The Afterlife of Antiquity in Virtual Reality

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Introduction: Floating Sculptures

In their film *The 3D Additivist Manifesto* (2015; 10:11 min), Morehshin Allahyari and Daniel Rourke proclaim a new posthumanistic age. »We call not for passive, dead technologies,« a voiceover intones, »but rather for a gradual awakening of matter, the emergence, ultimately, of a new form of life.« [1] The film positions the 3D printer as a profound metaphor, a technology for channeling creative endeavor through digital processes. Allahyari and Rourke's manifesto aims for a cybernetic interconnection of machine and human body. *The 3D Additivist Manifesto* (fig. 1) teems with sculptural quotations, positing a significant reconnection to the history of canonized sculpture, ranging from the iconic readymade *Fountain* (1917), representing modern notions of art and an expanded concept of authorship, to the Hellenistic torso of the *Venus de Milo*, enshrined in the traditional aesthetics of the Western sculpture canon as a feminine ideal. Departing from linear concepts in history, here, digitized sculptural objects, industrial artifacts, technological residues, cyber bodies, and animalistic details, such as the octopus, all simultaneously coexist. They float in the stream of oil from which they have been printed. This elemental substance, forged over millions of years, has enabled innovative technologies

1 Moreshin Allahyari/Daniel Rourke (2015): »The 3D Additivist Manifesto«, in: additivism.org. Online: https://additivism.org/manifesto/ (last access: 16.08.2025). See Ursula Ströbele (2023): »Sculpting Digital Realities. Notes on Truth to Materials, the Aesthetic Limit, Site-Specificity and 3D-Printing«, in: Mara-Johanna Kölmel/Id. (eds.), The Sculptural in the (Post-) Digital Age, Berlin/Boston: Walter de Gruyter, pp. 83–101, here: pp. 99–100. Thank you to Manischa Partowi, Annette Urban, and Manuel van der Veen for inviting me to the workshop and publication *Virtual Reality Exhibited. Interfacing Art, Games and Everyday Life* at Ruhr University Bochum and for the inspiring exchange.

such as 3D printing – a process that itself evokes deep time. Here, synthetic technology becomes a new modality of a biological posthuman medium, attributing intelligence to all kinds of matter. The *3D Additivist Manifesto* demonstrates the multiplicity inherent to the expansion of the sculptural, which entails an understanding of materiality that transcends the antique dualism of form and content and incorporates a relational field.[2]

fig. 1: Morehshin Allahyari & Daniel Rourke: The 3D Additivist Manifesto, 2015, 10:11 min, sound design by Andre Young, https://additivism.org/manifesto/

1. Quoting the Canon in Virtual Reality Art: *Mercury*, the Antique Messenger of the Gods Traveling Between the Worlds

Based on the *3D Additivist Manifesto*, I would like to present a few thoughts on how digital art–especially Virtual Reality (VR) works – contains sculptural quotations or conjures an antiquity that never existed in the virtual world. Which

2 Cf. M. Allahyari/D. Rourke: The 3D Additivist Manifesto. »Additivism« is derived from »additive« and »activism« and, according to the artists, aims to disrupt existing categories, expanding the art project toward an online community, activism, ironic commentary, and revolutionary potential.

objects are cited for this genealogical inscription within an (as yet) still-forming canon? How are these so-called antique set pieces, or *Versatzstücke*, situated between adaptation and alienation, and what role do speculative archaeology and humor play? And is »quotation« even a suitable term to describe these diverse modifications? The term quotation – an essential part of academic work – derives from the Latin *citatum*, meaning »to lead« or »to summon,« and from the verb *citare* »to set in motion,« as in citing someone in court.[3] It is the substantivized second participle of *citare* and traditionally refers to a passage taken verbatim or in terms of content from a text, intended to acknowledge the original author or copyright. Content can also be taken from other media, such as image or sound quotations. My text addresses quotations from sculpture and architecture, or their speculative references, which literally »set in motion« new ways of dealing with semantically overloaded cultural heritage. Notions of antiquity, canon, and material are at the center of the following considerations.

VR works enable an immersive sensory engagement of the recipients, who »wear« part of the apparatus, equipped with a head-mounted display, enter the digital spatial image and navigate through a virtual space of experience.[4] Among the early VR experiences is Banz & Bowinkel's *Mercury* (2016) (fig. 2), created nearly ten years ago for the HTC Vive. Wearing goggles, users stride through a virtual setting resembling an archipelago with five circular islands connected by narrow bridges, accessible by using the controller. They hover Olympus-like over a mountainous landscape close to the sea, which may cause dizziness or a touch of vertigo in some people while moving around. The platforms feature natural elements such as birch trees, skeletal-looking conifers, and a few rocks, alongside constructed forms: an architectural cube seemingly made of concrete, a hemispherical pavilion with a grid-like triangular structure, enlarged screens of a digital device, and text-based signs – such as »shift,« »function,« and »control« – that reference communication and the entanglement of real life and virtual worlds. Huge shiny spheres mirror an arena, bouncing up and down. Different avatars, some with fragmented mannequin-

3 See e.g. Digitales Wörterbuch der deutschen Sprache (DWDS), in: dwds.de. Online: https://www.dwds.de/wb/Zitat (last access: 18.08.2025).

4 Banz & Bowinkel (2016): »Mercury (VR)«, in: banzbowinkel.de. Online: https://www.banzbowinkel.de/project/mercury/ (last access: 16.08.2025). For the history of virtual reality see e.g. Oliver Grau (2001): Virtuelle Kunst in Geschichte und Gegenwart. Visuelle Strategien, Berlin: Reimer; Sabine Himmelsbach (2021): »Unbound Spaces – Immersive Virtualities«, in: Tina Sauerländer (ed.), Resonanz der Realitäten, VR Art Price of DKB in Cooperation with CAA Berlin, Ex. Cat., Haus am Lützowplatz, Berlin, pp. 20–25.

like bodies, appear repeatedly. Ghostly and prancing through the scenery, they seem absorbed in their own movements as they perform slow dance gestures, circling through the space. The lighting situation slowly changes as you walk, getting darker at the end of the »day« before the brightness increases again. These virtual entities are all intertwined into a surreal scenery aesthetically borrowed from gaming worlds, in which known physical laws have become fluid, without being a direct quotation such as in the following case. In the center of the artwork, but also of my analysis, is an ancient statue: Mercury, the winged messenger of the gods. Four avatars dressed in black and pink tights surround him, moving similarly to the mannequin-like figures mentioned above. Another version of the antique quote is a shattered statue, located next to the dry conifers, whose splinters can be virtually walked upon. User may even pass through the virtual stone – an indication of digital materiality and its permeability.

fig. 2: Banz & Bowinkel: Mercury, 2016-2017, interactive virtual reality installation for HTC Vive, customized computer, head-mounted display, 3D-printed porcelain interface button, web cameras, monitor, plexiglass, various cables; set up in a black anodized aluminum frame structure

2. Marble in the Virtual World: Material Simulation/Material Knowledge

In addition to the two aforementioned citations from *Mercury*, the second work by Banz & Bowinkel, created a year later, is evidence of a further development of the ancient statue. In *Palo Alto* (2017) the digital sculpture is animated.[5] It shatters and reassembles itself (fig. 3), while maintaining the illusion of a compact, three-dimensional form. Furthermore, Mercury changes his material properties. While at one moment the statue seems to be made of elastic, wobbling rubber, swinging up and down, the next moment it mutates into a figurative block of hard marble again or bursts into fragments. The users only have an indirect influence on the changing aggregate state. If one finds the entrance to the main tower, they reach the next level, which has different colors and lighting. The statue changes as soon as you enter or leave this passage, thus altering your own »gaming« level within this responsive environment. The aesthetic boundary between the sphere of art and the viewer's space, as discussed by Ernst Michalski (1931), seems to have disappeared or at least been reduced.[6] Only eruptive image transitions and glitches can disturb the spatial illusion and immersive effect. Oliver Grau underlines the reduction of the aesthetic distance and its manipulative effect:

> »The more ›natural‹ the interface, the more pronounced not only the danger that the invisible part of the ›technological iceberg‹ remains closed and unconscious to its user, but above all the more intense the illusionary dissociation with the data space.«[7]

5 Banz & Bowinkel (2017): »Palo Alto (VR)«, in: banzbowinkel.de. Online: https://www.banzbowinkel.de/project/palo-alto/ (last access: 16.08.2025). The work was amongst others exhibited in *The Unframed World: Virtual Reality as artistic medium* at House of Electronic Arts (HEK) Basel in 2017, curated by Tina Sauerländer, in *Brave New Worlds. Virtual Realities in Contemporary Art* at Zeppelin Museum in 2017/18, curated by Claudia Emmert and Ina Neddermayer, at Kunstverein Arnsberg 2019 in the exhibition *In Medias Res*, curated by the author. It is now part of the permanent collection of the Museum Kunstpalast in Düsseldorf.

6 Ernst Michalski (1996): Die Bedeutung der ästhetischen Grenze für die Methode der Kunstgeschichte, Berlin: Gebr. Mann Verlag.

7 O. Grau: Virtuelle Kunst in Geschichte und Gegenwart, p. 183 (translation by the author). He does not mention Ernst Michalski.

The so-called material time and the (learned) material knowledge itself, which includes the specific material properties, generates a dynamic tension between classical object aesthetics, sculptural *memoria*, and the digital counterfeit.[8] As is well known, marble, respectively stone, was celebrated as being timeless due to its durability. Here, it mutates into a digital simulation that is programmed on the computer and consists of individual pixels, as well as the texture map and normal map, which have an even greater influence on the artistic work on digital materiality.

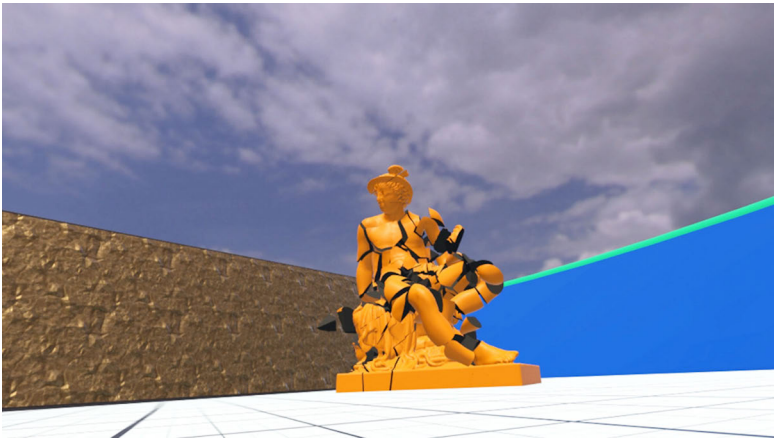

fig. 3: Banz & Bowinkel: Palo Alto, 2017-2018, interactive virtual reality installation for HTC Vive, customized computer, head-mounted display, monitor, carpet, various cables; set up in a four-colour powder coated anodized aluminum frame structure

On one hand, the alteration of material properties and the visual alienation of classical references carries a humorous component and could even be interpreted as a temporary iconoclastic act, which, however, remains without consequences due to its virtuality and is reversed again by the artistically programmed code. On the other hand it might allude to the elasticity of histori-

8 For more information on the material turn, see the recent insightful summary by Beate Fricke/Ann-Sophie Lehmann (2024): »Materials Matter«, in: Kunstchronik. Monatsschrift für Kunstwissenschaft 77/7, pp. 461–467, https://doi.org/10.11588/kc.2024.7.105329.

cal linearity, stretching the narrative of (progressive) history within the virtual world. There is also an iconoclastic moment in the splintering or crumbling of *Mercury*. The alienation or transformation of the quotation reveals the medium itself, similar to glitches, while simultaneously exposing the playful possibilities of digital art. Thus, a reference to antiquity in the form of an iconic statue is virtually cited, »herbeizitiert« (summoned) as a set piece and uprooted fragment of a larger cultural-historical context. The rubbery messenger of the gods looks like a humorous estrangement, reminiscent of merchandising products and miniaturized souvenirs, yet he is actually monumentalized in relation to the architectural surroundings and avatars. Does VR function here as a technology of counter-history and estrangement or does it imply a certain conservatism? Echoing the Eurocentric canon, the work reflects both an attempt at self-inscription within an art-historical genealogy and a humorously critical distancing qua alienation and symbolic destruction of historical continuity. While the Dadaists celebrated the elasticity, flexibility, adaptability, and ubiquity of industrial rubber as an artistic principle of life and survival in their collages and assemblages, Banz & Bowinkel playfully explore the facets of digital material illusion in this work.[9] Often, playful aspects have something childlike, degrading, and a closeness to life about it, which classical art history attempted to separate from so-called high art, whereas it is a decisive characteristic of virtual art.

The popularity of antique references, or spolia in the broader sense, is also evident in Robin Rutenberg's VR-work *Stonesong* (2022) (fig. 4): a pair of antique columns stand as isolated objects framing stairs without any corresponding building, next to a free-floating marble torso.[10] A few seconds later, the viewer experiences overgrown columns as if deep time had undergone a paradoxical acceleration; the figures look like petrified, stone-skinned fossils in an Arcadian setting.[11] They explain: »When journeying through this ethereal

9 Ursula Ströbele (2024): »Elastikakt – Elastizität als künstlerisches (Über-)Lebensprinzip«, in: Julia Wallner (ed.), Der Die Dada. Unordnung der Geschlechter, Ex. Cat., Munich: Hirmer, pp. 38–45.

10 They initially presented the work as a single VR headset installation with headphones. According to the artist, a video out ran to a large 55" flatscreen TV and an audio out fed two additional pairs of headphones, while the VR participant's journey could be viewed and listened to by other recipients. The statues remain stationary, while the stones are weightless, shapeshifting.

11 A summary can be found here: Robin (27.10.2022), Vimeo: https://vimeo.com/764574164 (last access: 16.08.2025).

realm, the listener encounters multiple 3D rendered statues of the artist and other stone structures forged from transcendent matter,« referring, amongst others, to the singing *Colossi of Memnon*, a pair of twin Egyptian burial monuments constructed by Pharaoh Amenhotep III. Rutenberg inscribes themself via their own portrait in the aesthetic genealogy of an ancient statue. Statues, or rather their shells, change color, pulse with light or are enveloped in mist. They »[swell] and [surge],« spilling »over [their] own bodily boundaries,« performing an allegorical image for materiality and its becoming.[12] Here again, this includes a reference to stone as a fundamental artistic material, which could not be more contrary to the (seeming) immateriality of VR/digital art. But in contrast to physical sculptures, it is the skin of a non-monolithic torso with fluid, porous contours that drifts apart, splinters, and reassembles in small particles – similar to *Mercury*. The porous shell, its deceptive appearance and false façade, refers to the timeless canon of antique statues.

fig. 4: Robin Rutenberg: Stonesong, 2022, VR poem and soundscape installation

Even if new modes of perception are made possible, only the »visual aid« of the interface reveals the sculptural work. Despite the dissociation between the practically non-existent movement of the viewer's physical body and their

12 Robin Rutenberg (2022): Stonesong. A VR Soundscape and Poem, Sound Studies and Sonic Arts Master Exhibition, Berlin University of the Arts, Collegium Hungaricum Berlin, booklet. Thank you to Tina Sauerländer, who draw my attention to this project.

movement in cyberspace, the apparatus remains palpable. This dynamic coupling of body and virtual space, as well as the indiscernibility of perception and affection, is an important aesthetic feature of VR. Our own knowledge, experience, and memory of material properties, such as the stability and rigidity of marble (*Mercury*) or the rough surface of wood/bark, still determine our perception of phenomena and sculptures in the virtual world and also determine how they affect us physically, despite being aware of the digital illusion.[13] Henri Focillon describes this as »tactile faculty,« which only allows »the possession of the world«[14]: »The hand knows that objects are weighted, that they are smooth or rugged, that they are not fused to the back of the sky or the earth like they appear.«[15]

3. Artistic Strategies of Reproduction and Appropriation

The canonical antique statue of Mercury, a central reference for both works by Banz & Bowinkel, is a quote within a quote within a quote: like ancient statues such as *Hermes Fastening His Sandal* (2nd c. AD), the French sculptor Jean-Baptiste Pigalle conceived his seated *Mercury* at the moment he fastens his heel-wings, preparing to take to the skies on an errand. The smaller-than-life marble sculpture was submitted in 1744 as Pigalle's reception piece for admission to the Royal Academy in Paris. By the 17th and 18th centuries, the imitation of antiquity no longer functioned as a form of slavish copying: *imiter* is now clearly separated from *copier*, as the French court historian and co-founder of the Paris Academy André Félibien claims. »When one speaks of imitating antiquity or the style of a specific master,« he writes in *De principes,* »this does not mean to copy every drawn, painted or sculpted detail, but rather to formulate a similar idea and work in the same style.«[16] This definition of *imiter* underscores how

13 Technological accessibility and implicit dependency include the respective (visual) equipment, i.e., software and hardware, which are equally essential for production and reception, require an audience that owns a digital device and has internet access, possibly access to VR glasses, and at the same time reflect media history.

14 Henri Focillon (2018): In Praise of Hands, New York: Parkstone Press International, p. 28.

15 Ibid.

16 André Félibien (1699): Des principes de l'architecture, de la sculpture et de la peinture et des autres arts qui en dépendent: avec un dictionnaire des termes propres à chacun de ces arts, Paris (Vol. 3), p. 442 (translation by the author).

it is not the exact replication of the ideal sculpture that matters, but the study of nature, anatomy, and its processes – and the subsequent reinterpretation of these elements. Since then, there have been various adaptations of the messenger of the gods in different attitudes and temporal moments. In an interview, Banz & Bowinkel explain their personal motivation:

> »The only direct reference is a 3D scan of a statue of Mercury from a project by Oliver Laric. We are interested in the figure of Mercury as the ancient god of commerce as well as thievery. An apt symbol of our times. We also wanted to implement the project instigated by Laric.«[17]

This echoes an afterlife of the Eurocentric ancient sculptural canon.[18] In recent years, Oliver Laric has scanned several antique, Greco-Roman statues, including *Mercury in Repose* carved by Joseph Nollekens in the 18th century. The file can be downloaded from a specific web portal, such as Turbosquid, and 3D printed.[19] Laric's sculptures are also not straightforward copies of their models. His work *Sleeping Boy* (2016) is printed in different materials. Such sculptures remind us of earlier strategies, for example in the Renaissance, when artists completed Greek and Roman torsos in marble (or in drawings) and often interpreted them self-consciously, for example following the excavation and discovery of the Laocoon group in 1506. In the context of Laric's engagement with the legacy of antique models, Melissa Gustin thus speaks of »digital neo-

17 Banz & Bowinkel in an interview with Dominik Busch (2017), in: Ina Neddermeyer/Claudia Emmert (eds.), Brave New Worlds. Virtual Realities in Contemporary Art, Ex. Cat., Zeppelin Museum, Friedrichshafen, p. 59.

18 For the notion afterlife, see also Anton Springer (1886): »Das Nachleben der Antike im Mittelalter«, in: Id. (ed.), Bilder aus der neueren Kunstgeschichte (Band 1), Bonn (2nd, revised and expanded edition). In his chapter »The Afterlife of Antiquity« he elaborates on the world of ancient Greece and Rome and how it has inspired the Western cultural history, how it has left many traces and has been a reference, still until today, one could add. Throughout his life, Aby Warburg devoted himself to antiquity and its afterlife in images, such as in the introduction to the *Mnemosyne Atlas*, where he formulates the idea of the long-term cultural impact of images (Aby Warburg (2012): »Der Bilderatlas Mnemosyne«, in: Gesammelte Schriften. Vol. II/1. Ed. by Martin Warnke/Claudia Brink, Berlin: Akademie Verlag). Thanks are due here to Steffen Haug.

19 Bridget O'Neal (2014): »Artist Oliver Laric Truly >Shares< his Lincoln 3D Scans from Usher Gallery Exhibit«, in: 3dprint.com. Online: https://3dprint.com/16512/oliver-laric-lincoln-3d-scans/ (last access: 16.08.2025).

classicism,« situating his artistic practice within the history of neoclassical imitation and legacy of antique models.[20]

A further iconographic layer arises from the various roles embodied by Mercury, a god of financial gain, commerce, eloquence, communication, travelers, and thieves who also guides souls to the underworld and serves as the »messenger of the gods«. Today, big data and the global, often free circulation of digital commodities lead to a dilemma that is linked to the question of how we define and deal with value in our society, leading Banz & Bowinkel to ask: »Is this trade or theft? Or, who profits from a certain structure of added value and who does not?«[21] Using digital editing and remixing, one might ask, who quotes whom and why? A quotation can also become intellectual theft if it is not properly identified. As Dennis Rudolph provocatively explains in *The Portal* (2022): »I stole all these figures from a huge baroque ceiling painting by Cortona in Rome. I started repainting them in 3D in the VR. Kind of updating them.«[22] The artist refers to his series of giant 3D painted mythological figures, which embody a painterly digital plasticity. His VR experience reshapes Auguste Rodin's *Gates of Hell* (1880-circa 1890) – another art historical quotation.

A further example of an antique reference is the arena-like architecture reminiscent of the antique agora, which is reflected in the bouncing spheres and appears miniaturized and distorted on their surfaces. *Palo Alto* is also determined by set pieces of reality, such as a virtual stonewall, which is juxtaposed with a blue concave-shaped mural element. Its color refers to the aesthetics of the blue screen and does not represent any architectural detail; rather, it embodies the omnipresence of the internet.[23] Scattered deciduous trees stand on a grid-like floor; avatars dressed in black and pink overalls move

20 Melissa L. Gustin (2024): »Do Sleeping Shepherds Dream of 3D-Printed Sheep: John Gibson, Oliver Laric, and Digital Neoclassicism«, in: British Art Studies, London/New Haven: Paul Mellon Centre for Studies in British Art and Yale Center for British Art, https://britishartstudies-24.netlify.app/digital-neoclassicism/ (last access: 16.08.2025).

21 Banz & Bowinkel in an interview with Dominik Busch, Brave New Worlds, p. 59.

22 Dennis Rudolph (2024): »The Portal (2024). VR Experience for Meta Quest«, in: radiancevr.co. Online: https://www.radiancevr.co/artists/dennis-rudolph/, 9:21–9:31 min (last access: 16.08.2025).

23 The title, *Palo Alto*, refers to Silicon Valley, which, quoting the artists, »symbolizes the cradle of the digital revolution.« (Banz & Bowinkel in an interview with Dominik Busch, Brave New Worlds, p. 59).

through the scene; light monochrome clones fall from a tower, in whose roof truss a pendulum swings back and forth between »true« and »false«; the text on the terrain here reads: »A place where none« and »See for be seen« – quotes from *Worstward Ho* (1983) by Samuel Beckett.

fig. 5: Banz & Bowinkel: Mercury, 2016–2017, interactive virtual reality installation for HTC Vive, customized computer, head-mounted display, 3D-printed porcelain interface button, web cameras, monitor, plexiglass, various cables; set up in a black anodized aluminum frame structure, installation view: Substance, DAM Gallery, 2017

Similar to Mercury, who continuously travels between realms, Banz & Bowinkel's work unites the two worlds: in VR, one of the screens displays the exhibition space along with the hands of the viewer and both controllers, while the other screen shows analogously an outside perspective onto the users. With a webcam it is clamped in an open aluminum frame that follows the changes of the virtual landscape, enabling other viewers to perceive the virtual movements and gain insight into the programmed scenery even without wearing the head-mounted display. The Italian philosopher Luciano Floridi (2015) names this contemporary entanglement of our post-digital world »onlife.«[24] The computer handling large amounts of data is installed as an aesthetic object next to the webcam, as is a 3D printed porcelain hand with a button (fig. 5), placed on a ball, suggesting a connection to the physicality of »traditional« sculpture. The button in the porcelain hand can be used to accelerate the day-night cycle in the VR world. The hand appears here across multiple registers: the user's hands holding the controller; as a sculptural object in the exhibition space, referring to interfaces that have become an extended body part and multifunctional prosthesis; as a digital counterpart in VR, and indirectly through the visible and tangible controller; and finally, as the programming hands of the artist duo. From an art historical perspective, the artist's hand is connected to various topoi; as a tactile organ, it represents the touch and modeling of material and is considered the executive force of the creative artistic genius. Henri Focillon praises them in his poetic odes to the hand (1934) as »tireless companions.« They are responsible for making man become »aware of the difficulty of thought […] the hand is about action: it takes, it creates, and it could be said that it thinks.«[25] Even though vision is often regarded as the central organ for the perception of aesthetic experience in digital art, the sense of touch also plays a decisive role. Derrick de Kerckhove has outlined the sense of touch as an essential sense of interactive media and each user's proprioception. His examples of scanning the television screen with the eyes, and of the tactile functions of the remote control and video recorder, could be expanded to consider these implements as historical precursors to the controllers and head-mounted display used in VR.[26] Shirin

24 Luciano Floridi quoted after S. Himmelsbach: Unbound Spaces, p. 21.

25 H. Focillon: In Praise of Hands, p. 11.

26 Derrick de Kerckhove (1993): »Touch versus Vision: Ästhetik neuer Technologien«, in: Wolfgang Welsch (ed.), Die Aktualität des Ästhetischen, Munich: Wilhelm Fink, pp. 137–168, here: pp. 145–148. See also Mark W. D. Paterson (2005): »Digital Touch«, in:

Weigelt also describes »tactility« as a central sensual-aesthetic category of digital media cultures.[27] Whether as a swipe, click, drag, or scroll gesture to browse and open digital pages, zoom in on individual details, or move with an avatar through a virtual landscape, navigating through a virtual world today is characterized by various haptic moments that even children can now easily master.

In *Palo Alto*, the display has slightly changed: a round, black carpet with the word »escape« rendered in neon green lettering and a photo-print depicting two avatars are added to the visible computer and the screen. The work can be experienced in different formats, whether as a site-adapted sculptural installation presented in an exhibition or collection context – such as *Palo Alto* in the Museum Kunstpalast in Düsseldorf – or a trailer-like excerpt on YouTube. The work itself can be experienced with Meta Quest goggles via the Radiance app at home or another chosen place with a WiFi-connection.[28]

4. Speculative Archeology and Scale in Digital Sculpture

The messenger of the gods cited by Banz & Bowinkel appears in a monumental format in relation to the avatars walking around it. There is an oversized, seemingly monstrous beetle – a quotation from Franz Kafka's *The Metamorphosis* (1915) – who also embodies the play with scaling. When you meet the insect with your avatar, your own size seems to change. In this virtual landscape, there are (no longer) any fixed distances or proportions for orientation. »The size is nothing; what matters is the scale,« Barnett Newman said in 1969.[29]

Constance Classen (ed.), The Book of Touch, Oxford/New York: Berg, pp. 431–436. His research has been dedicated to the sense of touch and haptic perception.

27 Shirin Weigelt (2019): »Tasten: Taktilität als Paradigma des Digitalen«, in: Rainer Mühlhoff/Anja Breljak/Jan Slaby (eds.), Affekt Macht Netz. Auf dem Weg zu einer Sozialtheorie der Digitalen Gesellschaft, Bielefeld: transcript, pp. 107–128, here: p. 155, https://doi.org/10.25969/mediarep/13223.

28 See Banz & Bowinkel (23.09.2017), Youtube: https://www.youtube.com/watch?v=Akp7cUB2bfQ; Banz & Bowinkel (21.02.2019, 2:22), Youtube: https://www.youtube.com/watch?v=fIci8C6r8NY&t=142s; Banz & Bowinkel, in: radiancevr.co. Online: https://www.radiancevr.co/artists/banz-bowinkel/ (last access: 16.08.2025).

29 Barnett Newman quoted after James Meyer (2004): »No more Scale. The Experience of Size in Contemporary Sculpture«, in: Artforum 42/10, online: https://www.artforum.com/features/no-more-scale-the-experience-of-size-in-contemporary-sculptur

Yet while the physical body is still considered a reference in Abstract Expressionism and (Post)-Minimal Art, this orientation holds little relevance for digital art, which allows permanent (re)-scaling and floating, thereby provoking a kind of *sitelessness*.[30] But in VR and Augmented Reality (AR) digital devices, such as googles, controllers and smartphones or tablets themselves become forms of bodily prostheses and sites of localization and reference. Although we do not have visible avatar bodies as we walk through the virtual landscapes of *Mercury* and *Palo Alto*, we position ourselves in relation to the size of the virtual mannequins and clones, which makes the beetle, for example, appear monumental to us.

Size can be marshaled as a critique of traditional monumentality and of the portable commodity. Thus, according to David J. Getsy, »even if the statue is monumental or miniscule, the bodily sense of scale becomes a corporeal link between the viewer and the actual presence of the three-dimensional image […].«[31] In VR, the users slip into their digital (physical) surrogate while teleporting through the virtual landscape. The corporeal link thus unfolds between each user's digital body, their individual memories of the actual, physical statue, and its virtual simulation, together suggesting a so-called speculative scale.

Speculation comes from the Latin *speculari*, meaning »to observe.« It describes a hypothetical train of thought that extends beyond tangible reality. »Speculation,« in the sense of Rosalyn Diprose, »is futural: it keeps open (past and present) worlds to potentiality, possibility, and the unknown«.[32] Potentiality is closely linked to virtuality; both terms embody a certain form of potentiality. Etymologically, virtuality is borrowed from the Latin *virtus* (»virtue,« »bravery,« »effectiveness«). In French, *virtuel* means »capable of acting,«, »existing as a possibility in accordance with its disposition.«[33] Virtuality is therefore an

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e-168860/ (last access: 17.08.2025). See e.g. *Scale as Content*, Corcoran Gallery of Art, Washington DC, 1967.

30 See U. Ströbele: Sculpting Digital Realities, p. 100.

31 David J. Getsy (2014): »Acts of Stillness: Statues, Performativity, and Passive Resistance«, in: Criticism 56/1, pp. 1–20, here: p. 2.

32 Rosalyn Diprose (2017): »Speculative research, temporality and politics«, in: Alex Wilkie/Martin Savransky/Marsha Rosengarten (eds.), Speculative Research. The Lure of Possible Futures, London/New York: Routledge, pp. 39–51, here: p. 40.

33 See Sven K. Knebel (2001): »Virtualität«, in: Joachim Ritter et al. (eds.), Historisches Wörterbuch der Philosophie 11, Basel: Schwabe, pp. 1062–1066; Ralf Grötker (2001): »Virtuelle Realität«, in: Ibid., pp. 1066–1068 (translation by the author).

entity that is not physical but exists in its functionality or effect. The conceptual history of the virtual, from a potential force striving for actualization (Thomas Aquinas) and an element preceding reality in time (Henri Bergson) to the temporal latency and recursion of virtual images, would require a separate investigation.[34] Speculating, according to Noam Gramlich, is a linguistic-material assemblage with, through, and *in* bodies.[35] Gramlich suggests that »long before the speculative turn, thinking in *futurum II* and the visionary design of other pasts, presents, and futures were constitutive components of feminist, post-, and decolonial theories as well as gender and queer studies.«[36] Speculation – the term stands here as a counter-program to established and objective knowledge – considers the virtual reality-constituting power and significance of fictions and narratives. As an ontological endeavor, speculative strategies characterize both Banz & Bowinkel's *Mercury* and *Palo Alto*. This also applies to Juan Covelli's VR-work *Speculating the Fragmented Body* (2019) (fig. 6), in which he uses 3D scans of 14 Mesoamerican artifacts from the Stavenhagen Collection in Mexico City to create an online free access archive, motivated by his »[fascination] with the Zapoteca culture and its aesthetics.«[37] Covelli invited other artists to download and modify the objects, both to restore their visibility against oblivion and to grant these 2000-year-old archaeological objects a new digital life within a virtual gallery.[38] Rather than sculptural quotation, he is instead interested in remixing and reprinting these objects, altering them through code and creating glitches: »This act of reconfiguring and reinterpret-

34 See e.g. Eva Wilson (2016): »Hinter den Spiegeln. Virtualität, Rekursion und virtuelle Bilder im 19. Jahrhundert«, in: Heide Barrenechea/Marcel Finke/Moritz Schumm (eds.), Periphere Visionen. Wissen an den Rändern von Fotografie und Film, Paderborn: Wilhelm Fink, pp. 97–112.

35 Naomie Gramlich (2020): »Feministisches Spekulieren: Einigen Pfaden folgen«, in: Marie-Luise Angerer/Naomie Gramlich (eds.), Feministisches Spekulieren: Genealogien, Narrationen, Zeitlichkeiten, Berlin: Kulturverlag Kadmos, pp. 9–32, here: p. 21.

36 Ibid., p. 9.

37 Juan Covelli in an interview with Schloss-Post (2018): »Ancient Gods and Digital Power«, in: Digital Culture, Theory & Art 0, online: https://schloss-post.com/ancient-gods-digital-power/ (last access: 18.08.2025).

38 According to Covelli, »the artists who interpreted the works remained anonymous. […] I was more interested in the act of reshaping and copying than in authorship. […] challenging the notion of uniqueness. As a result, the work itself plays with a blurred concept of heritage and ownership.« (Juan Covelli in an e-mail to the author, 29.01.2025).

ing is a way of liberating the artifacts from their historical baggage and thus overcoming the colonial yoke,« he explains.[39] Covelli further argues:

> »The most effective tool we have in the digital domain is the capacity to copy and disseminate information endlessly; the power of the copy is important because it makes it impossible to control or to grasp an artifact. There is not just one digital artifact; there are infinite copies circulating the web in many forms. […] We have passed from an era of mechanical reproduction to the era of the digital rhizome, a digital file that can be copied eternally, and can be viewed simultaneously in many places, a digital object thus has these magical properties of being ubiquitous, and this is what makes these new artifacts so powerful.«[40]

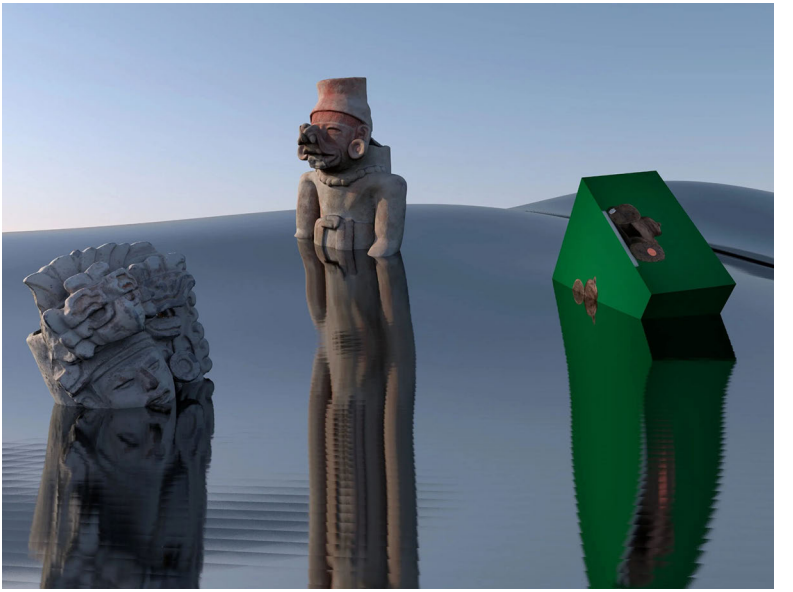

fig. 6: Juan Covelli, Speculating the Fragmented Copy, 2018

39 Web Residencies by Solitude and ZKM, online: https://speculating-the-fragmented-copy.schloss-post.com/index.html (last access: 18.08.2025).

40 Ibid.

Referring to their potential for sitelessness, these speculative sculptures were meant to be sent back to the artist for exhibition in a virtual gallery he created with the program Unity, which could be experienced through VR goggles. The gallery itself resembles a desert, »a future where the digital artifacts are the only thing remaining.«[41] Covelli's digital and printable monuments address ethical, philosophical, and historical challenges through an artistic strategy of speculative archaeology and scaling, thereby expanding a historic canon. The artist approaches the original historical artifacts by utilizing fed-in image material, allowing the algorithm to evoke a virtual form of memory from this data pool.

Concluding Remarks

Similar to what Allahyari and Rourke evoke in *3D Additivism*, a wide variety of historical quotations swim in the same stream of sampling, co-existing in their pop-cultural, virtual afterlife – whether in *Mercury* or *Palo Alto*, an antiquizing self-portrait of Robin Rutenberg, or in the virtual reinterpretations and remixes of prehistoric artifacts by Juan Covelli and his artist colleagues. The quasi-timeless, thus ennobled antiquity functions here as a motivic projection surface, from whose (emptied) pool of forms the artists (arbitrarily) draw upon in favor of the entanglement of different worlds. In VR, various material simulations are being experienced. The appropriation of antiquity or an antique-style vocabulary of forms, its proclaimed afterlife and continuity, oscillate between iconoclasm (via fragmentation and uprooting through the transfer to VR) and humorous, playful alienation, material fakery, and conservatism. Playful alienation manifests itself in two ways: On the one hand, the historicity of the respective work mirrors the artists' playful experimentation with the technical possibilities of this (relatively new) medium VR. On the other hand, participatory interaction in a virtual playing field allows for a reception-aesthetic, time-based experience that does not imply the artwork as a pure, static counterpart.

In the form of historical artifacts, history is elastically stretched and drawn into the digital sphere. While Banz & Bowinkel employ a quotation within a quotation, enabling clear identification and attribution, in the works of Covelli and Rutenberg the ancient model can only be stylistically speculated upon;

41 Ibid.

the historical model is alienated and re-created. Covelli claims the digital space as a decolonial space and uses tools such as his computer, VR goggles, and machine learning to contribute to a greater visibility of endangered, inaccessible, or destroyed historical artifacts. He points out the power of the image as such, thereby considering the artistic and speculative forms of sculptural reconstruction in *Speculating the Fragmented Body* as an artistic gesture of empowerment:

> »The problem is what happens with the digitization of these artifacts, they become data, and data is power. Corporations are keeping this data away or are using it to create new sources of profit. These new ways of colonialism mimic older forms of colonialism where you discover, collect, and then profit from it.«[42]

Banz & Bowinkel's choice of subject – Mercury, the god of trade, communication, and thieves – also points to the inherent power structures of big data and the circulation of digital commodities. One of the central stylistic features is the dissolution of fixed contours: fading, crumbling, morphing, and splintering are modes of movement that emphasize the aesthetics of fluidity in »the era of the digital rhizome.« One could ask to what extent these works reflect technological potential itself or whether they refer to an anachronistic concept of sculpture. Antiquity functions as a motivic mediator between the past, canon/tradition, historical continuity, and the present or future. It suggests a reconnection to existing values, but also creates a contrast considering its digitally floating sitelessness. Inscription within an established genealogy is an essential element of Western art history, such as the reception of antiquity in the Baroque period, the use of spolia and the imitation of ancient architectural elements in everyday houses. The previously mentioned artists raise this question about the afterlife of antiquity and its different ways of citation and appropriation. They examine how speculative digital reconstructions reveal both the technological and artistic potential of restoring and reinterpreting collective cultural memories within a speculative-archaeological framework.

42 Ibid.

Bibliography

Banz & Bowinkel in an interview with Dominik Busch (2017), in: Ina Neddermeyer/Claudia Emmert (eds.), Brave New Worlds. Virtual Realities in Contemporary Art, Ex. Cat., Friedrichshafen: Zeppelin Museum, p. 59.

Covelli, Juan in an interview with Schloss-Post (2018): »Ancient Gods and Digital Power«, in: Digital Culture, Theory & Art 0, online: https://schloss-post.com/ancient-gods-digital-power/ (last access: 13.10.2025).

Diprose, Rosalyn (2017): »Speculative research, temporality and politics«, in: Alex Wilkie/Martin Savransky/Marsha Rosengarten (eds.), Speculative Research. The Lure of Possible Futures, London/New York: Routledge, pp. 39–51.

Félibien, André (1699): Des Principes de l'Architecture, de la Sculpture et de la Peinture et des autres Arts qui en dépendent: avec un Dictionnaire de termes propres à chaucun de ces Arts, Paris (Vol. 3), pp. 442.

Focillon, Henri (2018): In Praise of Hands, New York: Parkstone Press International.

Fricke, Beate/Ann-Sophie Lehmann (2024): »Materials Matter«, in: Kunstchronik. Monatsschrift für Kunstwissenschaft 77/7, pp. 461–467. DOI: https://doi.org/10.11588/kc.2024.7.105329

Getsy, David J. (2014): »Acts of Stillness: Statues, Performativity, and Passive Resistance«, in: Criticism 56/1, pp. 1–20.

Gramlich, Naomie (2020): »Feministisches Spekulieren: Einigen Pfaden folgen«, in: Marie-Luise Angerer/Naomie Gramlich (eds.), Feministisches Spekulieren: Genealogien, Narrationen, Zeitlichkeiten, Berlin: Kulturverlag Kadmos, pp. 9–32.

Grau, Oliver (2001): Virtuelle Kunst in Geschichte und Gegenwart: Visuelle Strategien, Berlin: Reimer.

Grötker, Ralf (2001): »Virtuelle Realität«, in: Joachim Ritter et al. (eds.), Historisches Wörterbuch der Philosophie 11, Basel: Schwabe, pp. 1066–1068.

Gustin, Melissa L. (2024): »Do Sleeping Shepherds Dream of 3D-Printed Sheep: John Gibson, Oliver Laric, and Digital Neoclassicism«, in: British Art Studies, London/New Haven: Paul Mellon Centre for Studies in British Art and Yale Center for British Art, online: https://britishartstudies-24.netlify.app/issues/24/digital-neoclassicism/ (last access: 13.10.2025).

Himmelsbach, Sabine (2021): »Unbound Spaces – Immersive Virtualities«, in: Tina Sauerländer (ed.), Resonanz der Realitäten, VR Art Price of DKB in

Cooperation with CAA Berlin, Ex. Cat., Berlin: Haus am Lützowplatz, pp. 20–25.

Kerckhove, Derrick de (1993): »Touch versus Vision: Ästhetik neuer Technologien«, in: Wolfgang Welsch (ed.), Die Aktualität des Ästhetischen, Munich: Wilhelm Fink, pp. 137–168.

Knebel, Sven K. (2001): »Virtualität«, in: Joachim Ritter et al. (eds.), Historisches Wörterbuch der Philosophie 11, Basel: Schwabe, pp. 1062–1066.

Meyer, James (2004): »No more Scale: The Experience of Size in Contemporary Sculpture«, in: Artforum 42/10, online: https://www.artforum.com/features/no-more-scale-the-experience-of-size-in-contemporary-sculpture-168860/ (last access: 13.10.2025).

Michalski, Ernst (1996): Die Bedeutung der ästhetischen Grenze für die Methode der Kunstgeschichte, Berlin: Gebr. Mann Verlag.

Paterson, Mark W. D. (2005): »Digital Touch«, in: Constance Classen (ed.), The Book of Touch, Oxford/New York: Berg, pp. 431–436.

Rutenberg, Robin (2022): Stonesong. A VR Soundscape and Poem, Sound Studies and Sonic Arts Master Exhibition, Berlin University of the Arts, Collegium Hungaricum Berlin, booklet.

Springer, Anton (1886): »Das Nachleben der Antike im Mittelalter,« in: Id. (ed.), Bilder aus der neueren Kunstgeschichte (Band 1), Bonn (2nd, revised and expanded edition).

Ströbele, Ursula (2023): »Sculpting Digital Realities. Notes on Truth to Materials, the Aesthetic Limit, Site-Specificity and 3D-Printing«, in: Mara-Johanna Kölmel/Id. (eds.): The Sculptural in the (Post-) Digital Age, Berlin/Boston: Walter de Gruyter, pp. 83–101.

Ströbele, Ursula (2024): »Elastikakt – Elastizität als künstlerisches (Über-)Lebensprinzip«, in: Julia Wallner (ed.), Der Die Dada. Unordnung der Geschlechter, Ex. Cat., Munich: Hirmer pp. 38–45.

Warburg, Aby (2012): »Der Bilderatlas Mnemosyne«, in: Gesammelte Schriften. Vol. II.1. Ed. by Martin Warnke/Claudia Brink, Berlin: Akademie Verlag.

Weigelt, Shirin (2019): »Tasten: Taktilität als Paradigma des Digitalen«, in: Rainer Mühlhoff/Anja Breljak/Jan Slaby (eds.), Affekt Macht Netz. Auf dem Weg zu einer Sozialtheorie der Digitalen Gesellschaft, Bielefeld: transcript, pp. 107–128. DOI: https://doi.org/10.25969/mediarep/13223

Wilson, Eva (2016): »Hinter den Spiegeln. Virtualität, Rekursion und virtuelle Bilder im 19. Jahrhundert«, in: Heide Barrenechea/Marcel Finke/Moritz Schumm (eds.), Periphere Visionen. Wissen an den Rändern von Fotografie und Film, Paderborn: Wilhelm Fink, pp. 97–112.

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