

UC Irvine

UC Irvine Previously Published Works

Title

Toward anthropologies of the metaverse

Permalink

<https://escholarship.org/uc/item/302643ew>

Author

Boellstorff, Tom

Publication Date

2023

DOI

10.1111/amet.13228

Peer reviewed

FORUM: WHAT GOOD IS ANTHROPOLOGY? CELEBRATING 50 YEARS OF AMERICAN ETHNOLOGIST

Toward anthropologies of the metaverse

Tom Boellstorff 

Department of Anthropology, University of California, Irvine, USA

Correspondence

 Tom Boellstorff, Department of Anthropology, University of California, Irvine.
 Email: tboellst@uci.edu
Funding information

None

Abstract

Anthropology is good for understanding the metaverse, the emerging domain of digital culture that includes virtual worlds, online games, and social media. In the wake of COVID, there has been heightened interest in the metaverse's potential, particularly after Facebook renamed itself Meta in October 2021. Yet current understandings of the metaverse are deeply muddled, warped by rhetorics of promotion ranging from entrepreneurial zeal to rampant hucksterism. In response, anthropology can defamiliarize ways of thinking that might otherwise take on the status of common sense. I show that the metaverse is mischaracterized when its optional aspects are repackaged as obligatory. Four such mischaracterizations are particularly damaging: that the metaverse must use virtual reality (VR, which I rename "sensory immersion," or SI), that it must be interoperable, that it must be massive, and that it must employ crypto. By clearing this conceptual underbrush, we can move beyond both hype and anti-hype to delineate what anthropology offers to the analysis, decolonization, and future transformation of the metaverse.

KEYWORDS

anthropology, digital culture, ethnography, hype, metaverse, methods, virtual reality, virtual worlds

It's March 2023, and I'm in the greenroom, behind the stage where I'll soon be a keynote speaker at the 16th annual Virtual Worlds Best Practices in Education conference. Lorraine and iSkye, two of the organizers, help with a sound check and testing the presentation slide viewer.¹ Ready to discuss "making the metaverse a common reality," I walk through the stone wall surrounding the stage, since we are in the virtual world *Second Life* (see Figure 1).

The stage looks out on a magnificent crater lake, where about 150 audience members sit or float (see Figure 2). The crater is part of a vast landscape, stretching for nearly a virtual mile.

Since the landscape is built for a conference, there are venues for smaller presentations, and this year's design locates them in biomes ranging from icy tundra to arid desert (see Figure 3). The landscape also includes a wetlands with an ecology of virtual plants and animals, as well as a café for quiet discussion (see Figures 4 and 5). Indeed, the landscape is filled with buildings, meadows, hilltops—a diversity reflecting the conference's social design, of which talks are but one element. The conference also includes interactive exhibits, dances, even live music (see Figure 6). Virtual place enables social form. Virtual conferences using technologies like Zoom typically include only formal presentations. But this event's organizers leverage the metaverse to incorporate other crucial elements of effective

conferences: downtime in a new place, informal networking, gossip with old friends, partying, aimless discovery. The relationship of this event and landscape to the physical world is not one of replication or compensation but of new possibilities.

It is with this specific event—whose vibrancy I capture only in passing, noting as well that analogous events have taken place on other platforms—that I open a general discussion regarding how anthropology is good for understanding the metaverse. In the wake of COVID, there has been heightened interest in the metaverse's potential, particularly after Facebook renamed itself Meta in October 2021. But as science fiction author William Gibson puts it, "The future is already here—it's just not very evenly distributed" (Kennedy, 2012). In Gibson's adage, we can productively substitute "metaverse" for "future." Despite all the hype that the metaverse will soon transform society, the metaverse has been here for decades—just not very evenly distributed. And notwithstanding the anti-hype that the metaverse is already passé—supplanted by generative artificial intelligence like ChatGPT—we have only scratched the virtual surface of the metaverse's potential benefits and dangers.

Because the metaverse already exists, it will be good to continue fieldwork in a range of virtual field sites. But another way anthropology is good for the metaverse is conceptual—calling into question ways of thinking in danger of becoming

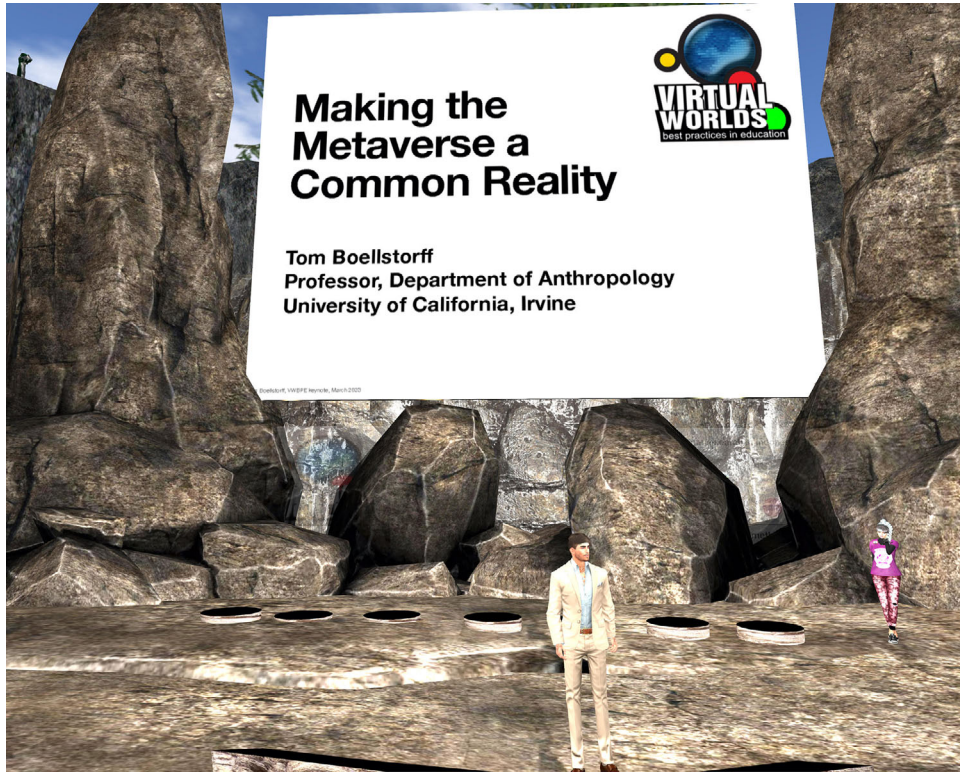


FIGURE 1 Tom Boellstorff (as their avatar Tom Bukowski), preparing to speak at the Virtual Worlds Best Practices in Education conference, March 23, 2023. Tom's avatar is dressed in a tan suit, and they stand before a presentation screen on a rocky wall. (Killashandra Lavendel) [This figure appears in color in the online issue]



FIGURE 2 Tom Boellstorff (as their avatar Tom Bukowski), speaking at the Virtual Worlds Best Practices in Education conference, March 23, 2023. In front of Tom is a crater lake with audience members floating in the water or sitting on piers. (Killashandra Lavendel) [This figure appears in color in the online issue]



FIGURE 3 A group of attendees at the Virtual Worlds Best Practices in Education conference, sitting in a desert landscape, March 2023. (Elektra Panthar) [This figure appears in color in the online issue]

“common sense.” My goals lie in this second register of conceptual analysis. This is not a review article surveying a body of scholarship but a commentary charting a landscape of possibility. Current understandings of the metaverse are deeply muddled, even contradictory. This reflects real uncertainty, but the muddling is often worsened by rhetorics of promotion ranging from entrepreneurial zeal to rampant hucksterism. I thus seek to help disentangle misunderstandings of the metaverse before they become “locked in” as if they were factual and inevitable (Lanier, 2010).

DEFINING THE METAVERSE

The metaverse’s history dates to the 19th-century telegraph, and science fiction authors have envisioned contemporary incarnations since at least Vernor Vinge’s (1981) novella *True Names* and William Gibson’s (1984) novel *Neuromancer* (Boellstorff, 2022). The term *metaverse* was coined by Neal Stephenson in 1993, and by the early 2000s, it was already a synonym for *virtual world* (e.g., Ondrejka, 2005). Stephenson (1993, pp. 24–25) defines the metaverse as an “imaginary place” composed of “the graphic representations—the user interfaces—of a myriad different pieces of software that have been engineered by major corporations.” This conflates necessary, predominant, and possible aspects of the metaverse, and such confusions have only multiplied. Consider how a definition from the venture capitalist Matthew Ball (2022, p. 29) mixes together about 15 concepts, from selfhood to time, money, and place:

The Metaverse is a massively scaled and interoperable network of real-time rendered 3D virtual worlds which can be experienced synchronously and persistently by an effectively unlimited number of users with an individual sense of presence, and with continuity of data, such as identity, history, entitlements, objects, communications, and payments.

Similarly, one group of technology journalists defined the metaverse as

made up of a number of 3D virtual environments or worlds that are connected. It’s virtual reality (VR), meets augmented reality (AR), meets NFTs, meets social commerce. Users will be able to create an avatar ... And it’ll be done with the help of AR glasses, VR headsets, smartphone apps or other devices like computers and gaming consoles. (del Carmen Corpus et al., 2022)

Like many other people I could have quoted, these astute observers confuse necessary, predominant, and possible aspects of the metaverse in four primary ways.

Virtual reality

The most pervasive of these four confusions involves virtual reality (VR). Try it yourself: search for “metaverse” on a



FIGURE 4 A group of attendees at the Virtual Worlds Best Practices in Education conference, exploring a virtual marshland, March 2023. (Elektra Panthar) [This figure appears in color in the online issue]

popular stock image vendor like Getty Images or iStock. You will primarily find “photos of gawk-mouthed people in VR headsets” (Au, 2023a, p. 330). What these people are seeing and experiencing is obscured. Imagine if I had illustrated the Virtual Worlds Best Practices in Education conference with a laptop self-portrait (see Figure 7)!

Using virtual reality headgear to stand in for the metaverse reveals a fundamental confusion of interface and place. It is unfortunate that since the 1980s, “virtual reality” has been equated with sensory interface. This most often means movement-tracking headsets with three-dimensional graphics and sound, but it can also mean, for instance, haptic gear allowing one to touch virtual objects. Reality, however, does not inhere in the senses. Persons with visual and auditory impairments have always participated in the metaverse; their practices, selfhoods, and communities are no less real. What makes the metaverse real is social immersion, not sensory immersion (Boellstorff, 2015, chap. 4). If I am in the metaverse with a friend, that friendship is real even if I’m using a screen and keyboard. If I take a text-based online Italian language class, interacting with my teacher and fellow students using no graphics whatsoever, those interactions are real, and from my learning I could travel to physical-world Rome and converse with the locals.

In asserting that virtual reality is necessary to the metaverse, some of its promoters are encoding an empirically incorrect and ableist notion of reality as reduced to the senses. Despite beginning with the same word, *virtual reality* and *virtual world* are radically distinct: *virtual reality* is about sensory interface, while *virtual world* is about online place. Apple recognized this when announcing its Vision Pro headset in June 2023: the com-

pany never used *virtual reality*, opting instead for the phrase *spatial computing*, which was coined by the company Magic Leap. Virtual reality and virtual worlds can overlap, but they are independent. One can use virtual reality gear on a computer disconnected from the internet, or, conversely, inhabit virtual worlds with a monitor and mouse. The metaverse is three-dimensional, “3D,” and one can use virtual reality “3D” interfaces within it, but these notions of “3D” differ. One can access the metaverse with “2D” interfaces like a monitor, and even “1D” interfaces in the sense that many virtual worlds are composed solely of text. Yet even these text-only virtual worlds are three-dimensional. In such a world, the following text might appear: “You have entered a room with a red chair and yellow chair; Susan is sitting in the yellow chair.” In response, you might type, “Sit in the red chair,” and you are thus moving in a three-dimensional virtual world space.

I acknowledge that the association of interface with “virtual reality” has become deeply entrenched. Renaming might seem futile, but the attempt is worthwhile even as a provocation. I therefore propose renaming virtual reality “sensory immersion” (SI). At present this usually means sight and sound, and often body movement and touch (haptics). In the future it could involve smell and taste, or even full-body immersion, as popularized in *The Matrix*. But as illustrated by another well-known film, *Avatar*, these interfaces could in theory be used to enable users to have another body in the physical world (Boellstorff, 2011). SI can exist without the metaverse and vice versa. SI has many fascinating possibilities, but these do not include privileged access to the real. Terming SI “virtual reality” misleadingly implies that the senses are the foundation of human reality. But we are present in places even when we do not



FIGURE 5 A group of attendees at the Virtual Worlds Best Practices in Education conference, sitting in a virtual café, March 2023. (Elektra Panthar) [This figure appears in color in the online issue]

sense them in every way. This is the anthropological insight that human reality is made not by individual sensing but by culture—the collective, shared grammars that let us speak and the shared social logics and practices through which human experience arises. Virtual worlds are virtual reality, in and of themselves. Understanding this does not minimize the important impact that SI technologies will have for many people in many corners of the metaverse. Rather, it provides a common language for locating that impact in the cultural contexts that are the metaverse’s true reality.

Interoperability

A second mischaracterization of the metaverse is that it must involve interoperability. The internet is predicated on the idea of a network with links, and definitions of the metaverse likewise presume connection. In this regard, the *meta* prefix performs a function similar to that of *inter*. But it’s unclear what exactly this overarching multiplicity might entail, which is why people sometimes confuse “metaverse” with “multiverse.”

Just as there are formats, from PDF to JPG, for sharing documents and images, there will be standard formats for avatars, digital objects, and virtual places in the metaverse. This can counter the siloing that, for instance, makes Facebook posts accessible only on Meta’s own platforms. But while standardization is important, some notions of metaverse interoperability presume, as Matthew Ball put it in the quotation above, “continuity of data, such as identity, history, entitlements, objects, communications, and payments.” Yet we know from the already-existing metaverse that users don’t necessarily

require consistent, unified identities. Based on what empirical evidence would we conclude that one’s identity in, say, an online game like Fortnite must align with one’s identity on Instagram? Such ideas illustrate how siloing is not the only modality of corporate profit: interoperability can facilitate surveillance capitalism and advertising models of revenue generation. Metaverse standards need not always include, say, having an avatar whose identity, social networks, clothing, and possessions are portable between worlds. In many cases interconnection takes the form of polymedia or transplatform relationships (Boellstorff & Soderman, forthcoming; Madianou & Miller, 2012). Such relationships can connect virtual worlds but also involve, for instance, social networks (like TikTok and Instagram) or collaboration software (like Discord and Slack). Furthermore, even with metaverse standards, forms of metaverse separation will persist and emerge. There is now, and will be, value in distinct online socialities—unconnected places of play, divisions of labor and leisure, pursuits of alternative selfhood and community. Anthropology can help illuminate these—including emergent patterns of everyday interconnection, from quite general (like copying and pasting) to more specific (like “friending” or going “away from keyboard”).

Massive

A third mischaracterization of something as obligatory involves massiveness. It is true that as noted above, “metaverse” (like “internet”) implies connections that are “worldwide.” But this does not mean that size correlates with significance. That idea has everything to do with the tech sector’s own hype: it is not



FIGURE 6 A group of attendees at the Virtual Worlds Best Practices in Education conference, listening to a live music event in the virtual marshland, March 2023. (Elektra Panthar) [This figure appears in color in the online issue]



FIGURE 7 The author in Second Life (but shown looking at a laptop screen), May 2023. (Tom Boellstorff) [This figure appears in color in the online issue]

an analysis but a sales pitch. The dream is the next iPhone or Facebook, something used by billions and generating enormous revenue. In this framework any element of the metaverse—a virtual world, a social network, a device—is either growing or shrinking (in which case it is uninteresting).

What counts as massive? Some virtual worlds are large: for instance, Roblox as of late 2022 had about 58.8 million average daily users and 250 million monthly users (Au, 2023, pp. 103, 107). In comparison, as I write Second Life has around 40,000 persons logged in at any one time, with about

600,000 active residents. Anthropologists, however, do not only study China and India as a whole: we work with communities smaller than 500,000, 50,000, or even 5000. The fallacy that size equals significance reflects how metaverse hype construes “society” as “market.” As in the physical world, many vital domains of culture will be relatively small. Anthropologists can explore the “minimally multiple” metaverse, charting similarities and differences, distinctions and connections. It is true that questions of scalability are significant with regard to the metaverse beyond capitalist logics of market share (Dionisio et al., 2013). Scalability will likely be crucial for the metaverse to help mitigate climate change, for instance. But scalability will not necessarily mean massiveness. We can ethnographically explore how to scale a metaverse of hundreds, so to speak: anthropological inquiry can illuminate how online sociality is formed and expanded through a multiplicity of smaller communities.

Crypto

A fourth mischaracterization involves “crypto” (also termed “web3”), which I use as a shorthand for cryptocurrencies, nonfungible tokens (NFTs), and blockchain technologies. Many metaverse definitions presume a foundation in crypto. No evidence is offered to support this claim that the metaverse will be crypto’s “killer app.” While crypto might be significant to some parts of the metaverse, as is already the case, the metaverse will often use physical-world currencies (like the dollar) or noncrypto currencies (like Second Life’s Linden Dollar or Roblox’s Robux). Furthermore, there is no reason the metaverse has to have money at all, even if this is beyond the horizon of today’s boosterism. The metaverse is not inevitably capitalist. Anthropologists have studied relationships between economy and society since the discipline’s founding. Such work already extends online and can include the open-source and nonprofit metaverse.

THREE DEFININIONS OF THE METAVERSE

It bears reemphasizing that these four elements—sensory immersion, interoperability, massiveness, and crypto—will be key aspects of the metaverse. But they are not necessary. It was in this spirit that I presented a working definition of the metaverse at the Virtual Worlds Best Practices in Education conference. With slight modifications, it was as follows:

DEFINITION 1. The metaverse:

- Is virtual place, linked to physical-world place;
- Predominantly employs self-representation, contains games, connects to the internet beyond virtual worlds, and is owned by for-profit companies;
- Possibly uses sensory immersion, features interoperability, is of massive size, or employs crypto.

This long-winded definition opens by recognizing that all understandings of the metaverse seem to presume virtual place,

usually in the form of multiple virtual worlds (or as a single interconnected virtual world). Because the online cannot exist without the offline, the metaverse will necessarily be entangled with physical-world places. (One example of such entanglement is temporality: online experience is always shaped by the time zone in which one is physically located.) Next are predominant—but not necessary—aspects of the metaverse. Self-representation (usually in the form of an avatar) is common, but one could design a virtual world without it. Gaming is also usually involved: many virtual worlds, including most of the largest, are designed first and foremost for gameplay (from World of Warcraft to Fortnite). Gaming also predominates in many more open-ended virtual worlds (like Minecraft and Roblox). Also usually present are links between virtual worlds and other internet platforms like social networks (e.g., Facebook, Instagram, YouTube), collaboration software like Discord and Slack, and even email and text messaging. If, say, a community in Fortnite has a Discord server for sharing news and planning events, that Discord sociality is part of the metaverse. Corporate ownership is the contemporary metaverse’s norm. This contrasts with the emerging internet of the 1970s and 1980s, which was largely driven by universities, government agencies, and the military. Anthropology can be good for showing how what might appear to be inevitable aspects of the metaverse are, in fact, capitalist assumptions about economy and society. Indeed, despite corporate dominance, there is a flourishing nonprofit and open-source metaverse ripe for ethnographic engagement. Finally, there are possible aspects of the metaverse. In many cases these will be of tremendous and widespread importance, but that does not imply a teleology by which they become ubiquitous.

This first definition is exhaustive and exhausting in its comprehensive disentangling of the necessary, predominant, and possible. Sacrificing detail for brevity, a second definition could be this:

DEFINITION 2. The metaverse is virtual place, usually including self-representation, games, other online platforms, and corporate ownership, and which can involve sensory immersion, feature interoperability, be massive, or employ crypto.

We could distill it even further:

DEFINITION 3. The metaverse is virtual place.

This third, maximally succinct definition presumes the detail of the first two definitions and proceeds from the fundamental character of the metaverse as virtual place. For the sake of synonyms, I would be fine with substituting “digital” and “online” for “virtual.” Where I am less flexible is with “place.” While *spatial computing* is an improvement over earlier formulations, its fatal flaw is the vague notion of “space” rendered more vague through transformation into the abstract adjective *spatial*. The metaverse is composed not of some ethereal “space” but of places every bit as real (and unreal) as physical places. This is the foundation of the metaverse—the source of its transformative potential.

METAVVERSE ECOLOGIES

Here, I have sought to contribute to the growing anthropology of the metaverse in an analytical register, cutting through conceptual underbrush to clarify what the metaverse actually entails. Anthropology is good for the metaverse because, as we saw at the Virtual Worlds Best Practices in Education conference, the metaverse already exists as places of remarkable creativity and possibility. Hundreds of millions already participate in the metaverse, and there is a desperate need for continuing ethnographic investigation of online socialities, the companies that overwhelmingly own and design them, the interfaces with which we access them, and the imbrications of online and offline cultures. One strength of anthropology is our “tackling between the most local of local detail and the most global of global structure in such a way as to bring them into simultaneous view” (Geertz, 1983, p. 69). In this spirit, anthropologies of the metaverse can provide both local ethnographic insight and what I have elsewhere termed “platform-agnostic theory,” which can “make claims about patterns and dynamics beyond the case study and the individual field site” (Boellstorff, 2013, p. 10).

Anthropology’s ethnographic and theoretical approaches mean it can play a pivotal role in preventing economic, political, and social models of the metaverse from being “locked in.” One consequence of corporate dominance is that there are now only two widespread economic paradigms: subscription (as a onetime purchase or a recurring monthly or annual fee) and advertising (with its associated forms of surveillance capitalism). The corporate model is a governance model as well, shaping dynamics of inclusion and exclusion, rights and representation, and a constrained palette of three content models. The first of these is corporate-created content—common in virtual worlds structured as games, where graphics, objects, embodiments and narrative are tightly controlled. The second model is predicated on user-generated content. It appears in virtual worlds like Minecraft, Roblox, and Second Life, and it predominates on social media (Facebook, YouTube, Instagram, TikTok) and online collaboration software (Discord, Slack). A third model links the first two in the form of specialized content creators and influencers—persons who are simultaneously users and laborers, earning income through the platform even though they are not employees. Anthropological inquiry can critically explore these dominant models of ownership, governance, economics, and labor—mapping their assumptions and examining alternatives.

The metaverse is not just a marketing scheme. It is very real, and a substantial portion of the world’s population already spends a lot of time there—there were about 600 million monthly active users as of October 2023 (Au, 2023b). I have emphasized throughout this essay that with regard to the metaverse, one “good” of anthropology lies in countering cycles of hype and anti-hype. Scholarly inquiry and activist intervention suffer from these hype cycles, in which faddish attention is followed by fading interest in favor of the Next Big Thing. While Facebook’s rebranding as Meta drew attention, its narrow and uninspired vision for the metaverse has engendered waves

of anti-hype all its own. Generative AIs like ChatGPT have followed and partially displaced the metaverse in the hype cycle. But the rising importance of AI does not diminish the metaverse’s importance. Indeed, they are deeply imbricated; AI can, for example, provide ever more lifelike nonplayer characters (NPCs) and enable users to easily create virtual worlds (“Computer, make me a French village surrounded by mountains with a church in the center”).

Because the metaverse is real, so too is its potential to reshape the physical world. For instance, transportation is a key contributor to climate change. Had the Virtual Worlds Best Practices in Education conference been held in the physical world, physical bodies would have taken planes and cars to physical conference rooms, hotels, and restaurants. The metaverse has a carbon footprint, but in cases like this, it has far less than do its physical-world analogues, and the metaverse can be made less energy and resource intensive. This is a call not for “technological solutionism” (Morozov, 2013) but for rethinking the relationships between digital technology and climate, with the goal of achieving what we could term a carbon-responsive metaverse (Nafus et al., 2021; see also Abraham, 2022; Aslan, 2020; Cubitt, 2017; Mills et al., 2019; Nardi et al., 2018). Climate change is a phenomenon of place: of the planet earth and its ecosystems. How can the metaverse as virtual place combat climate change in physical place?

Anthropology can play a vital role in answering this question in terms of social practices and cultural logics, linking up with but also moving us beyond a focus on technological affordance and design intervention. Anthropology can also respond to this question by historicizing physical place itself, recognizing that “imperialism and ongoing (settler) colonialisms have been ending worlds for as long as they have been in existence” (Yusoff, 2018, p. 10). This means that decolonizing the metaverse must be the modality in which we work from the outset. For instance, as anthropologists have continued to address the discipline’s own relationship to colonialism, Gupta and Stoolman (2022, p. 784) note that “studying Native American systems of thought and classification ... might have enabled an early critique of the ecological degradation and species extinction created by capitalist expansion and ‘frontier’ narratives.” A contemporary decolonizing approach to the metaverse can illuminate how to reduce its environmental impact and reduce physical-world contributors to climate change. At the same time, such a decolonizing approach provides the axis for responding to the ways that the metaverse is a project of corporate colonization of digital culture. Noting that “we are given to technological devices and gadgets galore that are not always geared to sustainability,” Kawagley (1998, pp. 5, 2) emphasizes the Alaska Native insight that “if we are looking at and trying to make sense of the world in which we live, we must speak of it as an active process.” How might this insight set a research agenda for making sense of virtual worlds as active processes? Following Ribeiro (2023, p. 2), we can term this a “postimperial” anthropology of the metaverse, one that looks to alternative possibility: “If the aim is to change the future, utopian struggles are crucial exactly because their explicit goals are to transform how we imagine what our world can become.”

Investigating what I term “metaverse ecologies”—how the metaverse represents climate change, contributes to climate change, and can mitigate climate change—represents only one direction for research that advances a decolonizing digital anthropology. A future-oriented anthropology of the metaverse can be utopian while responding to how the metaverse can also magnify negative aspects of the internet, adding new negative aspects all its own. The metaverse can be a corporate-owned source of disinformation, complicit with state power, that troubles boundaries of the authoritative and real in more pervasive ways than before. While the metaverse is grounded in the physical world, it can be used in service of ideologies involving the desire “to escape from existing physical and cultural constraints, and to start over in a more flexible space freed from the intense inequality and economic struggle of the existing social order” (Roquet, 2023, p. 4). In the metaverse it is entirely possible for heteronormativity, ableism, white supremacy, and patriarchy to continue to exploit and exclude. It can support infrastructures of labor precarity, surveillance, and inequality with regard to access, control, and representation.

My goal in naming these possible benefits and dangers is neither to inaugurate a new hype cycle nor set the stage for a wave of anti-hype dismissing the metaverse. Anthropology can help forge a metaverse of social justice founded in treating the virtual as the reality that it is. While drafting this essay, I sat down with iSkye and Phelan, another organizer of the Virtual Worlds Best Practices in Education conference, to reflect on the event’s success. As we sat around a virtual campfire I remarked on the creative use of biomes to organize the event. Phelan noted, “the neat thing about it is that to a certain extent we just sort of grab an idea and run with it.” iSkye added, “it challenges people to think differently,” and Phelan responded, “it’s also about providing an opportunity to allow other people to build upon a framework. And what we want to do is take people just the other side of their comfort zone.”

For many anthropologists, Phelan’s comment is germane indeed. The metaverse takes us out of our comfort zone. Anthropology boasts a vibrant community of scholarship on digital culture, but it has lagged in its attention to the metaverse. My call is to not let that persist. Anthropology is good for the metaverse. Claims that “big data” renders ethnography obsolete are incorrect. Without the kinds of attention to lived sociality and tacit knowledge that anthropology can provide, we will be unable to understand the metaverse—we will be unable to decolonize it or articulate better futures. Conversely, the metaverse is good for anthropology. Against claims that ethnography is limited to the local, physical, and discrete, the metaverse demonstrates the value of ethnographic method and anthropological analysis wherever culture resides.

We need not fear extending beyond our anthropological comfort zone. We already know a good deal about the metaverse. We know much of its history. We know a lot about the technologies, social practices, and economic forces that consolidate its massive contemporary presence. We even have many indications as to where the metaverse is going. A flourishing body of ethnographic work is already charting the metaverse—we could, indeed, hold a “Virtual Worlds Best Practices in Ethnog-

raphy” conference showing how anthropology can illuminate the metaverse. Anthropology itself can be a “best practice,” good for exploring this new phase of the human journey.

ACKNOWLEDGMENTS

I thank Susanna Trnka, Jesse Hession Grayman, and Lisa Wynn for their support in writing this essay. I thank Lorraine Mockford, Phelan Corrimal, and iSkye Silverweb for their insightful comments, and Elektra Panthar and Killashandra Lavendel for their wonderful images. Four anonymous reviewers provided incredibly insightful comments on an earlier version of this essay: the version you see is completely transformed for the better thanks to their generous suggestions.

ORCID

Tom Boellstorff  <https://orcid.org/0000-0002-8580-3747>

ENDNOTE

¹To acknowledge their creative work, I use the Second Life names of my virtual interlocutors.

REFERENCES

- Abraham, Benjamin J. 2022. *Digital Games after Climate Change*. Cham, Switzerland: Palgrave Macmillan.
- Aslan, Joshua. 2020. “Climate Change Implications of Gaming Products and Services.” PhD diss., University of Surrey.
- Au, Wagner James. 2023a. *Making a Metaverse That Matters: From Snow Crash and Second Life to a Virtual World Worth Fighting For*. Hoboken, NJ: John Wiley.
- Au, Wagner James. 2023b. “Metaverse Platform Market Passes 600 Million Monthly Active Users, With Strongest Growth among 17–24 Adults.” *New World Notes*, October 4, 2023. <https://nwn.blogs.com/nwn/2023/10/metaverse-platform-mau-q3-2023-metaversed.html>.
- Ball, Matthew. 2022. *The Metaverse and How It Will Revolutionize Everything*. New York: Livewright.
- Boellstorff, Tom. 2011. “Placing the Virtual Body: Avatar, Chora, Cypherg.” In *A Companion to the Anthropology of the Body and Embodiment*, edited by Frances E. Mascia-Lees, 504–20. New York: Wiley-Blackwell.
- Boellstorff, Tom. 2013. “Making Big Data, in Theory.” *First Monday* 18 (10): 1–17. <https://doi.org/10.5210/fm.v18i10.4869>.
- Boellstorff, Tom. 2015. *Coming of Age in Second Life: An Anthropologist Explores the Virtually Human*. 2nd ed. Princeton, NJ: Princeton University Press.
- Boellstorff, Tom. 2022. “The Metaverse Isn’t Here Yet but It Already Has a Long History.” *Conversation*, August 12, 2022. <https://theconversation.com/the-metaverse-isnt-here-yet-but-it-already-has-a-long-history-186083>.
- Boellstorff, Tom, and Braxton Soderman. Forthcoming. *Intellivision: How a Videogame System Battled Atari and Almost Bankrupted Barbie®*. Cambridge, MA: MIT Press.
- Cubitt, Sean. 2017. *Finite Media: Environmental Implications of Digital Technologies*. Durham, NC: Duke University Press.
- del Carmen Corpus, Maria, Maria McCallen, Alicia Valenski, and Kamini Ramdeen-Chowdhury. 2022. “What’s the Metaverse? Here’s How It’ll Spice Up Your Virtual Life.” *Skimm*, March 25, 2022. <https://www.theskimm.com/news/whats-the-metaverse-heres-how-itll-spice-up-your-virtual-life-2pj9S56yCBSWOM2QHWgaW5>.
- Dionisio, John D. N., William Burns, and Richard Gilbert. 2013. “3D Virtual Worlds and the Metaverse: Current Status and Future Possibilities.” *ACM Computing Surveys* 45 (3): 31–38. <https://doi.org/10.1145/2480741.2480751>.
- Geertz, Clifford. 1983. “‘From the Native’s Point of View’: On the Nature of Anthropological Understanding.” In *Local Knowledge*, 55–72. New York: Basic Books.
- Gibson, William. 1984. *Neuromancer*. New York: Ace.

- Gupta, Akhil, and Jessie Stoolman. 2022. "Decolonizing US Anthropology." *American Anthropologist* 124 (4): 778–99. <https://doi.org/10.1111/aman.13775>.
- Kawagley, Angayuqaq Oscar. 1998. "An Alliance between Humans and Creatures, Part I." *Sharing Our Pathways* 3 (5): 1–6.
- Kennedy, Pagan. 2012. "William Gibson's Future Is Now." *New York Times*, January 13, 2012. <https://www.nytimes.com/2012/01/15/books/review/distrust-that-particular-flavor-by-william-gibson-book-review.html>.
- Lanier, Jaron. 2010. *You Are Not a Gadget: A Manifesto*. New York: Alfred A. Knopf.
- Madianou, Mirca, and Daniel Miller. 2012. "Polymedia: Towards a New Theory of Digital Media in Interpersonal Communication." *International Journal of Cultural Studies* 16 (2): 169–87. <https://doi.org/10.1177/1367877912452486>.
- Mills, Evan, Norman Bourassa, Leo Rainer, Jimmy Mai, Arman Shehabi, and Nathaniel Mills. 2019. "Toward Greener Gaming: Estimating National Energy Use and Energy Efficiency Potential." *Computer Games Journal* 8 (3/4): 157–78. <https://doi.org/10.1007/s40869-019-00084-2>.
- Morozov, Evgeny. 2013. *To Save Everything, Click Here: The Folly of Technological Solutionism*. New York: PublicAffairs.
- Nafus, Dawn, Eve M. Schooler, and Karly Ann Burch. 2021. "Carbon-Responsive Computing: Changing the Nexus between Energy and Computing." *Energies* 14 (21): 1–26. <https://doi.org/10.3390/en14216917>
- Nardi, Bonnie, Bill Tomlinson, Donald J. Patterson, Jay Chen, Daniel Pargman, Barath Raghavan, and Birgit Penzenstadler. 2018. "Computing within Limits." *Commun* 61 (10): 86–93. <https://doi.org/10.1145/3183582>.
- Ondrejka, Cory. 2005. "Escaping the Gilded Cage: User Created Content and Building the Metaverse." *NYLS Law Review* 49 (1): art. no. 6. https://digitalcommons.nyls.edu/cgi/viewcontent.cgi?article=1310&context=nyls_law_review.
- Ribeiro, Gustavo Lins. 2023. "From Decolonizing Knowledge to Postimperialism." *American Ethnologist* 50 (3): 375–86. <https://doi.org/10.1111/amet.13186>.
- Roquet, Paul. 2023. "Japan's Retreat to the Metaverse." *Media, Culture, and Society* 45 (7): 1501–10. <https://doi.org/10.1177/01634437231182001>.
- Stephenson, Neal. 1993. *Snow Crash*. New York: Bantam.
- Vinge, Vernor. 1981. *True Names*. New York: Dell.
- Yusoff, Kathryn. 2018. *A Billion Black Anthropocenes or None*. Minneapolis: University of Minnesota Press.

How to cite this article: Boellstorff, Tom. 2023. "Toward anthropologies of the metaverse." *American Ethnologist* 1–10. <https://doi.org/10.1111/amet.13228>