



# The Metaverse: Virtual Metaphysics, Virtual Governance, and Virtual Abundance

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## Abstract

In his article ‘The Metaverse: Surveillant Physics, Virtual Realist Governance, and the Missing Commons,’ Andrew McStay addresses an entwinement of ethical, political, and metaphysical concerns surrounding the Metaverse, arguing that the Metaverse is not being designed to further the public good but is instead being created to serve the plutocratic ends of technology corporations. He advances the notion of ‘surveillant physics’ to capture this insight and introduces the concept of ‘virtual realist governance’ as a theoretical framework that ought to guide Metaverse design and regulation. This commentary article primarily serves as a supplementary piece rather than a direct critique of McStay’s work. First, I flag certain understated or overlooked nuances in McStay’s discussion. Then, I extend McStay’s discussion by juxtaposing a Lockean inspired argument supporting the property rights of Metaverse creators with an opposing argument advocating for a Metaverse user’s ‘right to virtual abundance,’ informed by the potential of virtual reality technology to eliminate scarcity in virtual worlds. Contrasting these arguments highlights the tension between corporate rights and social justice in the governance of virtual worlds and bears directly on McStay’s assertion that there is a problem of the missing commons in the early design of the Metaverse.

**Keywords** Metaverse · Virtual reality · Philosophy of technology · Data ethics · Virtual abundance · Virtual governance

The Metaverse can be broadly understood as a three-dimensional immersive version of the internet that incorporates mixed and virtual reality technologies. The philosophy of the Metaverse has emerged as a growing subfield within the philosophy of technology (Chalmers, 2022; Chen, 2023; Turner, 2022). In his article ‘The Metaverse: Surveillant Physics, Virtual Realist Governance, and the Missing

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Commons,' Andrew McStay addresses an entwinement of ethical, political, and metaphysical concerns surrounding the Metaverse, arguing that the technology is not being designed to further the public good but is instead being created to serve the plutocratic ends of technology corporations. He advances the notion of 'surveillant physics' to capture this insight and introduces the concept of 'virtual realist governance' as a theoretical framework that ought to guide Metaverse design and regulation. While McStay's article qualifies as techno pessimistic, he outlines specific governance proposals for the Metaverse, such as personal data stores and data trusts, that align with data stewardship and the dictates of virtual realist governance.

This commentary article primarily serves as a supplementary piece rather than a direct critique of McStay's work. First, I flag some understated or overlooked nuances in McStay's discussion. In particular, I:

- (a) Emphasize that the structure of surveillant physics and virtual realist governance will vary significantly between virtual reality and mixed reality technologies in the Metaverse.
- (b) Question the assumption underlying the concept of virtual realist governance that virtual value theory is dependent on virtual metaphysics.
- (c) Highlight the importance of the debate between virtual monism and virtual pluralism in determining proper virtual realist governance.
- (d) Draw attention to the fact that the public commons in the Metaverse is threatened not only by a perniciously capitalistic surveillant physics, but also by a problem of digital neo colonization.

After accomplishing these evaluative tasks, the second half of the commentary extends McStay's discussion by juxtaposing a Lockean inspired argument in favor of the property rights of Metaverse creators with what I call 'the right to virtual abundance argument' in favor of Metaverse users. Contrasting these arguments highlights the tension between corporate rights and social justice in the governance of virtual worlds and bears directly on McStay's assertion that there is a problem of the missing commons in the early design of the Metaverse.

McStay begins his article by correctly noting that the term 'Metaverse' is an empty signifier due to its lack of a fixed, universally accepted definition. He provides an overview of the investments that the companies Meta and Microsoft are making in the Metaverse, underscoring that, while the technology's trajectory remains uncertain, there is ample empirical evidence suggesting that the Metaverse demands serious philosophical consideration. After this stage setting, McStay proceeds to introduce the two central concepts of the paper: surveillant physics and virtual realist governance. He describes surveillant physics as "the outcome of when data collected about biometrics, neural activity, behaviour, gaze, history and avatar behaviour is added to data about situational context to inform the laws of how that reality operates" (McStay, 2023: p. 9). Surveillant physics can be loosely thought of as a heightened version of surveillance capitalism adapted for Metaverse environments. Surveillance capitalism, a term coined by Shoshana Zuboff (2019), refers to the ad-based business model that undergirds

the contemporary digital economy wherein personal data is mined from digital users, turned into prediction models, and sold to advertisers and data brokers. Surveillant physics is (or at least has the potential to be) an intensified version of surveillance capitalism because technology corporations will be able to extract a broader range of personal data from Metaverse users than they do from contemporary smartphone users, including biometric and emotion data, eye-tracking data, first-person perspectival data, neural data, and more. While McStay briefly considers some positive applications of surveillant physics (e.g., enhancing presence, personalization, and productivity in the workplace), he is mostly focused on its capacity for harm, the central concern being that technology corporations will control the laws and physics of virtual worlds to further their attention-capturing, data harvesting objectives.

This exploitative use of surveillant physics is problematic given the normative ideal of what McStay calls virtual realist governance. *Virtual realism* is a position in the metaphysics of virtual reality defended by Chalmers (2022) which states that experiences in virtual worlds can be just as real, meaningful, and valuable as experiences in the physical world. The notion of virtual realist governance avers that governance in the Metaverse needs to account for the veracity of virtual realism; namely, the fact that virtual experiences are real experiences that possess life-like immersive and affective properties. For example, if virtual theft is real theft, and virtual assault is real assault, then virtual theft and virtual assault are serious ethical transgressions and should be governed as such in terms of punishment (Danaher, 2022). McStay considers various ways in which proponents of virtual realist governance might design the Metaverse such that it both avoids harm and enables quality for Metaverse users. For instance, he advocates that companies do not retain face-tracking and emotion data from Metaverse users and considers the possibility of an Avatar bot facilitating informed consent by explaining terms and conditions agreements in simple intuitive terms.

However, McStay's central concern is that virtual realist governance proposals like these will not come to fruition given the plutocratic ambitions of early Metaverse designers, leading to a problem of the missing public commons. Industry leaders such as Mark Zuckerberg have expressed preference for virtual governance by technical standards groups (such as the World Wide Web Consortium), but McStay voices doubts that good governance by standards groups will be achieved given the ability of corporations to sway standards groups towards their own monopolistic ends: "Standards which are open by default, and designed for all developers to use, run counter to firms that use their own standards to lock users into their own services. The idea that companies would sacrifice monopolistic self-interest in the name of openness is a difficult premise, making good governance by standards unlikely" (McStay, 2023: p. 15).

McStay ends his article by considering specific governance proposals for the Metaverse that align with data stewardship and the dictates of virtual realist governance. His primary focus is on *interoperability* in the Metaverse, which involves the ability to seamlessly transfer one's personal data, virtual avatar, and other virtual possessions across different virtual worlds and applications. McStay proposes *personal data stores*, which would enable Metaverse users to own and sell their

personal data to interested parties via smart contracts and intuitive user-friendly interfaces. He also recommends *data trusts* in the form of decentralized autonomous organizations (DAOs) that harness the collective power of Metaverse users to protect their interests and promote the public good. While both of these proposals will be difficult to implement given the data harvesting ambitions of tech corporations, McStay is hopeful that the immersive and affective qualities of the Metaverse compared to contemporary digital technologies will motivate Metaverse users to demand data justice and proper virtual realist governance.

Now on to my assessment. First, as a point of clarification: while the Metaverse encompasses both virtual and mixed reality according to McStay, one must be careful to not obscure key differences between the two technologies. Mixed reality deals with adjudicating the rules for virtual entities in pre-existing physical environments, be they private physical spaces or public arenas.<sup>1</sup> In contrast, virtual reality involves adjudicating the rules in novel virtual environments that are not previously owned or a part of the public commons. These two technologies yield distinct ethical questions surrounding issues like property rights, privacy, and informed consent. For the purposes of this commentary, it is important to recognize that what form surveillant physics takes, and what appropriate virtual realist governance looks like, will differ significantly depending on whether one is discussing virtual reality or mixed reality.

Second, to probe a foundational assumption underlying the concept of virtual realist governance: the concept assumes that the metaphysical status of virtual entities (virtual metaphysics) determines the value we ascribe to them (virtual value theory), which in turn impacts practical considerations surrounding virtual governance. This assumption seems to imply that if *virtual fictionalism* (McDonnell & Wildman, 2019) turns out to be the correct metaphysical theory of virtual reality (i.e., virtual entities are unreal fictions), then experiences in virtual worlds do not have real value, subsequently meaning that there is no political imperative to promote the public good in the Metaverse. I will not argue against this assumption here but just wish to flag that it may be possible to resist the assumption by contending that virtual value theory is not beholden to virtual metaphysics in the manner implied by the notion of virtual realist governance (see Ali, 2023).

Third, nuance can be added to the notion of virtual realist governance by acknowledging that one can be a pluralist about both virtual metaphysics and virtual value theory. Regarding *virtual pluralism*, Rami Ali notes that “while some virtual Xs are Xs, others are not. For instance, only some virtual money is money, and only some virtual calculators are calculators. This suggests that virtual Xs differ in kind. Moreover, the difference is relevant to their value: a virtual X that is an instance of X plausibly shares X’s value, and one that is not an instance plausibly has a distinct value” (Ali, 2023: p. 235). Proponents of virtual realist governance ought not assume without justification *virtual monism*, the alterative thesis that all virtual entities can be classified under a singular status and value. If, for example, virtual theft is by and large closer in metaphysical status and value-salience to physical theft than

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<sup>1</sup> Neely (2019) addresses the question of who has a right to augment virtual objects in the context of both private and public physical spaces.

virtual assault is to physical assault, then the punishment for virtual theft should mirror the punishment for physical theft more than the punishment for virtual assault should mirror the punishment for physical assault.

Fourth, regarding McStay's discussion of the missing commons: the problem is not merely that tech corporations per se are defining the public commons, but more precisely that a small set of Western-based tech corporations with specific ideologies are creating the rules and imbuing values and biases into the foundations of the Metaverse. This is reflected by the fact that the main Metaverse corporations that McStay discusses (Meta and Microsoft) are Western corporations and the main article of legislation under consideration is the European Union-based General Data Protection Regulation (GDPR). Looking at this empirical reality, one might worry that the public commons is threatened not just by a perniciously capitalistic surveillant physics but also by a problem of *digital neo-colonization*. I submit that in designing the Metaverse to promote the public good, it is crucial to ensure that technical standards groups incorporate non-Western based perspectives and that Metaverse creators are sufficiently sensitive to the global nature of the technology.

An objection that McStay raises to the idea that there is a problem of the missing public commons in the Metaverse is based on a suggestion I made as a reviewer involving Locke's labor theory of property. Following Locke, one might argue that Metaverse environments are the rightful property of technology corporations since these corporations created and mixed their labor with them. McStay briefly considers this Lockean inspired objection, claiming in response that "Locke's theory of property is about the exertion of labour upon natural resources (Locke cites acorns, apples and produce of land). The resources in question for the Metaverse and surveillant physics are people, which are not natural resources in Locke's terms" (McStay, 2023: p. 13).

At least two points can be made in response to McStay here. First, the Metaverse does involve virtual resources like virtual trees and landscapes, which, if virtual realism is true, are just as 'real' as natural physical resources and should thus arguably be included within the scope of Locke's labor theory of property. It is these virtual resources, not the digital users engaging with them, that Metaverse corporations are creating and arguably have property rights over. Second, one can argue for the property rights of Metaverse creators without invoking the particularities of Locke's labor theory of property. Ethical arguments against adblocking often claim that adblockers infringe upon the property rights of website creators, much like online music piracy infringes upon the property rights of record labels (Douglas, 2022). One might naturally extend this rationale to the Metaverse, averring that Metaverse creators also have the right to dictate the conditions for entry to their property, meaning that there is no problem of the missing public commons in the manner McStay suggests.

A major flaw with this property rights-based argument from my perspective is that it focuses on the rights of Metaverse creators to the neglect of the rights of Metaverse users. For the remainder of this commentary article, I will, by way of juxtaposition, consider a different argument based on the possibility of virtual abundance that addresses the rights of Metaverse users. *Virtual abundance* is the idea that virtual reality technology has the ability to create a nearly limitless supply of virtual goods at little cost, thereby eliminating scarcity in virtual worlds. As

Chalmers explains, “Space is not at a premium in VR. Everyone can have a personal idyllic virtual island if they choose to. Construction is easy, too. Once a house has been built, it can be duplicated elsewhere at little cost. Anyone can have a large virtual home in a wonderful location. The result may be virtual abundance” (Chalmers, 2022: p. 379). Chalmers observes that virtual abundance may not have a significant influence on the lives of digital users in the immediate future. Virtual reality is not yet ubiquitous in society, and the technology is still relatively primitive compared to what it could be. But imagine a world in which virtual reality technology is more widespread, seamlessly photorealistic, and incorporates various sensory modalities (e.g., touch, smell, taste, etc.). Assuming this more technologically mature version of virtual reality, and the veracity of virtual realism, it is not unreasonable to think that the quality of life within virtual worlds may eventually be equivalent to or even better than the quality of life within the physical world.

An argument in favor of the notion that that Metaverse users have a right to virtual abundance can be represented as follows:

#### The Right to Virtual Abundance Argument

P1. Virtual experiences in the Metaverse have real value, comparable to experiences in the physical world.

P2. It is inherently unjust to deny access to resources in an environment where scarcity is artificial and not a result of natural limitations.

C. Therefore, given virtual realist governance and the injustice of artificial scarcity, Metaverse users have a right to virtual abundance.

The first premise is essentially an affirmation of virtual realist governance. If virtual fictionalism is true, then there is intuitively not (at least as much of) an ethical and political imperative for Metaverse users to have a right to virtual abundance because in this case virtual goods are fictions that do not have real value or meaning. Assuming virtual realist governance, the second premise suggests that it would be unjust to deprive Metaverse users of virtual abundance and instead make them struggle or work for virtual goods and services. This premise builds on Chalmers’ (2022) point concerning how virtual abundance has the capacity to eliminate the problem of distributive justice in the Metaverse (chapter 19: pp. 352–356).<sup>2</sup>

The argument for the right to virtual abundance is naturally motivated by socialist principles, which support the equitable distribution of resources and proclaim that access to basic necessities (in this case, virtual goods) should not be determined by one’s ability to pay. Interestingly, while socialism supports the idea that there is a right to virtual abundance, the possibility of virtual abundance also makes the implementation of socialism more feasible. Socialism in the physical world is difficult to enact because of the finite number of material goods, but this is not necessarily the

<sup>2</sup> Chalmers clarifies that a post-scarcity Metaverse society characterized by virtual abundance is not necessarily an egalitarian utopia. There may be ‘positional goods’ like fame and power that are not distributed equally in such a society, even if there is not a problem of distributive justice with respect to material goods.

case in the Metaverse. Furthermore, it is worth observing that virtual abundance is less likely to be enacted if the Metaverse is run by corporations, as these corporations will have a strong financial incentive to implement a capitalist regime in virtual worlds wherein users must work and pay for virtual goods and services. Supporting this point, Chalmers says, “It’s somewhat easier to see how virtual abundance could work if a state rather than a corporation is responsible for the virtual worlds. The state can ensure that everyone has enough income to live a good life in a post-scarcity virtual world. Innovations will be made available to all. It is no accident that Karl Marx’s vision of an ideal society required abundance rather than scarcity” (Chalmers, 2022: pp. 354–355). Of course, none of this is to suggest that there are not serious ethical worries surrounding state control of the Metaverse. McStay briefly addresses the possibility of a ‘state surveillance physics’ wherein ethically problematic state surveillance and censorship mechanisms are deployed and justified in the Metaverse under the guise of user safety and well-being. Such state surveillance physics is also inconducive to the public good, according to McStay (see p. 16). Finally, while the argument for the right to virtual abundance is natural motivated by socialist principles, it is not inextricably tied to the political philosophy of socialism. The argument could also, for example, be defended from the perspective of *cyberlibertarianism*, a viewpoint exclusive to the internet and virtual environments which maintains that users should have maximum freedom in their digital interactions and not be subject to undue control and surveillance by corporations or governments (Winner, 1997). The cyberlibertarian might affirm that digital users have a right to virtual abundance as a means of maximizing user freedom in the Metaverse.<sup>3</sup>

Properly balancing the rights of digital creators with the rights of digital users has always been a paramount task in navigating the ethics of digital technologies. This becomes even more pronounced in the context of immersive Metaverse environments, as illustrated by the juxtaposition of the property rights argument and the right to virtual abundance argument. As virtual reality and mixed reality technologies become more advanced and ubiquitous, there will be an increasing need to address issues related to virtual metaphysics, virtual value theory, and virtual governance. McStay’s article is a timely, vital contribution to the philosophy of the Metaverse at both the theoretical level (e.g., novel conceptual frameworks of virtual realist governance and surveillant physics) and the pragmatic level (e.g., concrete governance proposals such as personal data stores and DAOs as data trusts), laying the groundwork for future work in this burgeoning philosophical subfield.

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<sup>3</sup> The right to virtual abundance argument does not propose that all virtual worlds should be characterized by the same governmental structure. There may be a variety of different types of governments across different virtual worlds, some capitalist and some socialist in nature. This is permissible according to the proponent of the right to virtual abundance argument, as long as Metaverse users have the option of virtual abundance.

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