed consent from children, see Schneble et al. (2021). For an analysis of terms and conditions which are likely unfair under the EU Unfair Contract Terms Directive, see Loos and Luzak (2016).

[8] As a result, the Data Protection Working Party (2016) has developed guidelines for how to properly obtain consent to process personal data under the GDPR. Actual digital services currently fall short of these (Schneble et al. 2021).

[9] Inspired by the Marxian concepts of 'surplus labor' and 'surplus value', Zuboff (2019) uses the term 'behavioral surplus' to describe the transfer of personal digital data from individuals to companies. We can note the descriptive aspects of this without being wedded to Zuboff's normative assessment.

norms (Ibrahim 2010). Another example is the fact that policies for user-generated content on gay-targeted social networking services tend to be very restrictive, hiding certain types of sexuality from view (Roth 2015). A third example, which has received much attention, is the question of how personal data can or cannot be used for profitable targeted advertising (Esteve 2017). In all these cases, users have transferred rights to their personal data in ways that allow others to control them in ways that were not obvious from the start. Clearly, such conflicts are not felt—let alone acted upon—by everyone. But, as in the demoktesis scenario, some people may feel 'considerable oppression' (Nozick 1974, p. 283). At the very least, consumers 'are deeply anxious about how their personal information may be used' (Morey et al. 2015). Exit—leaving social networks and other digital services—is of course a theoretical option, but in practice obstacles are overwhelming (examples abound, of course, but see Vara 2023 for an interesting one on how dedication and idealism may not be enough) and regardless, it may be impossible to fulfill a right to be forgotten in modern AI environments (Villaronga et al. 2018). In the demoktesis scenario, it is in the end decided that unincorporated children 'do not have to join the stockholders' guild, after all. They can refuse its benefits and leave the corporation area, without and hard feelings. (But since no settlement has survived on Mars for more than six months there are strong reasons for remaining on earth and becoming a stockholder.)' (Nozick 1974, p. 289). Comparing the metaverse to existing social networks and other digital platforms, there is no reason to expect that conflicts would be less common. Indeed, to the extent that a metaverse fulfills its promises—more immersion, more non-trivial experiences, more personal and professional opportunities—it seems that the stakes would be higher and the grievances, once they become apparent, correspondingly more pressing: 'in an immersive virtual environment like the Metaverse, the risks associated with digital technologies will be exacerbated' (Floridi 2022).

Collective Decision-Making Over Personal Digital Data

Fourth, we observe that existing digital services exhibit some demoktesis-like decision-making procedures (i.e., direct or indirect voting on issues that were previously individual decisions). More precisely, these institutions can have three different genealogies: (i) A service may explicitly embrace co-ownership as an ideological driving force. Indeed, there is a Platform Cooperativism Consortium organizing such digital platforms.[10] So far, however, these platforms struggle to attract user bases near their more traditional, non-coop, competitors (perhaps due to economies of scale such as Metcalfe's law, though these may be smaller than sometimes assumed; see Briscoe et al. 2006). (ii) Traditional platforms may give their users voting rights, as a means to find solutions to pressing problems, to build legitimacy, etc. For example, Facebook implemented a participatory governance system in 2009, in operation until 2012, where users voted on its privacy policy

[10] It also maintains a list of services at http://directory.platform.coop/.

(Engelmann et al. 2018). Wikipedia makes extensive use of elections to various offices, though it exhibits a mix of different governance principles and has been characterized as an adhocracy by Konieczny (2010). Indeed, while a great many social networks and other platforms do experiment with various forms of voting, 'the question remains whether large community platforms will one day develop into democratically constituted virtual worlds' (Seidel 2019). (iii) Demoktesis-like decision-making procedures may be explicitly or implicitly forced upon a digital platform from the outside, i.e., by governments of the jurisdictions where they operate. For example, Engelmann et al. (2018) report considerable confusion among users about the interface between the laws of external jurisdictions and the regulations internal to Facebook in their analysis of the 2009–2012 period of participatory governance at Facebook. Valtỳsson (2018) also reports similar results, namely that Facebook users are uncertain about their rights and contractual agreements, but trust the law.

In practice, however, decision-making procedures may exhibit elements from all three genealogies, not least because there are many ways for institutions to build their legitimacy. For example, Dvoskin (2022) argues that the Facebook Oversight Board—a non-elected expert group most famous for its decision to suspend Donald Trump's account—could increase its legitimacy by encouraging the participation of more actors whose judgment can impact decisions (aligned with i or ii), rather than, as it currently does, only highlight its expertise in applying international human rights law (aligned with iii). Again, compared to existing social networks and other digital platforms, there is little reason to believe that there would be less interest in direct or indirect voting in a metaverse.[11]

Concluding the Demoktesis Metaverse Dystopia

In summary, we have thus observed that personal digital data has become an important part of our identities to the point of extending our selves and even being self-constituting, that ownership rights to such personal data are transferred on a large scale to various digital platforms and services, that such transfers sometimes entail conflicts with respect to communication and behavior so that some people experience oppression, that such conflicts are sometimes resolved by direct or

[11] Voting may seem innocent enough, hardly worthy of the label 'dystopian'. But recall first that the voting is not the whole story, it is but its last step. Second, recall that the demoktesis voting is not (meaningfully) limited but is used to determine all kinds of rules—this is the 'vast panoply of powers' (Nozick 1974, p. 290)—including ones that may limit freedom of speech, sexual identity, etc. (as in actual cases such as those studied by Ibrahim 2010; Roth 2015). Third, observe that some of the rationales for the vast panoply of powers may be less pressing in a metaverse than in the physical world. For example, if in the physical world government power is needed to avoid Hobbesian perpetual conflict over scarce resources, such power may not be needed in a metaverse where (digital) resources are not scarce, but abundant or even infinite, though of course this does not mean that all conflicts will disappear. See also Chalmers (2022, pp. 360–364) as well as McStay (2023b), Turner (2023), and McStay (2023a) for additional perspectives on governance and abundance in the metaverse. These three arguments notwithstanding, the question of whether our dystopian scenarios are indeed dystopian under different normative theories is a genuine and interesting one, to be briefly revisited in Sect. 'Conclusions' .

indirect voting among those who have transferred their ownership rights, and finally that all of these phenomena are likely to be at least as common in a metaverse as in existing social networks and other digital platforms. In other words, we have explained how a metaverse could develop into the demoktesis dystopia.

Of course, this is not a prediction: the observations are certainly not sufficient conditions to bring about the dystopia. The individualist experience machine dystopia from Sect. 'The experience machine metaverse dystopia' does not seem probable at present; neither does the collectivist demoktesis metaverse dystopia we have discussed here.[12] Still, it cannot be dismissed—the observations suggest that the scenario is relevant in the sense that dystopias at all can be relevant.

Conclusions

Concluding, a few final remarks are appropriate. First, we do not claim that the two dystopias described in Sects. 'The experience machine metaverse dystopia' and 'The demoktesis metaverse dystopia' exhaust the dystopian possibilities of the metaverse. Surely, many other such dystopias can be imagined. However, the two dystopias presented here are interesting in that they are at the opposite ends of an interesting dimension; from individualism (or even solipsism) in the experience machine to collectivism in demoktesis. The observations at both endpoints need additional qualification. Regarding the experience machine, only the version where you are removed from sharing is individualist—a communal version where you are removed only from actuality is not. Regarding demoktesis, other labels, besides collectivism, are possible. In particular, one might follow Zuboff (2019) and call it surveillance capitalism, corporatocracy etc., suggesting that it is monopolist rather than collectivist. However, such labels only capture the development sketched in Sects. 'The importance of personal digital data', 'The transfer of personal digital data' and 'Conflicts over personal digital data', not the concluding collective decision-making described in Sect. 'Collective decision-making over personal digital data'. This may indeed be the most novel aspect of the demoktesis metaverse dystopia: the observation that collective decision-making such as voting may not alleviate all ills, but could itself constitute (part of) a collectivist dystopia.

Second, we reiterate that we do not claim that either of these dystopias will come into being. As mentioned in the Introduction, many serious doubts about the

[12] Again, it may be useful to turn to the arts for a depiction of what the actual dystopia would look like. Ajvide Lindqvist (2022, p. 32) in the novel playfully but aptly titled *Reality* lets its protagonist, an influencer whose life is constantly broadcast online, have an epiphany about self-ownership as she walks her dog: 'The lady scratches Titania one last time behind her ears and a banal realization dawns upon me. Of course she considers herself entitled to go after my dog. After all, I'm not a stranger, no, she *knows* me and knows precisely who I am. Perhaps she even considers herself a shareholder in me as she, one evening after another, has me cornered on her big or small screen. The lady says "Keep it up" and extends her hand to caress my cheek and take possession of her property. That's where I draw the line. I retract my head, say "Don't touch", and pull the leash to bring Titania along. The lady looks sullen and perhaps we just lost a viewer'. (My translation from Swedish, emphasis in original.)

metaverse plans of Meta and others have been voiced, and their realization is far from certain. Even contingent on a metaverse in the appropriate sense being realized, however, it may well develop in other directions; dystopian or non-dystopian. Thus, the dystopias are not predictions; rather, they are observanda which may contribute to averting their realizations. Indeed, this is the proper role of dystopias, as observed by Moylan and Baccolini (2003):

> the dystopian imagination has served as a prophetic vehicle, the canary in a cage, for writers with an ethical and political concern for warning us of terrible sociopolitical tendencies that could, if continued, turn our contemporary world into the iron cages portrayed in the realm of utopia's underside. (Moylan and Baccolini 2003, pp. 1–2)

Third, the analysis is not intended to be strongly wedded to any particular theory of ethics or political philosophy. This may seem strange, as the two dystopias come from Nozick (1974), who presents precisely such a theory. However, the dystopian qualities of the two scenarios are compatible with a wide range of ethical and political convictions. To some extent, this is because the scenarios are underdetermined by the descriptions given in Sects. 'The experience machine metaverse dystopia' and 'The demoktesis metaverse dystopia'. With more precise descriptions, their compatibility with various normative theories will become more constrained. For example, deontologists may find the metaverse experience machine dystopian under most (or even all) descriptions, whereas utilitarian hedonists may need more precise descriptions of exactly what the metaverse experience machine really accomplishes—e.g., whether it confers propositional or mere sensory pleasure (see Sinnott-Armstrong 2021)—in order to pass verdict on it. Similarly, political libertarians may find the metaverse demoktesis dystopian under most (or even all) descriptions (though this is not self-evident, as the original demoktesis is carefully constructed not to violate anyone's property rights), whereas communitarians or egalitarians may need more precise descriptions of exactly how the metaverse demoktesis looks—for instance about whether it fosters social responsibility and sense of community, or how it fares on various measures of equality—in order to pass verdict on it. However, we hypothesize that for each major normative theory there is at least *some* description of each of the two dystopias that would genuinely seem dystopian. Working out the details of this—under which descriptions the scenarios would be dystopian or not under various normative theories—seems like an illuminating endeavor, shedding light not only on the dystopias, but more importantly on the theories themselves.[13] Bearing this is mind, we hope that the contribution of the two dystopias described in Sects. 'The experience machine metaverse dystopia' and 'The

[13] Indeed, we may read the entire demoktesis chapter, in particular in conjunction with the subsequent utopia chapter from Nozick (1974), as an example of this within a libertarian political philosophy. To simplify: Why is it not enough that a state does not violate individual property rights? Because even if no such rights are violated, a dystopian state may emerge under the demoktesis scenario. Whether we agree with the theory or not, the examples shed additional light upon it.

demoktesis metaverse dystopia' can be recognized as valuable beyond the limits of particular ethical and political theories.

As a final remark, it is gratifying to observe that *Anarchy, State, and Utopia*, now at its fiftieth anniversary, continues to serve as a source of inspiration, controversy, and wonder.

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