

# From Pixels to Emotions

## Exploring Atmospheres in Metaverse Art Exhibitions

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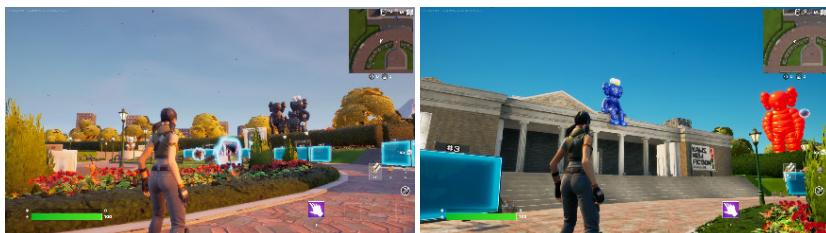
### INTRODUCTION

At the beginning of 2022, the Serpentine Gallery in London presented the exhibition “KAWS: New Fiction” with sculptures and paintings by pop artist and designer Brian Donelly, known by his alias KAWS. Part of the concept of the exhibition was to create a transition from analog to digital space, for which an augmented reality (AR) app was developed in cooperation with Acute Art. Using the app, it was possible to place and view some of the artworks of the exhibition as well as additional works on location digitally.<sup>1</sup> The app can also be used at home. In addition, the exhibition was recreated quite accurately in the game FORTNITE, a “free to play” survival shooter developed by Epic Games and People Can Fly, released in 2017. In the FORTNITE exhibition, visitors started in a park (which features FORTNITE matchmaking portals) in front of the Serpentine Gallery (see Figure 1a). Facing the gallery, the sculptures by KAWS immediately caught the eye (see Figure 1b). They were positioned around the exhibition building or were placed on the portico above the entrance. Inside the small, unpretentious exhibition building, paintings and other sculptures were presented (see Figure 2). A sculpture in the entrance area seemed to float motionless in the air, but it was not possible to interact directly with any of the works. Additional information about the art was not provided. Opposite the gallery, on the other side of the small park, there was a labyrinth through which players could reach other large sculptures that could already be seen from a distance.

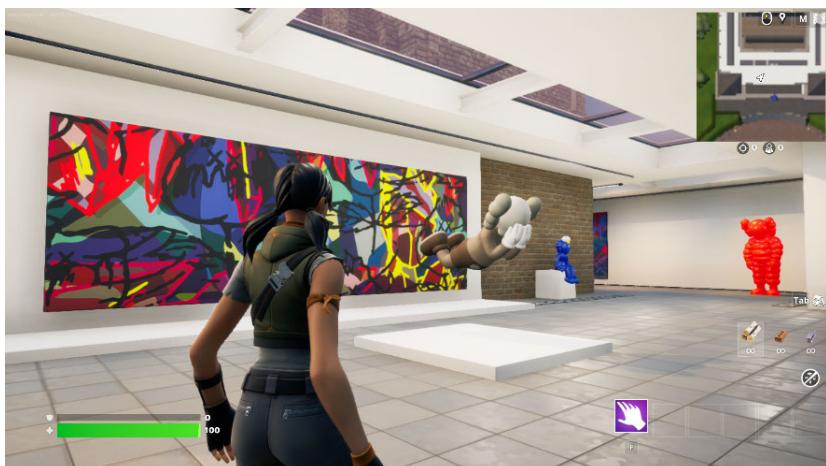
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1 Serpentine Galleries: “Acute Art presents | KAWS: NEW FICTION,” *Serpentine Galleries*, <https://www.serpentinegalleries.org/whats-on/acute-art-presents-kaws-new-fiction/>

*Figures 1a/1b: View of the exhibition building (in the picture on the left) and the opposite side with the sculptures above the labyrinth (in the picture on the right)*



*Figure 2: The entrance area inside the exhibition building*



Source: FORTNITE, Epic Games, People Can Fly, 2017, screenshots by I. Hamm

As FORTNITE's first art exhibition and in the context of the COVID-19 pandemic, the Metaverse version of the KAWS exhibition attracted a lot of attention, with reactions and opinions widely varying. The younger audience described more positive impressions and were pleased to (re)discover KAWS' works in this unusual setting or to come into contact with an art exhibition for the first time via FORTNITE.<sup>2</sup> However, London art critics expressed great disappointment.<sup>3</sup> Alastair

2 Chow, Vivienne: “‘You Literally Got Me Into KAWS Fam.’: What Game-Playing Teens Think About the Artist’s New Project on Fortnite,” *Artnet*, January 25, 2022, <https://news.artnet.com/art-world/london-art-critics-kaws-serpentine-fortnite-playerslove-it-2063909>

3 Ibid.

Smart did not appreciate the exhibition, finding it “hard to see any player having a meaningful experience in the would-be exhibition.”<sup>4</sup> Eddy Frankel also chose strong words:

“[...] the gallery’s been recreated in FORTNITE too, which isn’t half as interesting or revolutionary as it likes to think it is, because artists have been creating in-game exhibitions for decades. [...] I want to be immersed in KAWS about as much as I want to be immersed in a vat of pus. The problem with KAWS, and this show, is that he and it aren’t about anything. It has no concepts, no emotions, no beauty and absolutely no point.”<sup>5</sup>

The principle of the virtual exhibition was at its core laid out even decades before the development of the Internet through concepts of cross-linking knowledge such as André Malraux’s *Museum Without Walls*.<sup>6</sup> In 1953, the art theorist and politician Malraux used this term to describe his observation that the increasing number of photographic reproductions of works of art was leading to wider dissemination of art and, therefore, effectively renewed research and reception.<sup>7</sup> In this way, it became possible to summarize an entire artistic oeuvre in an illustrated book in order to study it in a comparative way. These processes of change, which were initiated by photography in Malraux’s time, are once again coming to a head through virtual exhibitions. Via platforms such as SECOND LIFE as well as the first museum websites of the 2000s and subsequent increasingly sophisticated technical solutions, they have developed into a more complex, mostly three-dimensional form of mediation to the present day.<sup>8</sup>

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- 4 Smart, Alastair: “KAWS: New Fiction, Review: Who Wants to Go to a Gallery and Stare at Their Phone?,” *The Telegraph*, January 19, 2022, <https://www.telegraph.co.uk/art/what-to-see/kaws-new-fiction-review-wants-go-gallery-stare-phone/>
- 5 Frankel, Eddy: “KAWS: ‘New Fiction’,” *TimeOut*, January 18, 2022, <https://www.timeout.com/london/art/kaws-new-fiction>
- 6 Schweibenz, Werner: “The Virtual Museum: an Overview of Its Origins, Concepts, and Terminology,” *The Museum Review* 4, no. 1 (2019), [https://www.researchgate.net/publication/335241270\\_The\\_virtual\\_museum\\_an\\_overview\\_of\\_its\\_origins\\_concepts\\_and\\_terminology](https://www.researchgate.net/publication/335241270_The_virtual_museum_an_overview_of_its_origins_concepts_and_terminology)
- 7 Malraux, André: “Museum Without Walls,” in: Idem (ed.), *Voices of Silence*, Frogmore, St. Albans: Paladin 1953, pp. 13-127, here pp. 17-46.
- 8 Povroznik, Nadezhda: “History,” *VM History*, 2019, <http://virtualmuseumhistory.com/history/>

Due to its long media cultural history, there is no universally accepted definition for the term virtual exhibition.<sup>9</sup> This essay, therefore, invokes the definition developed in 2016 by the Digital Exhibitions Working Group of the ArthenaPlus project, as it is concrete enough but also allows for the flexibility that virtual exhibitions require:

“A Digital Exhibition is based on a clear concept and is well curated. It assembles, interlinks and disseminates digital multimedia objects in order to deliver innovative presentations of a theme, or series of themes, allowing user interaction to a great extent.”<sup>10</sup>

## BENEFITS AND CHALLENGES OF VIRTUAL EXHIBITIONS

The example of the KAWS exhibition in FORTNITE illustrates some of the advantages and challenges of virtual exhibitions. In addition to providing unlimited access and documentation, which can benefit researchers, the exhibition organizers were particularly interested in reaching new target groups.<sup>11</sup> Even beyond the COVID-19 pandemic, during which the KAWS exhibition opened, virtual exhibitions can make promising contributions in this regard. They appeal to audiences who usually would not see an analog exhibition because of the distance to their place of residence or because they have no interest in the institution or the subject. At the same time, virtual exhibitions attract attention and can serve as an advertisement for the institution.

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- 9 To make matters even more complicated, exhibition activities in the digital space are often labeled with various combinations of words that reflect the fluid transitions of media forms. For instance, terms like ‘exhibition’ or ‘museum’ are frequently paired with descriptors such as ‘electronic,’ ‘virtual,’ ‘web,’ ‘online,’ and ‘digital.’ These combinations of terms necessarily result in different approaches and possibilities of definition (W. Schweibenz: “The Virtual Museum: An Overview of Its Origins, concepts, and Terminology”).
- 10 AthenaPlus Digital Exhibitions Working Group: *Metadata for the Description of Digital Exhibitions: The Demes Element Set*, Tiburtine 2016, p. 13.
- 11 Chow, Vivienne: “‘It’s Just a Different Way of Reaching People:’ KAWS on Why He Teamed Up With ‘Fortnite’ to Bring His Work Into the Virtual World,” *Artnet*, January 20, 2022, <https://news.artnet.com/art-world/kaws-serpentine-fort-nite-2061921>

Thereby, the users of digital services represent a new target group that can easily surpass the number of analog visitors.<sup>12</sup> The digital audience is still under-researched. Data collection methods such as user statistics lack the accuracy and systematization needed to establish comparability.<sup>13</sup> According to initial studies and surveys, the majority of the audience wants to experience content in a way that is not possible in the analog space.<sup>14</sup> The form of presentation of the artifacts has a significant influence. It matters whether an object is exhibited in the form of a photo or visualized in 3D.<sup>15</sup> In general, the audience values an appealing, user-friendly design, high-quality images, varied and new content, and playful approaches.<sup>16</sup> Decentralized services should be educational and entertaining, available for as long as possible, and designed to be low-threshold and interactive or participatory.

This also highlights the challenges that the KAWS exhibition exemplifies. The expectations of digital offerings are high and differ from those of analog offerings. In museological debates, conflicts often arise from this: Digitized and digital art, as well as virtual formats of mediation, have been in tension with their analog counterparts for decades. Discussions on this topic peaked in the 1990s and were subsequently referred to as “real-virtual-divide.”<sup>17</sup> Ross Parry describes the situation as follows: “A great deal of anxiety came to be placed, and in some cases,

12 Schweibenz, Werner: “Wie und was sucht das Online-Publikum? Erwartungen von Online-Besucherinnen und -Besuchern an museumsbezogene Informationsangebote im Internet,” in: Carius, Hendrikje/Fackler, Guido (eds.), *Exponat—Raum—Interaktion. Perspektiven für das Kuratieren digitaler Ausstellungen*, Göttingen: V&R Unipress 2022, pp. 183-192, here p. 187.

13 Bernhardt, Johannes/Gries, Christian: “Das digitale Publikum,” *Museums.Management* 1 (2022), pp. 1-11, here pp. 2-4.

14 Schwan, Stefan: “Digitale Ausstellungen aus Besuchersicht,” in: Hendrikje Carius/ Guido Fackler (eds.), *Exponat—Raum—Interaktion. Perspektiven für das Kuratieren digitaler Ausstellungen*, Göttingen: V&R Unipress 2022, pp. 193-202, here p. 194.

15 Ibid.

16 Ibid, p. 199.

17 Galani, Areti/Calmers, Matthew: “Empowering the Remote Visitor: Supporting Social Museum Experiences Among Local and Remote Visitors,” in: Ross Parry (ed.), *Museums in a Digital Age*, New York, NY: Routledge 2010, pp. 159-169, here p. 160; Schweibenz, Werner: “Wenn das Ding digital ist ... Überlegungen zum Verhältnis von Objekt und Digitalisat,” in: Udo Andraschke/Sarah Wagner (eds.), *Objekte im Netz. Wissenschaftliche Sammlungen im digitalen Wandel*, Bielefeld: transcript 2020, pp. 15-28, here p. 18.

some quite hysterical polarisation ensued between notions of the ‘virtual’ and the ‘real.’”<sup>18</sup> To this day, the core of these debates is about the value of analog and digital offerings and comparing them against each other, whereby a revaluation of the analog or even a disregard for the digital is usually based on Walter Benjamin’s concept of the aura.<sup>19</sup>

The criticism of the KAWS exhibition shows that the potential of virtual exhibitions is not fully realized when an analog exhibition is replicated in digital space. After all, an analog exhibition offers an experience that cannot be (completely) translated digitally. However, this is by no means to say that digital art mediation cannot be successful. This essay will, therefore, explore how virtual exhibitions—and in this case, particularly Metaverse art exhibitions—can address the conflict between analog and digital spatiality and create compelling art experiences.

For this purpose, the concepts of the German philosopher Gernot Böhme can provide promising starting points. His interconnected perspectives on the topics of bodily presence in space and the creation and design of atmospheres will be discussed. The implementation of this approach will be exemplified by the Metaverse exhibitions in the videogame OCCUPY WHITE WALLS and the platform wwwFORUM of the NRW-Forum Düsseldorf<sup>20</sup>—to finally investigate the question of what the KAWS exhibition in FORTNITE was missing. First, however, a look at the current state of development of the Metaverse will be taken to better situate virtual exhibitions within it.

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18 Parry, Ross: *Recoding the Museum*, London: Routledge 2007, p. 61.

19 The concept of aura is discussed primarily on the basis of Walter Benjamin’s 1935 essay *The Work of Art in the Age of Mechanical Reproduction*, which continues to be of great importance for art history and media cultural studies. The essay addresses the processes of change in the creation and dissemination of art brought about by technology, as well as its misuse by fascism. Benjamin, Walter: “The Work of Art in the Age of Mechanical Reproduction,” in: Leon Wieseltier (ed.), *Walter Benjamin. Illuminations*, New York, NY: Schocken Books 1969, pp. 217-251. Dennis Niewerth has written on the aura in the context of the museum; e.g., Niewerth, Dennis: “Objekt der Begierde. Wie man eine digitale Aura erzeugt (und wie besser nicht),” in: *EVA Berlin* 26. 2019, p. 38-43; Niewerth, Dennis: “Die ‘Digitale Aura’ und die Anmutungen des Virtuellen,” in: Hendrikje Carius/Guido Fackler (eds.), *Exponat – Raum – Interaktion. Perspektiven für das Kuratieren digitaler Ausstellungen*, Göttingen: V&R Unipress 2022, pp. 173-182.

20 The ‘NRW-Forum Düsseldorf’ is an exhibition venue and cultural center located in Düsseldorf, the capital of the federal state of North Rhine-Westphalia (NRW). North Rhine-Westphalia is situated in western Germany.

## ABOUT THE METAVERSE

The Metaverse<sup>21</sup> is a phenomenon that, as a possible new stage in the development of the Internet, blurs the boundaries between analog and digital modalities to a particular extent. It is still unclear where exactly the journey will lead to. The Metaverse is mostly described in relation to the concept of Web 4.0, but both terms still lack universally valid definitions. In the early days of the internet, Web 1.0 (Read Only Web), information was disseminated via hypertextually linked, static pages.<sup>22</sup> This was followed in 2005 by Web 2.0 (Semantic Web), in which social media and user-generated content emerged, enabling user interaction and global networking.<sup>23</sup> For Web 3.0 (request content), artificial intelligence and machine learning play a crucial role in helping users filter relevant information from the existing flood of data and generate helpful content.<sup>24</sup> Web 4.0 (Industrial Content) includes approaches such as Machine-to-Machine Communication, the Internet of Things, and Cloud Computing.<sup>25</sup> The Metaverse could become a version of Web 4.0 technology, focusing on establishing virtual worlds with digital goods through which people move with avatars. Based on life in the analog world, these virtual worlds would make it possible to experience and support both professional and private events in a decentralized, networked manner, including, for example, through virtual reality (VR) and augmented reality (AR) in a highly immersive way.<sup>26</sup>

After Facebook founder Marc Zuckerberg triggered a new Metaverse hype in 2021 by renaming his company Meta, various companies and platform providers have taken up the cause of developing the concept of the Metaverse and already refer to their platforms as Metaverses, such as FORTNITE, DECENTRALAND, ROBLOX, SORARE, THE SANDBOX, and META HORIZON WORLDS. However, the different technical requirements and control systems of these platforms do not currently allow users to have a holistic experience with seamless transition options or

21 The term “Metaverse” was adopted from Neal Stephenson’s novel *Snow Crash*. (Stephenson, Neal: *Snow Crash*, New York, NY: Bantam Books 1992.)

22 Kollmann, Tobias: “Grundlagen des Web 1.0, Web 2.0, Web 3.0 und Web 4.0,” in: Idem (ed.), *Handbuch Digitale Wirtschaft*, Wiesbaden: Springer Gabler 2020, pp. 133-155, here pp. 134-137.

23 Ibid.

24 Ibid, pp. 140-151.

25 T. Kollmann: “Grundlagen des Web 1.0, Web 2.0, Web 3.0 und Web 4.0,” p. 15.

26 Bendel, Oliver: “Definition: Was ist „Metaverse?” in: *Gabler Wirtschaftlexikon*, <https://wirtschaftslexikon.gabler.de/definition/metaverse-123520>

transfers of virtual goods. Whether there will be a single, large Metaverse in the future is therefore uncertain, both because of the major problem of synchronizing technical rule systems and because of the economic interests of the individual providers.<sup>27</sup> Currently, there is a *Multiverse of Metaverses*<sup>28</sup> in which the various market players set their own priorities in the areas of gaming, assets, productivity, shopping, and entertainment.<sup>29</sup>

The history of art exhibitions in the Metaverse can be understood as a developmental branch of virtual exhibitions. Depending on the intention and the design, art exhibitions in the Metaverse can be part of one or more of the focus areas of gaming and entertainment or, with regard to the art market, assets, and shopping. Metaverses such as FORTNITE pick up on lines of development that have already been experimented with in SECOND LIFE. They continue currently established manifestations of virtual exhibitions, such as three-dimensionally designed web applications, by extending exhibition contexts into worlds through which users can navigate their avatars and may be able to come together for social activities. Due to such design possibilities, exhibition visits, which are generally more familiar and initially learned in analog space, are increasingly made possible in an appealing way in digital space as well. In the following, these boundaries between analog and digital will be examined with the help of Gernot Böhme's theories of bodily presence in (both analog and digital) space and atmosphere.

## BODILY PRESENCE IN THE DIGITAL SPACE

“For some analysts, it may seem paradoxical that today bodily presence is given such weight. Aren’t we living in the age of telecommunication, isn’t an increasing portion of our lives playing out in virtual spaces—so what use is the body to us? More and more, a person’s social existence is defined by their technical network. They are present not as a concrete person but as a connection. A homepage, Internet address, and cell phone are prerequisites for being a player in the social game. Their contribution to society as a whole, to work, consumption, and communication is increasingly being handled via such terminals and nodes in the network. For many professional activities, it is basically indifferent where the

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27 Ravenscraft, Eric: “What is the Metaverse, Exactly?” *Wired*, June 15, 2023, <https://www.wired.com/story/what-is-the-metaverse/>

28 Gurau, Michael: “A Multiverse of Metaverses,” *Forbes*, March 22, 2022, <https://www.forbes.com/sites/forbestechcouncil/2022/03/22/a-multiverse-of-metaverses/?sh=78126b2d7475>

29 Ibid.

person performing them is currently located, if only they can somehow be reached. Is this really so, is this the future of technical civilization: a social existence without a body or at least an existence for which physical presence is redundant?"<sup>30</sup>

This quote by the German philosopher Gernot Böhme from the year 2001 seems nowadays more relevant than ever in the context of the development of the Metaverse. Böhme is known for his approaches in the discourse on atmospheres, which are directly linked to his concept of bodily presence mentioned in the quote. Bodily existence in space basically describes physical corporeality, while Böhme differentiates himself from mathematical concepts of space by Aristotle (space as place) and Descartes (space as distance).<sup>31</sup> Human beings are thus understood not as one of many geometric corpora that relate to each other as objects in space but as sentient subjects.<sup>32</sup> Bodily presence is described by Böhme as follows:

"From all spaces of depiction, the space of bodily presence is to be fundamentally distinguished. The space of bodily presence is the extension of the bodily sensing of a human being. [...] Our spatial existence through bodily sensing essentially takes place in three kinds of spaces:

- in the space of action, classically our sphaera activitatis, i.e., the area of proximity and distance, in which we can become bodily active;
- in the space of perception, i.e., the extension in which we are perceptive with things;
- in the space of moods, i.e., the extension of atmospheres, which we experience in bodily involvement."<sup>33</sup>

Böhme speaks firstly of a "scope for actions and possibilities of movement,"<sup>34</sup> secondly of sensual perception of things or other people, which also involves communication and togetherness<sup>35</sup> and thirdly of atmospheres, which will be discussed in the following section.

30 Böhme, Gernot: "Leibliche Anwesenheit im Raum," in: Egon Schirmbeck (ed.), *RAUMstationen, Metamorphosen des Raumes im 20. Jahrhundert*, Ludwigsburg: Wüstenrot Stiftung 2001, p. 92, my translation.

31 Ibid., p. 94.

32 Ibid.

33 Böhme, Gernot: "Wirklichkeiten. Über die Hybridisierung von Räumen und die Erfahrung von Immersion," in: *media/rep* (Jahrbuch immersiver Medien 5), Marburg: Schüren 2013, pp. 17-22, here p. 19, my translation.

34 Böhme, Gernot: *Leib*, Berlin: Suhrkamp Verlag 2020, p. 54, my translation.

35 Ibid. pp. 54-55.

First of all, bodily presence seems to be completely anchored in analog space, but a closer look reveals several points of contact in terms of digital media as well as virtual exhibitions. Böhme himself even reflected on bodily presence in the light of a “hybridization of spaces.”<sup>36</sup> By this, he means the mixing of analog space with virtual realities such as films and computer games.<sup>37</sup> According to Böhme, the hybridization of bodily presence with visual worlds takes place through “the phenomenon of immersion [...]. This means that a person is so immersed in a representational space that they experience it at the same time as an extension of their bodily sensing.”<sup>38</sup> Böhme attributes a high potential for immersion, especially to computer games as an interactive medium. In this process, the avatar has a special function:

“If a user of a computer game has a representative, an avatar, in the game, then they not only participate in its fate through identification, but they act with this avatar via their game console in the game itself. This could already lead to a hybridization of bodily space and visual space via a process of incorporation, embodiment.”<sup>39</sup>

Felix Zimmermann has analyzed this approach of Böhme and the avatar’s significance for “atmospheric involvement”<sup>40</sup> in computer games.<sup>41</sup> For virtual exhibitions, it can be stated that the avatars that regularly appear in Metaverse art exhibitions can contribute to an improved spatial experience as an “extension of the player.”<sup>42</sup> However, for a captivating art experience in digital space, the design of the perceptual space and the space of moods are also crucial. Böhme continues:

“Admittedly, it must be said that this figurative presence [through an avatar] in pictorial space is only a limited bodily presence, insofar as, of the three types of bodily space mentioned, only the action space is realized, but not the perceptual space and the space of moods.”<sup>43</sup>

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36 G. Böhme: “Wirklichkeiten,” pp. 17-22.

37 Ibid. p. 20.

38 Ibid.

39 Ibid.

40 Zimmermann, Felix: *Virtuelle Wirklichkeiten*, Marburg: Büchner-Verlag 202, p. 137, my translation.

41 Ibid., pp. 137-144.

42 Beil, Benjamin/Rauscher, Andreas: “Avatar,” in: Benjamin Beil/Thomas Hensel/Andreas Rauscher (eds.), *Game Studies*, Wiesbaden: Springer VS 2018, pp. 207-208.

43 G. Böhme: “Wirklichkeiten,” p. 21.

The perceptual space is already implemented in massively multiplayer online games (MMOs) and in the Metaverse as a communication space and place of togetherness, in the sense that participants can meet each other with their avatars and engage in exchange. Virtual exhibitions can also benefit from this, as a visit to a museum often serves as a social event to meet friends or family and talk about art with each other. The last-mentioned space of moods and the experience of atmosphere have a special role to play.

## DIGITAL ATMOSPHERES

With the space of moods, Böhme refers to feeling “the extension of one’s own sensitivities themselves,”<sup>44</sup> through which an inner mood could alter the immediate surroundings. This altered space is an atmospheric one, whereby atmosphere, according to Böhme, is not only determined from within but encounters the feeling subject much more from its environment.<sup>45</sup> According to Böhme, atmosphere is present everywhere in everyday life, has an immediate effect on a subject’s mood, and finds active areas of application. The phenomenon can be approached by analyzing the aspects of sensual perception and their social significance.<sup>46</sup> Böhme defines the term atmosphere as follows:

“Atmosphere is the common reality of the perceiver and the perceived. It is the reality of the perceived as a sphere of its presence and the reality of the perceiver, insofar as he, sensing the atmosphere, is bodily present in a certain way.”<sup>47</sup>

According to Böhme, atmosphere is always present, but it can also be created intentionally.<sup>48</sup> Atmosphere can be determined and controlled by factors that Böhme calls generators.

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44 G. Böhme: *Leib*, p. 54.

45 Ibid.

46 Böhme also connects his concept of atmosphere with Walter Benjamin’s concept of aura. Thus, the aura is ultimately a bodily felt “spatially poured out quality of feeling” (Böhme, Gernot: *Atmosphäre. Essays zur neuen Ästhetik*, Berlin: Suhrkamp Verlag 2013, p. 27, my translation).

47 G. Böhme: *Atmosphäre*, p. 34.

48 Ibid., p. 17, pp. 45-46.

These include, first of all, the experience of the narrowness or width and limitation of a room as well as the use of light and sound.<sup>49</sup> Targeted lighting can tint objects in their hues or even color an entire scene and make it appear in a different mood.<sup>50</sup> Music, sounds, noises, and voices also represent a central atmospheric element, as they fill the space and lend immediate expression to bodily presence.<sup>51</sup>

Generators include three further factors: First, the suggestions of movement, which, mostly in architectural terms, set bodies and masses in relation to each other and show the bodily present person paths through these constellations. Second, Böhme speaks of synesthesias. These show themselves, for example, “in the fact that a room can be experienced as cool, because in one case it is completely tiled, in another case it is painted blue, in the third case it has a relatively low temperature.”<sup>52</sup> Third and finally, social characteristics are listed that are linked to cultural conventions and meanings, “such as [that] porphyry as a material creates the atmosphere of majesty.”<sup>53</sup>

Böhme himself describes how these factors for creating atmospheres can also be applied in virtual space.<sup>54</sup> Here, Böhme’s philosophy has already proven to be relevant for digital games. Marc Bonner, for example, has analyzed atmospheric theories, especially those of Böhme, in the context of games with a special focus on the design of natural landscapes and architecture, like THE LAST OF US, THE WITCHER 3, or HORIZON ZERO DAWN.<sup>55</sup> Felix Zimmermann used Böhme’s concept to describe how an atmospheric experience of the past can be created in games like ANNO 1800, ASSASSIN’S CREED SYNDICATE, or DISHONORED.<sup>56</sup> This results in interesting intersections with virtual exhibitions, as these certainly also feature landscape elements as well as (exhibition) architecture and appear as places in which the past is made tangible in the form of artworks and curatorial expressions.

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49 G. Böhme: “Leibliche Anwesenheit im Raum,” p. 94-96.

50 G. Böhme: *Atmosphäre*, pp. 154-158.

51 Ibid., pp. 159-166; G. Böhme: *Leib*, pp. 55-59.

52 G. Böhme: “Leibliche Anwesenheit im Raum,” p. 97.

53 Ibid.

54 Ibid., p. 97-98.

55 Bonner, Marc: “Welt,” in: Benjamin Beil/Thomas Hensel/Andreas Rauscher (eds.), *Game Studies*, Wiesbaden: Springer VS 2018; Bonner, Marc: *Offene-Welt-Strukturen. Architektur, Stadt- und Naturlandschaft im Computerspiel*, Marburg: Büchner-Verlag 2023.

56 F. Zimmermann: *Virtuelle Wirklichkeiten*.

Museums are generally inscribed with communication techniques of staging.<sup>57</sup> The atmospheric design of virtual exhibitions can, therefore, benefit from communication mechanisms of analog exhibitions. Regan Forrest has analyzed the concept using the term “atmospherics” for the analog museum space—not referring to Böhme, but based on very similar parameters such as light, color, and sound.<sup>58</sup> In addition, through an analysis of different visitor surveys and marketing strategies, she demonstrated the impact that atmospheric design can have on the visitor experience, visitor satisfaction, and the intention to revisit a given institution in the future.<sup>59</sup>

In the field of virtual exhibitions, it can be stated that atmospheres can—and should—be created intentionally in digital space with the help of the categories described above. In this way, it is possible to implement analog strategies in the digital space, contribute to a feeling of immersion, and make a virtual exhibition visit more vivid. As discussed at the beginning of this essay, however, this process is mostly not about recreating analog spaces but rather about establishing elements that can only be implemented digitally and thus clearly differentiate the virtual exhibition from the analog one in terms of atmosphere as well. In the following, the game OCCUPY WHITE WALLS and the platform WWWFORUM will be used to explore how such particularities and atmospheres, in general, can be implemented in Metaverse art exhibitions.

## ATMOSPHERE IN METAVERSE ART EXHIBITIONS

### OCCUPY WHITE WALLS

In the free sandbox game OCCUPY WHITE WALLS, users can create their own art exhibitions. The developer studio Kultura Ex Machina released the PC game in 2018 as a beta version, followed by an official release in 2022. The game is meant to encourage approaching art from a purely aesthetic point of view and not making enjoyment dependent on prior knowledge or canonization. The goal is nothing less

57 Paul, Stefan: “Kommunizierende Räume. Das Museum,” in: Alexander C.T. Geppert/Uffa Jensen/Jörn Weinhold (eds.), *Ortsgespräche. Raum und Kommunikation im 19. und 20. Jahrhundert*, Bielefeld: transcript 2005, pp. 341-357.

58 Forrest, Regan: “Exhibition Narrative: The Spatial Parameters,” *Exhibitionist* 2014, pp. 28-32.

59 Forrest, Regan: “Museum Atmospherics: The Role of the Exhibition Environment in the Visitor Experience,” *Visitor Studies*, 16:2, 2013, pp. 201-216.

than to democratize art: Players can create and curate art galleries freely to their liking. By now, thousands of architectural assets and over 30,000 works of art from a wide variety of eras are available for this purpose, which are represented on the walls according to their proportions.<sup>60</sup> Since 2020, users can also upload their own artworks for a fee of \$7 per image.<sup>61</sup> The artificial intelligence D.A.I.S.Y. (“Discover Art Intended Specifically For You”) supports players in finding works of art and, as the game progresses, shows them more and more works that suit their taste. D.A.I.S.Y. does not distinguish between canonical and unknown works and dissolves art historical hierarchies.<sup>62</sup> Information such as title, artist, medium, dimensions, time of origin, and, if available, a description are displayed for each work of art. Works can be commented on, favorited, and acquired for the player’s gallery.

It is also possible to visit the galleries of other players. While doing so, users can chat with each other, invite players to their own gallery, or leave a comment in the guestbook, for example. OCCUPY WHITE WALLS highlights particularly spectacular galleries of fellow players in the teleport menu but also offers the option of randomly picking a destination.

“Within the game, you’ll find thousands of hugely impractical, financially unviable art galleries that could never exist in the real world—as the system stands—wrenched straight out of players’ imaginations. In place of neatly-organised rooms, carefully filed into different time periods or closely related art movements, any curation (or lack thereof) is left completely up to each player, or gallery boss.”<sup>63</sup>

The full spectrum of atmospheric factors is put to use here: pompous museum architecture, narrative, theme-based exhibition structures, and sensory experiences are applied. This involves spaces that impress with their openness or narrowness as well as airy heights (see Figures 3a/3b). Visitors are motivated to explore large spatial complexes and winding niches of the galleries. Music is playing in most of the venues. The use of light and a wide variety of materials, up to and

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60 Faber, Tom: “Occupy White Walls—the Game That Aims to Turn 500mn People Into Virtual Art Collectors,” *Financial Times*, June 28, 2022, <https://www.ft.com/content/c743dcfc-b61d-4355-879c-d57b9534c8d6>

61 Ibid.

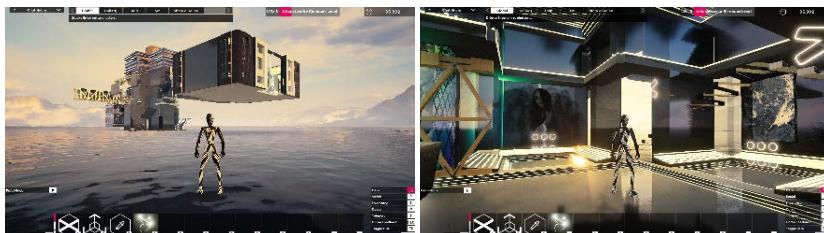
62 Hunt, El: “‘Occupy White Walls’: the Art-minded Game Breaking Open the Gallery Doors,” *NME*, June 27, 2022, <https://www.nme.com/features/gaming-feat-ures/occupy-white-walls-the-art-minded-game-breaking-open-the-gallery-doors-3256917>

63 Ibid.

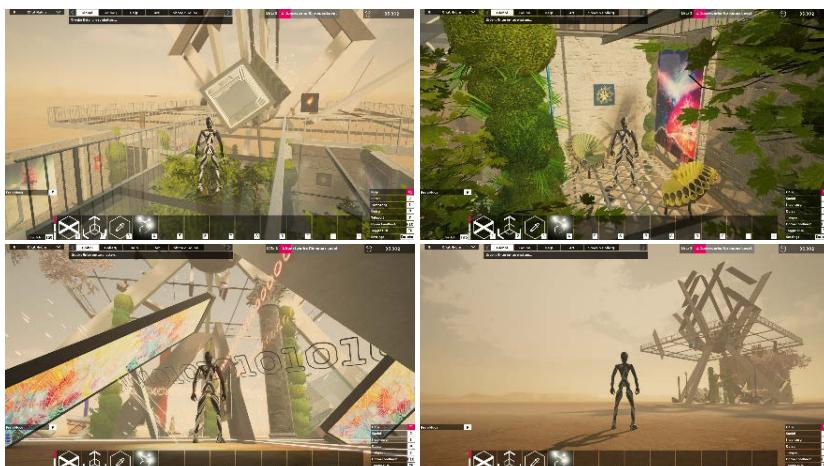
including galleries flooded with water, makes it possible to present art in the most diverse and sometimes unrealistic ways.

The design process of the galleries also indicates the game progress of their curators. Art, architectural elements, and space are not fully available to players from the beginning but must be purchased initially with the budget provided by the game. Money can be earned by opening a gallery to visitors. Buying art additionally unlocks components and other assets, increasing the range of design options available. The game motivates players to alternate their own creative process with visits to other players' exhibitions.

*Figures 3a/3b: A gallery called 4swift2, created by the player swift2, floating above a seemingly endless water landscape*



*Figures 4a/4b/4c/4d: A gallery called "Inside My Head" by the player gutfeeling, showing art in a futuristic glass building in a desert landscape*



Sources: OCCUPY WHITE WALLS, KULTURA Ex Machina, StikiPixels, 2022, screenshots by I. Hamm

The limitation of resources helps to make certain players' galleries even more intriguing to their visitors. They are a sign of the time invested in the game and the curatorial experience gained. Even if players can rediscover and buy art in gallery hopping, the main point is to dive into the atmospheres of the unknown gallery spaces and experience them as total works of art (see Figures 4a/4b/4c/4d). The art in the narrower sense, however, can fade into the background, especially since the game is more about aesthetic access to space and works, the expression of personal taste, one's own creative processes, and art as a social event.

#### **WWWFORUM<sup>64</sup>**

The NRW-Forum in Düsseldorf offers a different approach to questions about the boundaries of analog and digital spaces and the possibilities of exhibiting art virtually. On March 30, 2023, it was one of the first institutions in the art and museum scene to open its own Metaverse museum called WWWFORUM, which was open to visitors during daily opening hours from 4 to 8 p.m. as a multiplayer web application.<sup>65</sup> The project was created in collaboration with the in-house platform next-museum.io and the artist studio Christian Mio Loclair and was hosted through the company Journee.<sup>66</sup>

The WWWFORUM is intended to serve as a permanent extension into the digital space and to develop into a hybrid museum. From 2023 to 2024, the WWWFORUM hosted four residencies, which were selected on the basis of an open call on next-museum.io.<sup>67</sup> As a digital exhibition space and total work of art, the WWWFORUM asks "fundamental questions about augmented reality: Is there an aura of the digital? What is a digital twin? And when does an extension become autonomous?"<sup>68</sup>

The WWWFORUM contains elements that are intended to be reminiscent of the surroundings of the NRW-Forum, such as the Rhine or a kiosk, but without aiming for an exact digital reproduction. Christian Mio Loclair expressed that he wanted to create a valuable space that moved users, unlike most of the content on the net.<sup>69</sup>

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64 Further insights into the WWWFORUM project can be found in Alina Fuchte's and Isabelle Hamm's contribution "Virtual Wonderlands" in this anthology.

65 <https://web.journee.live/nrwforum>; NRW-Forum Düsseldorf: "wwwforum," <https://www.nrw-forum.de/wwwforum>

66 Ibid.

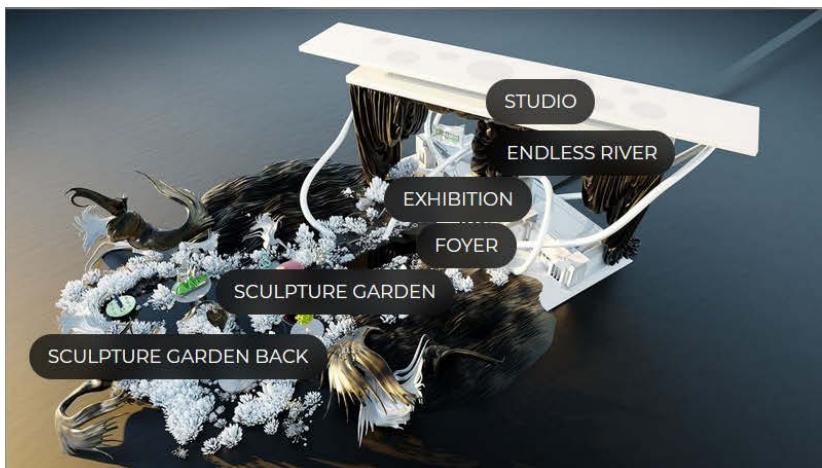
67 Ibid.

68 Ibid.

69 Lenze, Larissa: "Willkommen im Metaversum," *Micropolis Magazine*, April 2, 2023, <https://www.micropolis-mag.com/willkommen-im-metaverse-museum/>

In the WWWFORUM, users can move through an imaginative designed world with an avatar and experience Born Digital Art. The interface enables the user to customize the avatar, get information about the location, access a map with a teleport function (see Figure 5), and take photos.

*Figure 5: The map of the WWWFORUM*



Source: WWWFORUM, Christian Mio Loclair, nextmuseum.io, 2023, screenshot by I. Hamm

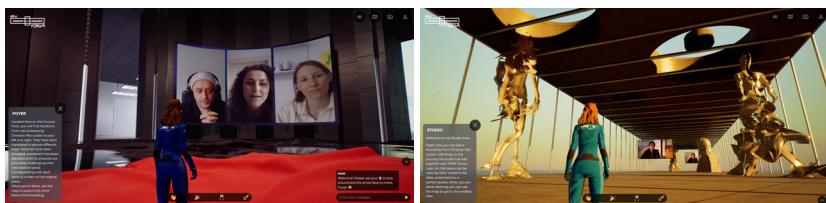
There is a chat function for all visitors present. When users start the application, they are first located in the sculpture garden, through which they can move to a futuristic exhibition building (see Figure 6). Inside this building, some exhibition rooms can only be reached via the map's teleport function. Behind the exhibition building lie the kiosk and the Endless River, which refers to the Rhine (see Figures 8a/8b). In the sculpture garden, the exhibition building, or the area of the Endless River, artworks by the artists in residency are shown, as well as occasional videos in which the work at hand is discussed.

Atmosphere is created and influenced in WWWFORUM in many ways. The design of the whole map, especially that of the exhibition building, has a futuristic effect, establishing a space where new ways of experiencing art and technology can emerge. The sculpture garden supports this effect with its organic but also otherworldly-looking forms. The garden is populated by wandering figures who are not visitors, creating the impression of a living virtual world. The chat function allows conversations to take place with friends or strangers about art and shared experiences.

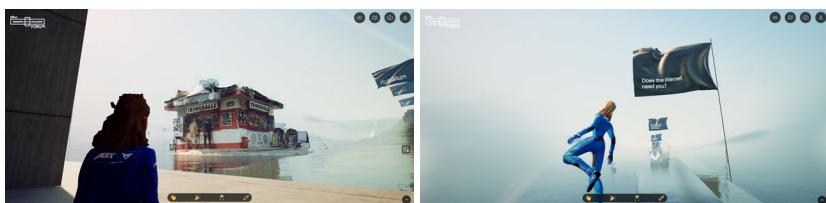
Figure 6: The starting point at the exhibition venue



Figures 7a/7b: Inside the exhibition building's foyer and the 'Studio'



Figures 8a/8b: The kiosk behind the exhibition building and the flight over the Endless River



Sources: WWWFORUM, Christian Mio Loclair, nextmuseum.io, 2023, screenshots by I. Hamm

The videos in the exhibition building, in which visitors are often addressed directly, convey low-threshold information and the feeling that players could sit down with the speakers and engage in an exchange (see Figure 7a/7b). Often, music or mysterious sounds such as rustling, crackling, or rumbling can be heard. The light is reminiscent of a daily routine with sunset but changes quickly and irregularly so that there is no consistent sense of time. Finally, visitors can fly over the

Endless River and, while viewing the art on display there, have a spatial experience of undefined vastness. If they decide to fly through a portal at the end of the map, they are relocated to the starting point of the Endless River, just behind the exhibition building. The teleport function of the map, which is the only way to reach and leave some rooms inside the exhibition building, further highlights the differences between digital and analog space.

Furthermore, the unusual decision to restrict access to a Metaverse application to specific opening hours is worth noting. However, this principle of limitation<sup>70</sup> also establishes a framework that resembles that of a museum in analog space and requires the audience to consciously plan their visit. In this way, the staging strategies of the WWWFORUM support the questions that the project generally aims to explore.

The art shown differs, of course, depending on the artist in residency. However, now that four exhibitions have been presented, there is a noticeable tendency to make the art on display more interactive and to work with the possibilities of digital space. For example, artist Franziska Ostermann showed a sculpture of a cell phone with buttons scattered throughout the sculpture garden, always teleporting visitors back to the sculpture. Meanwhile, in a room inside the exhibition building, poetry is staged in a bright, blank environment into which visitors are immersed when they enter the room, whereupon they can no longer recognize the boundaries of the space.

The experience of the digital art presented is finally enhanced by the atmosphere created without being overpowering.

## CONCLUSION

The Metaverse exhibitions discussed show that it is not only the kind of atmospheric staging that matters but also its intensity. Thus, virtual (as well as analog) exhibitions can be under- or overloaded with atmospheres. Compared to the exhibitions in OCCUPY WHITE WALLS and WWWFORUM, it is evident that for “KAWS: New Fiction” in FORTNITE, the parameters for the creation of atmospheres presented above could have been used to a greater extent. In the KAWS exhibition, for example, an unusual use of light, background music, or carefully chosen sounds, or a more playful approach to the spatiality of the labyrinth<sup>71</sup> (that was

70 D. Niewerth: “Objekt der Begierde,” pp. 41-43.

71 One particular way of combining self-awareness and digital space is through the use of non-Euclidean spaces, as they are used in games. Non-Euclidean spaces break with

part of the exhibition outside the gallery building) could have intensified the atmosphere. Atmospheric elements should neither be used too little (like in the Serpentine Gallery in FORTNITE) nor too much (like in OCCUPY WHITE WALLS) in the presentation of art. They have to be balanced (like in the WWWFORUM) so that the art as such can still have its effect.

Staging as a communication strategy and a way of exerting influence has a great impact. Using and feeling these effects is taken for granted in everyday life, especially in museums. Perhaps this is why they are still sometimes overlooked in the creation of online venues. It is advisable not to copy analog exhibitions but to include elements that would be difficult or impossible to implement in the analog space. Other digital media, such as video games, which influence the viewing and usage habits of digital audiences, can provide clues in this regard.<sup>72</sup>

Although the concept of atmosphere can have a spiritual appeal, the criteria presented by Gernot Böhme make it clear which factors should be decided upon when creating an intentional design. In this respect, empirical values from the analog space can benefit a digital experience. Creating atmosphere in virtual exhibitions is one way to address the discourse around analog and digital art experiences. Thus, bodily presence in space also becomes accessible in a digital manner. It is a unique way of experiencing oneself and the art on display.

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