BEYOND MATTER, WITHIN SPACE

Curatorial and Art Mediation Techniques on the Verge of Virtual Reality

Edited by Lívia Nolasco-Rózsás
with Marianne Schädler

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For Peter Weibel (1944–2023)

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zkm karlsruhe

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1.
VIRAL RADIATION.
Spaces of the Exhibition in the Virtual Condition

2.
VALID READINGS.
Digitization of Materiality and Memory

3.
VAPOROUS RESTORATION.
Digital Models of Past Landmark Exhibitions

4.
VARIABLE RELATIONS. Navigating the Local, Non-local, and Interlocal

5.
VISIBLE REVISION. Hybrid Experiences in the Museum

6.
VISIONARY RAMBLINGS. Residency Program in Karlsruhe, Tallinn, Tirana, and Online

APPENDIX

A MESSAGE FROM THE GERMAN MINISTER OF STATE FOR CULTURE AND THE MEDIA

Peter Weibel, the longtime chairman of ZKM | Center for Art and Media Karlsruhe who passed away in March 2023 at the age of seventy-eight, was a fascinating pioneer of media art and a powerhouse of creativity. He once neatly summed up the task of art as "opening doors that no one sees are there." The international project "Beyond Matter. Cultural Heritage on the Verge of Virtual Reality" throws open the doors for the museum of the future, for art and for its mediation: How does digital technology influence our conception of space, and how does that affect the work of museums and the way art is shared with the public? How does digital transformation change our aesthetic experiences? Artists, researchers, and museum experts in Europe worked together for four years to answer these questions: from the Centre Pompidou in Paris to ZKM in Karlsruhe and the Ludwig Museum of Contemporary Art in Budapest; from Aalto University in Helsinki to Tallinn Art Hall in Estonia and tech companies in Germany.

Digital transformation is one of the major challenges of our time for culture and the media as well. This challenge demands creative minds and innovative approaches. It is in our common interest to make sure that museums can continue to accomplish their mission under rapidly changing conditions, both as institutions of art and culture, and as sites of social and democratic discourse.

This publication and the related project website are a valuable resource for everyone who has the task of expanding their digital offerings and providing museum services that meet current and future needs.

I am glad that the office of the Federal Government Commissioner for Culture and the Media was able to support the digital transformation of museums by contributing funding to the Beyond Matter project. I am grateful to Peter Weibel's dedicated team at the ZKM and to all those who participated in this project for their commitment, and I hope the readers of this volume will find it interesting and inspiring.

Claudia Roth
Member of the German Bundestag
Minister of State for Culture and the Media

Berlin, April 4, 2023

THE SENSE OF PRESENCE IN A VIRTUALIZED SOCIETY

Elena Esposito

The Space of Exhibitions in Times of Virtuality

Virtuality is becoming increasingly normalized in our society.[1] Right now this is primarily happening through Meta's metaverse, an immersive virtual world in which users move in the form of avatars. The *metaverse* is regarded as an alternative digital world (or integrative in the sense of augmented reality) that is not real, but in which one does things that can have consequences in the real world: creating and destroying wealth with cryptocurrencies, performing surgery on living bodies, experimenting with novel forms of authenticity and ownership such as non-fungible tokens (NFTs), and much more.

Art production reacts in its own ways, using software programs and virtual reality equipment to experiment with computer-assisted animations, immersive spaces, human-machine interfaces, and artistic experience in non-real environments. For museums, virtualization can be particularly challenging. The requirement to move people's bodies to a specific place—the space of the exhibition—at specific times seems to become anachronistic and increasingly rare. Now that so many experiences, including the artistic, are disengaging from participants' physical context and can be accomplished by going online from any location, requiring physical presence in a given place seems a luxury and a cost (in time, money, effort, and commitment) that must be justified. How do curatorial approaches respond to this? How does the meaning of exhibiting work of art in the museum space change when society offers more and more, and increasingly rich and flexible, digital spaces of experience? Why should people be willing to take on the burden of going to the physical place of the exhibition?

The Metaverse, Cyberspace, and the Experience of Fiction

To answer these questions, we must first clarify what the virtualization of experience is and in which ways it is innovative with respect to the media experiences already available in our societies. From a sociological perspective, virtuality—from video games to the recent emphasis on the *metaverse*—is a form of experience with not-real worlds that further elaborates the modern tradition of fiction, most specifically the development of the novel since it coalesced as a form in eighteenth-century England.[2] Fiction also constructs an avowedly non-existent alternative reality, which enables participants to observe the "real reality" from the outside—with the result that direct experience is contextualized.[3] Virtual reality has some very peculiar features that make it not a fictitious reality distinct from the real one, however, but an independent alternative world in which one can operate and realize concrete

1 See the Collaborative Research Center Virtual Environments at the University Bochum, https://www.sfb1567.ruhr-uni-bochum.de/.

2 See Lennard J. Davis, *Factual Fictions. The Origins of the English Novel* (New York: Columbia University Press, 1983).

3 See Elena Esposito, *Die Fiktion der wahrscheinlichen Realität* (Frankfurt am Main: Suhrkamp, 2007).

effects. How does this happen, and what are the consequences?

Recent virtual environments, including the Meta's *metaverse*, promise to constitute the most accomplished form of virtualization to date. And the difference between fiction and virtualization may be particularly useful in helping us understand what is in fact new about the *metaverse*. At first glance, the discourse on the *metaverse* reproduces, thirty years later, the discussion in the 1990s about so-called cyberspace, an alternative world to real reality, in which people can experience different identities and have otherwise inaccessible experiences.[4] At that time it was already observed that we had been living in cyberspace since at least the past two or three centuries, since the experience of fiction became widespread—and that arguably this first happened with novels, and then with cinema and television adding sounds and moving images,[5] as we participated in alternative worlds which were known not to exist but were nevertheless not a lie. The author of fiction narrates events that never happened, but cannot be called a liar. The reader or viewer, like the avatar in virtual reality, enters the world of fiction by assuming the perspective of the characters and participating in their experiences—because they are known not to be true. Engaging in the events of fiction, we weep, are happy, become scared, and, by observing the world from a different perspective, eventually learn to observe our own perspective from the outside. In sociology, this is called second-order observation: instead of observing the objects of the world we observe other observers and their perspective on their world.[6]

This *Realitätsverdoppelung* (reality doubling) as described by Niklas Luhmann[7] was a key element in the transition to modern society and is now so normalized that we no longer realize it. In fact, we have all been living for centuries in a "metaverse" that includes Sherlock Holmes and Harry Potter, Emma Bovary and Mickey Mouse, to name only some figures from Euro-American culture, and that affects the way we observe other observers and ourselves, and the way we experience the real world. Already in the seventeenth century, François de La Rochefoucauld observed that each of us knows what it is like to be in love before we meet our loved one—we experience it by reading novels.[8]

What does virtuality add to this experience? The fundamental element of *interactivity*. In fiction you cannot intervene: the reader or viewer cannot change the course of the story if they do not agree with it—they cannot decide not to let Prince Andrei die in *War and Peace* (1869), even if it makes them very sad. The point of fiction is that we know it is not true, but it is also not a lie, so it cannot be changed at will: it has been created by someone, the author, to whom the choices within it are attributed.[9] If we do not respect the author's omnipotence, our sense of participation in fiction empties: Moll Flanders is only a servant and a thief, and what's more she never existed—why should we care about her affairs? By participating in a world explicitly invented by the author, we can do what is never possible in real life: access the minds of the characters and see the world from their perspective.

We cannot enter the fictional world, but we do enter the virtual world. Interactivity is a component that fundamentally characterizes recent technological developments due to another agent that comes into play: algorithms that work autonomously.[10] In the virtual world,

4 See Michael Benedikt, *Cyberspace. First Steps* (Cambridge, MA: MIT Press, 1991); Sherry Turkle, *Life on the Screen. Identity in the Age of the Internet* (New York: Simon & Schuster, 1995).

5 See Niklas Luhmann, *The Reality of the Mass Media* (Stanford, CA: Stanford University Press, 2000). First published as *Die Realität der Massenmedien* (Opladen: Westdeutscher Verlag, 1995).

6 See Heinz von Foerster, *Observing Systems* (Seaside, CA: Intersystems Publications, 1981).

7 Niklas Luhmann, *A Systems Theory of Religion* (Stanford, CA: Stanford University Press, 2013), 56.

8 See François de La Rochefoucauld, "Réflexions ou sentences et maximes morales" (1665), in *Moralistes du XVIIe Siècle*, ed. Jean Lafond (Paris: Laffont, 1992), 134–93.

9 See Wayne C. Booth, *The Rhetoric of Fiction* (Chicago, IL: The University of Chicago Press, 1961).

10 See Elena Esposito *Artificial Communication* (Cambridge, MA: MIT Press, 2022).

one can act: in video games we run, shoot, hide, communicate with other characters, intervene in the story's course. The world we enter with the support of advanced algorithms is not a fictitious real world but a real virtual world, one in which what happens also depends on us as observers and our behavior.

Let us now return to my basic question: if this is the innovative feature of virtualization, what risks and opportunities does it offer for art curation in physical exhibition spaces? As we know, challenges can also be opportunities to innovate, and a dynamic and experimental world like the art world is particularly well suited to seize and exploit such opportunities. Here I briefly focus on two aspects of the virtual in the art world: the significance of the contextuality of experience in exhibition spaces, and the exploitation of interactivity.

No Sense of Place

Virtualization technologies seem to have taken to the extreme the "no sense of place" theorized by Joshua Meyrowitz in 1985 in reference to television, which had made it possible to directly experience distant places to the point that when you actually went to them, they already appeared familiar.[11] The experience offered by television made it possible to see a place and its dynamics with very high fidelity while remaining at home—and then to observe one's real world from an otherwise inaccessible distance. Today, in the virtual world, it literally makes no difference where the user is in the real world: provided we can access the metaverse, our perceptual experience takes place in the same space shared by all other users. We not only see it but move within it, inhabiting it with the other participants. How does this experience affect our relations with our immediate context?

A first consequence is that moving physically to a different place in the real world to have an experience, such as visiting an exhibition, must be motivated in a new way. Many immersive, interesting, and surprising experiences can be made from home at a very high level of fidelity. Why then should we feel like going to a museum?

Faced with this challenge, the curators of art exhibitions have progressively modified their approach. Already in the twentieth century, the experience offered by exhibitions was less and less about contemplating a painting or work of art (which can also be reproduced with very high resolution) or seeing a sequence of works in chronological order (e.g., from Cimabue to Jackson Pollock) or organized according to abstract criteria such as thematic or stylistic affinity. Exhibitions came to offer a contextual experience, participation in the enclosed space of the "white cube" of the museum or gallery,"[12] disengaged from ties to the outside world. Visitors must be physically there to perceive the space and the moment with an otherwise unknown intensity and reflexivity. We are not asked to fix our attention on a single work of art but to participate in a broader experience generated by a contemporary exposure to different (often heterogeneous) works and by the works' mutual relationships in the exhibition space—something that cannot be posted on the web or reproduced in the *metaverse*. The experience is not about getting to see the *Mona Lisa* (ca. 1503–06) or another work of art, but perceiving the spatial arrangement of the room, the light at that time of day, the volumes, and the references and harmonies between all exhibited objects.

Within the Western art tradition, artists came to experiment with the contextuality of artistic experience in the 1970s through *space-bound* exhibitions: *site-specific* works like Robert Smithson's *Spiral Jetty* (1970) or Daniel Buren's installations integrating contemporary art into historic buildings. They linked art objects to a specific place inside or outside the museum; the objects could not be moved without losing their meaning.

11 Joshua Meyrowitz, *No Sense of Place. The Impact of Electronic Media on Social Behavior* (New York: Oxford University Press, 1985).

12 Brian O'Doherty, *Inside the White Cube: The Ideology of the Gallery Space* (Santa Monica, CA: Lapis Press, 1986).

"To remove the work is to destroy it,"[13] said Richard Serra of his *Tilted Arc* (1981). Today the virtualization of experience seems to lead to a further step of contextualization. Some curators are experimenting with forms of *time-bound* exhibition whereby art (like theater) dictates the time of viewing, which cannot be changed without altering the meaning. Several curatorial experiments by Hans Ulrich Obrist, for example, have been conceived as temporal rather than spatial experiences,[14] the most advanced of which are held to be his *Marathons* (2006), twenty-four-hour combinations of conversation, performance, presentations, and experiments. The decontextualized experience offered by participation in virtual realities is apparently reflected here in its opposite: a rediscovery and replanning of contextual presence in the space of the exhibition.

Time-bound as in theater, however, is not *time-specific* in the sense of a reflective awareness of temporal context. One example of an authentic, innovative time-specific experience is Christian Marclay's video installation *The Clock* (2010),[15] consisting of a twenty-four-hour montage of thousands of images of clocks in movies or on television, combined in such a way that the time shown on the screen always coincides with the present time of the spectator (see fig. 1). In seeing onscreen images of distant places and moments synchronized with the present, Marclay says, "you're constantly reminded of what time it is," so that "*The Clock* has the ability to make us present in the moment."[16] Viewers who observe the perspective of others reproduced by the images on the screen are led to reflect on their own perspectives and current context, reversing the tendency to digitally neutralize a sense of place and reference to contextual experience.

In this and in similar experimentations, the detachment of virtual worlds from the concrete experience of the "real world" invokes as its opposite innovative forms of intensified contextual experience in the space and time of the museum or gallery. While virtual realities are not bound to any concrete time and space, art exhibitions require visitors to engage in a heightened awareness of their presence in a given space and time—making use of a

Fig. 1
Christian Marclay, *The Clock*, 2010. Detail. Single-channel video with sound, 24 hours.

13 Richard Serra, "Letter to Donald Thalacker, January 1, 1985," in *The Destruction of Tilted Arc: Documents*, ed. Clara Weyergraf-Serra and Martha Buskirk (Cambridge, MA: MIT Press, 1990), 38.

14 See Hans Ulrich Obrist, *Ways of Curating* (London: Allen Lane, 2014), 139–45.

15 See https://www.tate.org.uk/whats-on/tate-modern/exhibition/christian-marclay-clock.

16 https://www.tate.org.uk/art/lists/five-ways-christian-marclays-clock-does-more-just-tell-time

condition that digital society tends to make increasingly obsolete: reference to context in the real world.

Interactivity

But virtualization has a further unprecedented characteristic, going back to the origins of the idea of the virtual: *interactivity*. The notion of virtuality comes from optics, where an image is defined as virtual if the light rays passing through it are not the real light rays but their extensions, as is the case with images in a mirror. These images do not correspond to autonomous objects on the other side of the mirror but enable us, as observers looking at the mirror, to explore our own worlds from an otherwise inaccessible perspective: in the mirror we can see objects and even ourselves as an observer standing in front of us would see them. The virtual images depend on us and our movements, changing when we move and observe them from another point of view. They are therefore interactive but do not duplicate the world: they only correspond to objects that exist in the real world, which can be seen from different points of view. One cannot enter the mirror to look for objects corresponding to these virtual images. Nothing would be found.

In an experience with virtual reality produced by algorithms, however, interactivity shifts within virtual space: we enter the mirror, manipulate the objects, and act on the alternative world. Video games, for example, offer us the possibility of active intervention in the game world; their creators have developed a highly innovative "grammar of fun."[17] Contrary to the basic rule of fiction, players of video games also act in the virtual world and live a particularly immersive game experience—shooting, hiding, running away from enemies. In third-person point-of-view games, we can also see the body of the characters we impersonate from a perspective above and behind the avatar. If we identify with and act through an avatar, we can observe our virtual self through the eyes of another. For the first time, the video game offers a space in which we see not only the world but also ourselves and our own behavior through the eyes of another. In the form of the avatar, according to Zach Waggoner, we experience a "virtual identity" that allows us to be "both self and not-self," "other and not other at the same time."[18]

Virtuality thus seems to make possible an unprecedented form of experience of ourselves and of our observational perspectives, offering opportunities for innovation. Commercial projects have rapidly emerged on the fringes of the art world to do this, such as *Admission to Be Yourself* (2022–) at Beautiful Gallery, Bologna,[19] which promises "an interactive, one-of-a-kind artistic experience" with an immersive journey that allows a visitor "to focus on yourself, on who you are at your core, apart from others" and "makes you the real protagonist of the work" in the physical space of an exhibition. As the possibilities of interactive virtual experience multiply, the real world reacts by staging concrete spaces that allow digitally accustomed users to test the forms of self-awareness they have experienced in the virtual world. Virtualization also leads to a new interest in unprecedented forms of self-observation.

In an article in the *New Yorker*, Anna Wiener describes the "Rise of 'Immersive' Art"[20] as a commercial phenomenon, exploiting interactivity to allow visitors to retreat into themselves and their comfort zones. This is certainly the case, but there are also genuinely artistic projects that take advantage of the experience of immersion for innovative

17 See Tom Bissell, *Extra Lives: Why Video Games Matter* (New York: Random House, 2010); Tom Bissell, "The Grammar of Fun: CliffyB and the World of the Video Game," *The New Yorker,* November 3, 2008, https://www.newyorker.com/magazine/2008/11/03/the-grammar-of-fun.

18 Zach Waggoner, *My Avatar, My Self: Identity in Video Role-Playing Games* (Jefferson, NC: McFarland, 2009), 42.

19 See https://beautifulgallery.it/mostra/bologna/.

20 Anna Wiener, "The Rise of 'Immersive' Art: Why are Tech-centric, Projection-based Exhibits Suddenly Everywhere?," *The New Yorker*, February 10, 2022, https://www.newyorker.com/news/letter-from-silicon-valley/the-rise-and-rise-of-immersive-art.

Fig. 2
Alicja Kwade, *Clout-Count*, 2018/21. Installation view *In Abwesenheit*, Berlinische Galerie, 2021.

experiments in self-observation, which are anything but comfortable. Take for example *In Abwesenheit* (*In Absence*), presented by Alicja Kwade at the Berlinische Galerie in 2021 (see fig. 2).[21] The installation occupied an entire large room in the museum, and at its center was a ring of black steel, reaching almost to the ceiling, on which twenty-four loudspeakers transmitting the artist's heartbeat were mounted. Also present were twenty-four glass ampoules containing the chemical elements of the human body in pure form, 314,000 sheets of paper bearing the full print of the artist's sequenced DNA on the walls and collected in big bronze boxes, and several stelae made of overlapping smartphones shaped as a double helix. The overall effect was of an exploration of the physical presence of an absent person in a deeply immersive experience, timed by the rhythm of the heartbeat and staged through the various objects in the room, with the stacked smartphones as a gateway connecting the real space of the museum and the virtual space to which they gave access.

The expressive possibilities offered by virtualization to artistic communication go far beyond the production of virtual artworks and the use of digital programs. The normalization of virtuality gives artists and curators the possibility to juxtapose different modes of presence and absence, in place, in time, and with respect to oneself—and this requires physical presence in the space of the museum.

21 See https://berlinischegalerie.de/en/exhibition/alicja-kwade/.