Mayte Gómez-Molina

You can/’t see me through my avatar

Introduction

Museums and institutions might not have fully reflected upon it yet, but over the past several years, contemporary art has witnessed a sharp increase in the use of 3D and VR software by artists as a means of expression. Many artists are using 3D-rendered images as a tool to express themselves in this moment of cohabitation with the digital, especially young artists who populate social media and other Internet spaces with their 3D still and moving images. This technology is allowing artists to share their experience as a contemporary subject at a moment when the real and the digital are no longer a valid dichotomy, in that the digital has merged with our everyday reality and created an analogue/digital duality in our daily lives, each of which is a valid form of experience. One of the most frequently used images in contemporary 3D-rendered art is that of the body, as I believe it is the easiest way for a potential audience to recognize itself in this new technology. The capacity of these tools to copy the way we perceive reality allows creators, artworks, and viewers to generate a virtual space of thought in which different contemporary and historical topics can be talked about and thought through.

To build on this hypothesis, I will first analyze how CGI and 3D-rendered images interact with vision and perception, especially regarding a tactile quality of 3D-rendered images that allows viewers to feel the images in their bodies, generating a possibility of empathy. The impression of depth and solidity delivered by 3D-rendered images, along with the capacity for immersion in 3D installations and VR environments, will be discussed as the main reason why this type of image has the capacity to replace perception, generating a virtual space where we can nonetheless experience real feelings and gain new knowledge about ourselves, the world, and others. To navigate these virtual spaces as a user/observer of 3D and VR artworks, and even in 3D and VR spaces for mainstream consumption, people must acquire an avatar, one of the key entry points for the digital experience, the appearance the user adopts to interact with the digital world. Avatars, as representations of the self, should be considered part of the politics of representation and of identity politics, and observed carefully as they deliver information about the rules of digital platforms and how they do or do not impose

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normative ideas of bodies, identities, and social groups—and therefore potentially become an extension of the reach of normative power in the off-screen society. Digital avatars are a representation of the world beyond the digital, and this has not gone unnoticed by contemporary artists who focus on these topics. They become one tool of expression that allows artists new ways to think about and present their experience and beliefs about these topics. Once I have presented the idea that 3D and VR can produce reality and real feelings, and that digital avatars are key to understanding representation online (and therefore offline), I will analyze several contemporary digital artworks that reflect these two hypotheses and convey a third main idea that will be present in this paper: that the avatar as a proxy of the self, together with the virtual space as a proxy of our social, personal, and historical environment, allow artists to create a space for themselves with some distance to their own experience, which is frequently traumatic as a result of the oppression artists and their social group endure. By using the avatar and the virtual as a proxy, artists can not only separate themselves from the difficulty of living through their own pain again and again, but can also create a means to protect the viewer.

3D technology and the mimicry of perception

My eyes can touch: Tactility in vision

In 1972, Ed Catmull, co-founder of Pixar and Disney Animations, created a short piece called *A Computer Animated Hand*, which was followed by *A Computer Animated Face*.[1] This is considered the first three-dimensional short film made with computer-generated imaging, best known as CGI. In the film, we can see the process of digitizing a hand to translate it to vectors that are then interpreted and animated by the computer in three dimensions. We see the image of the hand moving, the fingers trying to grasp the non-tangible space that surrounds them inside the screen, as if they were trying to understand it. Suddenly, another image comes to mind: the stone at the entrance of Chauvet Cave in France, one of the oldest and best-preserved examples of prehistoric figurative cave painting. Covered by red negative stencils of hands—we see the hands painted in silhouette, not actual handprints—the stone welcomed humans (prehistoric and contemporary) into the cave, where they found or will find a space for the sacred and the virtual. What is it about the hand that connects these two moments in a new way of representation? Guy Debord comes to mind, when in *The Society of the Spectacle* he writes: "The most modern is also the most archaic."[2] Indeed, it seems rather curious that hands were both a prehistoric painting motif and the first element to be

1 Carmen Martínez Ribera, *A Computer Animated Hand / Mano animada por ordenador*, 2015 [1972], 6:32 min, https://www.youtube.com/watch?v=XdY_q_CbZK4 (accessed March 20, 2023).
2 Guy Debord, *The Society of the Spectacle*, Detroit 1970 [Paris 1967], 45.

represented in a three-dimensional CGI-animated image, especially if we consider that the human hand is our first tool for experiencing the world: the connection between the self and everything and everyone around us.

In the University of Virginia's *The Mind Is the Metaphor* database, created by Brad Pasanek, we find a very compelling metaphor about hands in Aristotle's book *De Anima* [*On the Soul*]: "It follows that the soul is analogous to the hand; for as the hand is a tool of tools, so the mind is the form of forms and sense the form of sensible things."[3] Here, Aristotle defines the hand as a proxy for the soul and as the main tool of the mind to apprehend the sensible world. When describing vision, there is something closely intertwined about hands and eyes, about touch and sight, something very present when we stand in front of 3D-rendered images. This is something we might not have encountered in a contemporary art context, but probably most of us have experienced in situations related to entertainment, such as theme parks or mainstream 3D-cinema. Although this essay won't address these topics, I think it is useful to outline some brief comments about the power 3D exerts over mainstream audiences to understand its potential when utilized in art making. In her essay "Sensual Vision: 3-D, Medieval Art, and the Cinematic Imaginary," Allison Griffiths formulates a very important observation regarding the connection between vision and touch, using the audiences of 3D movies to make a point:

> *Advertisements for 3D Imax technology often show spectators seated in steeply raked auditoriums with their hands in front of their faces or reaching out in front of them, and it is not uncommon to see spectators attempt to touch objects when watching an especially thrilling 3D sequence.*[4]

Although she makes a very interesting case for how Medieval art and 3D movies share aspects of immersivity, I would like to focus on her comments about tactility and vision.

> *Reaching out and touching images that seem to come alive and enter the viewing space invokes an ancient belief in the importance of the hands in the sensory experience of the world.*[5]

I have not found the exact IMAX advertisement images she discusses in the text, but if we go to Google Images and type in "people wearing 3D glasses or 3D movie au-

3 Aristotle, *De anima*, 432a, 235, quoted from: Brad Pasanek, "The Mind is the Metaphor," in: http://metaphors.lib.virginia.edu/metaphors/16905 (accessed March 25, 2023).
4 Alison Griffiths, "Sensual Vision: 3-D, Medieval Art, and the Cinematic Imaginary", in: *Film Criticism* 37/38 (3/1), 2013, 60–85, esp. 71, http://www.jstor.org/stable/24777977.
5 Ibid., 61.

dience", we can see many pictures similar to what she describes—people reacting to what they are seeing on the screen, either leaning towards the image or leaning back in order to protect themselves from it. Elizabeth Grosz argues that "experiencing a movie, not even merely 'seeing it,' my lived body enacts this reversibility in perception and subverts the very notion of onscreen and offscreen as mutually exclusive sites or subject's positions."[6] Grosz talks about non-computer-generated cinema, but I think we can extrapolate this quote to describe the experience of the audience of CGI or 3D-rendered images, as this feeling of merging with the screen is enhanced by the impression of reality and the substitution of one's own perception that happen when we immerse ourselves in 3D-rendered images. There's a tactile, skin-reactive quality to three-dimensional images that allows a virtual image to be born for our vision. As Richard Shiff argues, "touch and vision are caught in reciprocal figuration: it is touch that is figuring vision, and vision that is figuring touch."[7] We see what we touch, and we touch what we see, in a very particular way that is born from the synthesis of these two senses, because it is important to note that the senses do not operate in isolation. As Massumi writes,

> *Vision only actually functions in mixed or intermodal state. It is always fed into other senses and feeds out to them.*[8]

This explains why there has been an association between the hand and the eye as the two main translators of the sensible world to the mind and the soul. Massumi continues:

> *Vision has taken up a tactile function. It has arrogated to itself the function of touch. This purely visual touch is a synesthesia proper to vision: a touch as only the eyes can touch.*[9]

The fact that there's a potential for touch in our vision makes it possible to feel 3D-rendered images as if they were tangible, which lends them a materiality that enables them to add to our experience of the world. A good example of this is José Carlos Casado's 3D-rendered video piece *Sacrifice* (n. d. [2013]).[10] The work is made by capturing the movements of a dancing subject with motion capture technology, which involves a suit that translates movement into data that can subsequently be applied to a

6 As cited in Vivian Sobchack, *Carnal Thoughts: Embodiment and Moving Image Culture*, Berkely 2004, 66f.
7 Ibid., 82.
8 Brian Massumi, *Parables for the Virtual*, Durham and London 2002, 154.
9 Ibid., 157f.
10 José Carlos Casado, *Sacrifice*, Video Work, n. d. [2013], https://www.josecarloscasado.com/?/video/sacrificeV01/ (accessed May 10, 2023).

3D digital body. Casado then added textures to the body to make it tactile, causing it to drift away from a human shape that we can still nonetheless recognize: as a body that feels like it could be *touched*. The textures in Casado's piece have been defined as "the skin as an extreme expression":[11] Casado is interested in showing the body in violent conditions, whether pleasurable or painful. And although we might never have seen or touched the texture Casado puts on this digital body, we can certainly feel it. As Massumi writes,

> *We can see texture. You don't have to touch velvet to know that it is soft, or a rock to know that it is hard. Presented with a texture you have never seen before, you can anticipate its texture. [...] You have to know texture in general already before you can see a specifically new texture. But that doesn't change the fact that once you can generally see texture, you see a texture directly, with only your eyes, without reaching."*[12]

We can also go back to Massumi's previous quote, where he defines vision as *intermodal*, depending not only on touch but on the other senses too, as the audio track also collaborates in giving "humanness" to the piece. Another interesting fact about this work is its live performance, where we see people dancing and their movement translated to the digital 3D-rendered body on a screen.[13] This enhances a feeling of identification with this digital body, as we see actual people, like us, transferring their dance onto this body. We, the viewers, could potentially be the dancers, which means we could also be the body Casado creates, made unrecognizable by violence.

Solidity and depth: the stereoscope as a virtual apparatus

Before discussing the stereoscope, I would like to frame the definition of virtuality I will be using to describe its effects and what it tells us about CGI and 3D-rendered images. Virtuality has been defined by Summers as something

> *[...] rooted in the capacity to see three dimensions in two, and in the conditional availability of surfaces upon which this capacity may be brought into play. The term, chosen well before 'virtual reality' became current, refers to images on surfaces that have the 'virtue' or positive force of forms in real space.*[14]

11 Watermill Center, *José Carlos Casado in Residence*, January 15, 2014–February 3, 2014, https://www.watermillcenter.org/jose-carlos-casado/ (accessed April 20, 2023).
12 Massumi, *Parables for the Virtual,* 157f.
13 José Carlos Casado, Video Works, n. d., https://www.josecarloscasado.com/video (accessed: May 10, 2023).
14 David Summers, *Real Spaces. World Art History and the Rise of Western Modernism*, London and New York 2003, 431.

And even though virtual and virtuality are colloquially associated with contemporary apparatuses, the aspect of virtuality can be found long before 3D was used as an asset for immersive experience in cinema and art as we know it today. There is a history of strategies and artifacts that have attempted to create spaces of immersion for spectators, such as the tradition of panoramas in the early nineteenth century, but I would like to explore the first single-user artifact that allowed people to see a virtualization of the third dimension replacing their personal vision: the stereoscope.

Grau defines the stereoscope as an apparatus "invented in 1838 by Charles Wheatstone and improved in 1843 by David Brewster" that "utilizes our physiological ability to perceive depth of field: Two eyeglasses arranged as far apart as the eyes, the binocular parallax, allow the combination of two images taken from viewpoints a small distance apart. The stereoscopic view results from a system of mirrors and gives the observer an impression of space and depth."[15] Long before CGI technology and 3D glasses, the stereoscope was a single-user object that enabled people to have three-dimensional experiences of individual vision that enhanced the subject's capacity for immersion, as it completely covered their eyes and replaced their vision.

In an article for *The Atlantic*, Oliver Wendell Holmes writes about this device, describing the stereoscope as

> *[...] an instrument which makes surfaces look solid. All pictures in which perspective and light and shade are properly managed, have more or less of the effect of solidity; but by this instrument that effect is so heightened as to produce an appearance of reality which cheats the senses with its seeming truth.*[16]

Later on in the article, he adds that due to the stereoscope's capacity to convey depth and solidity, it was possible for the mind to feel "its way into the very depths of the picture."[17] This leads to another aspect of the virtual that becomes very important for this essay but drifts away from the purely academic discourse to enter a space of experience. In my opinion, it is very hard to find a language to describe what happens between subject and object when a virtual connection is established between the two. The definition I offer and which guides this essay describes the virtual as a dimensionless feeling that comes to life between the seeing subject and their object of vision, when their entirely different times and spaces momentarily meet. It's as though the present of the object finds the present of the subject, and they exchange positions without losing their integrity. Like water and oil, they are together in a separate way.

15 Oliver Grau, *Virtual Art: From Illusion to Immersion*, Cambridge, Mass., 2003, 141.
16 Oliver Wendell Holmes, "The Stereoscope and the Stereograph," in: *The Atlantic* 3, June 1859, 738–748, 74.
17 Ibid., 78.

1 **Video still from: Miao Xiaochun, *Restart,* 2008–2010, 3D computer animation, 14:22 min**

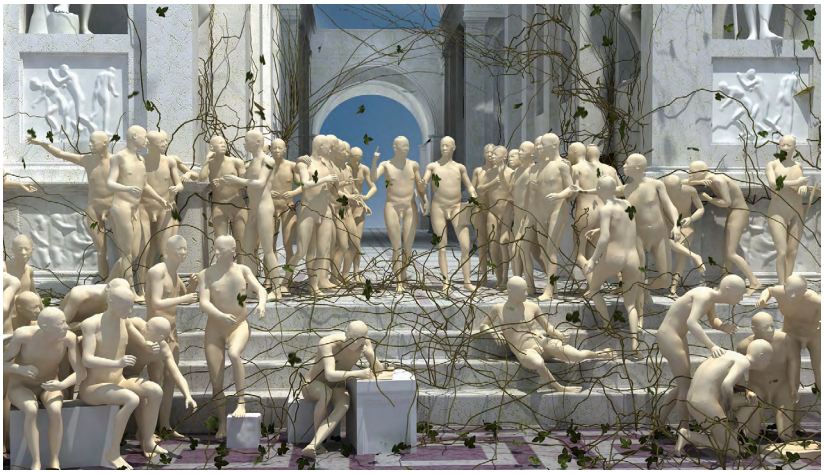
The subject leaves its body, and the object leaves its materiality, but they experience this flight from the self only if they are still connected to it. Going back to the hypothesis of tactility in our vision, I would like to add that the way of seeing we experience when vision and touch truly merge has to do with a feeling of depth and distance. As Merleau-Ponty writes, "to see is to have a distance."[18] I believe that to see in a virtualized way is to touch something at a distance, a motion in which the eye replaces the hand yet maintains its essence. This, in my opinion, is what happens in the body when we face 3D-rendered images. They are at a seemingly reachable distance, yet impossible to grasp, as it is the eye and not the hand that is able to touch them. When Wendell Holmes talks about depth, I think he points to the spatial tension generated between the seeing subject and the object of vision as they meet halfway in the virtual, where the subject—we will never know about the object—undergoes their experience. The way Wendell Holmes describes the capacity of the stereoscope to trick us into believing that what we see is real goes as far as to argue that we no longer need real objects. He writes that because of the realness of stereoscopic images,

> *Form is henceforth divorced from matter. In fact, matter as a visible object is of no great use any longer, except as the mould in which form is shaped. Give us a few negatives of a thing worth seeing, taken from different points of view and that is all we want of it.*[19]

It is important to note how he thinks that this impression of reality would improve if the stereoscope offered pictures of an object or place from different angles, and how this points to a three-dimensional aspect of images that 3D-rendered images later successfully achieved.

An artist who taps into the capacity of 3D-rendered images to offer an impression

18 Maurice Merleau-Ponty, *The Primacy of Perception*, Evanston, Ill., 1964, 166.
19 Wendell Holmes, *The Stereoscope and the Stereograph*, 747.



2 **Video still from: Miao Xiaochun, *Restart,* 2008–2010, 3D computer animation, 14:22 min**

of realness using the concepts solidity and distance is Ed Atkins. We could talk about any of his pieces, as his style essentially mines the medium's capacity to mimic reality, but I would like to focus on his piece *Ribbons* from 2014.[20] The work doesn't only deliver a feeling of reality through a quality of sharpness and visual definition of the objects and the digital body used in it; it also uses a depth of field we identify with human vision. In the second part of this piece, we see a character drinking and reciting poetry, and we can appreciate shifts of focus that resemble the scope of the eye, in which we can focus our attention on objects at different distances from us, causing a change in how we see the overall picture. For example, if we focus on an object that is very close to us, the background will not be as sharp as the object we are gazing at, as happens in this 3D-rendered artwork. Furthermore, the position of the virtual camera in this piece, which offers us the point of view of someone sitting right in front of the character, allows us to enter the piece, to be the first-person receptor of the character's words. These three elements (the realness/solidity of the digital objects, the mimicking of human eye motions, and the first-person perspective) illustrate some of the reasons why Oliver Wendell Holmes defended the stereoscope—the 3D image—as a substitution of reality. Another artist who plays with the concepts Wendell Holmes discussed is Miao Xiaochun (1964), whose two 3D-rendered movies, *Restart*[21] (Figs. 1 and 2) and *Microcosms*[22] make beautiful use of camera movement and depth of field to communicate a feeling of spatiality. Although his movies do not have the realism quality Atkin's have, the spatial sense is worth noting, as it offers depth not only inside the 3D-rendered piece, but also outside, towards the viewer, creating a tunnel between the audience and

20 Erich Mülla, *Ed Atkins—Ribbons, 2014*, Video Excerpt, January 12, 2015, https://www.youtube.com/watch?v=3EkqVWXBVOQ (accessed January 30, 2025).
21 Miao Xiaochun, *Restart*, 2008–2010, Public Delivery 2019, https://www.youtube.com/watch?v=bPJKcKsabhI (accessed February 15, 2023.
22 Son Nguyen, *Microcosm Miao XiaoChun*, 2014, https://www.youtube.com/watch?v=p5YFDiSFpig (accessed February 15, 2023).

the screen on which the piece is shown, allowing the screen to move beyond mere surface and become a window to another reality. None of these artists use 3D-rendered images in a way that exactly copies human vision. In Atkin's piece, the shift of focus resembles those only a camera can achieve, just as the camera movements in Xiaochun's pieces are impossible for a human body. But both pieces recall a way of seeing we have learned from painting, photography, and cinema, and in this case that is enough to make us believe that what we are seeing could be real. As Joel Snyder writes,

> *Realistic depiction is conceptually and historically based upon the adoption of a model that permits both picture maker and viewer to demand and, indeed, to find systematic relations between picture and object of depiction. But this 'object' is not simply 'the way the world is', 'the way the world looks', nor even 'the ways we use our vision'; it is rather a standardized, or characterized, or defined notion of vision.*[23]

These 3D-rendered images, as it happened with the daguerreotypes, are not exact representations of reality as the eye can see them, but they are real in the sense that we consider them to be a valid representation of reality that informs the way we see. Snyder continues by saying that

> *what we do in depicting is to establish a congruence between a 'natural' seen picture that we construct according to pictorial rules and a representation of that 'natural' picture. The rules of construction are the same for both pictures.*[24]

The 3D-rendered movies I have presented might not offer a real equivalent of human vision, but then we would have to say that neither do paintings, photographs, or films: yet we believe they are extensions of our vision, capable of providing a space of self-identification, recognition of the other, and therefore a possibility for empathy.

3D-rendered images of bodies as a tool for empathy

The hand and the face

3D-rendered images have the capacity to convey a feeling of reality and allow for something greater than just the viewers' astonishment or a realistic point of view. If we look at Ed Catmull's first 3D-rendered film, the importance of the hand as a tool for tactility in vision is not the only essential element of this piece. We must also note that, among all the elements that could have been chosen, *A Computer Animated Hand*, which includes another part neglected in the title, *A Computer Animated Face*, chose two key

23 Joel Snyder, "On Picturing Vision," in: *Critical Inquiry* 6 (3), 1980, 499–526, esp. 503.
24 Ibid., 504.

parts of the human body to be the first protagonists of this new technological possibility. If the hand, as described by Aristotle, was *the tool of tools*, the face also has a crucial power in life as well as in representation. In *Cinema 1, The movement-image*, Gilles Deleuze writes about the importance of the face:

> *Ordinarily, three roles of the face are recognizable: it is individuating (it distinguishes or characterizes each person); it is socializing (it manifests a social role); it is relational or communicating (it ensures not only communication between two people, but also in a single person, the internal agreement between his character and his role).*[25]

The face acts as a pivotal point for human recognition, not only from human to human, but from humans to themselves. Therefore, it makes sense that the face was the other element Catmull selected for his first 3D-rendered and animated film, as it was the most effective way of finding a human element in this new technology, so alien at the time, as well of recognizing and inscribing ourselves in it. The aspect of recognition goes first, but there's also an important point we must consider: the possibility of empathy a face offers. Deleuze points to this when he writes:

> *There are two sorts of questions which we can put to a face, depending on the circumstances: what are you thinking about? Or what is bothering you, what is the matter, what do you sense or feel?*[26]

The face and its expressions act as a space of recognition and interaction, but they are only the tip of the iceberg. The face crowns a body full of expressions and shapes we feel related and attracted to when represented in images, although Deleuze and Guattari will use these arguments to critique the use of the face as a capitalist instrument that has reduced all the possibilities of the body to the power of the face.[27] I agree with Mark Hansen's positive outlook on Deleuze and Guattari's comments when he considers the face as a platform for empathy: "the face becomes the catalyst for a reinvestment of the body as the rich source for meaning and the precondition for communication."[28] I agree with the idea that even if the face acts as the main trait for identity and identification, that doesn't mean the body is disregarded.

The hand and the face, the first two elements rendered in a 3D film, both act as a synecdoche: they represent the body and the human. When we see a digital face or a body part in a 3D-rendered contemporary artwork, and even in a mainstream 3D-ren-

25 Gilles Deleuze, *Cinema 1: The Movement-Image*, London 1986, 99.
26 Ibid., 88.
27 As cited by Mark Hansen, *New Philosophy for New Media*, Cambridge, Mass. 2004, 131.
28 Ibid., 131.

dered product (such as a film or video game), identification works in the same way a "real" human face or body part would. In her article *A Strange Hand: On Self-Recognition and the Recognition of Another* (2009), Jenny Slatman argues how self-recognition and recognition of others are linked in a phenomenon of causal perception: because I recognize myself, I can recognize the other. She writes:

> *I recognize myself, distinguished from that which does not belong to me: and I recognize the other as a being who, like myself, has a sense of herself and may be concerned for herself.*[29]

What she implies here is that because we see ourselves in the other, because the other acts as a mirror image of ourselves, I can recognize the "me" in them and give them a selfhood like my own. To make an argument about how we transpose ourselves onto others as a crucial part of recognition, Slatman discusses the rubber hand experiment:[30]

> *[...] this experimental illusion can be provoked by hiding a subject's hand (for instance behind a screen) and replacing it with a rubber hand, and subsequently touching simultaneously one's own hidden hand and the rubber hand. After a little while, subjects experience the rubber hand as if it were their own.*[31]

What is interesting about this experiment is how it shows that we can feel in our own body things happening to another body, and more importantly, how we can feel in our own body things happening to artifacts that resemble a human body even if they are not a part of it. This is very important for the argument I am making, as the rubber hand in this experiment could be replaced by a digital, 3D-rendered hand. We might not feel a 3D-rendered body as if it were our own, as it is not present in our physical space, but we might feel an identification and transference of sensations when viewing a 3D-rendered body, just as when we see virtual bodies of actors and actresses in non-computer-generated cinema. As Laura Mulvey writes in her iconic *Visual Pleasure and Narrative Cinema* (1999),[32] a moving image that involves human form creates a space of self-recognition and recognition of the other, just as Slatman defines in her argument about how we perceive ourselves and others. Moving images and representations of humans have an impact on us that we cannot evade. Mulvey writes:

29 Jenny Slatman, "A strange hand: On self-recognition and recognition of another," in: Phenom Cogn Sci 8, 2009, 321–342, esp. 321f., https://doi.org/10.1007/s11097-009-9127-5 (accessed November 21, 2024).
30 *National Geographic*, "Is that my real hand? The Rubber Hand Experiment," 2016, https://www.youtube.com/watch?v=DphlhmtGRql (accessed February 10, 2023).
31 Slatman, *A strange hand*, esp. 322.
32 Laura Mulvey, "Visual Pleasure and Narrative Cinema," in: Leo Braudy, Marshall Cohen (eds.), *Film Theory and Criticism: Introductory Readings*, 5th ed., New York and Oxford 1999, 833–844.

The conventions of mainstream film focus attention on the human form. Scale, space, stories are all anthropomorphic. Here, curiosity and the wish to look intermingle with a fascination with likeness and recognition: the human face, the human body, the relationship between human form and its surroundings, the visible presence of the person in the world.[33]

Even though I am not writing about mainstream film in this essay, Mulvey's argument about the anthropomorphic will of films does match my intention to discuss pieces of 3D-rendered contemporary artworks that have chosen the body and the human form as a vehicle for expression. Since the beginning of representation, we have had a fascination with human form that we cannot seem to escape.

Digital versions of empathy

Empathy can be described as "(the observer) reacting emotionally because he perceives that another is experiencing or about to experience an emotion."[34] This is not only a phenomenon that occurs when we see another human or non-human animal present or close to us, but it also happens when we encounter fictional representations, or even descriptions, of human and non-human characters. Conceived by literary theory and coined by scholar Jonathan Culler,[35] this paper briefly addresses the *hyper-protected cooperative principle*. This means that as a reader and/or spectator, when we open a book or watch fiction-based films, we suspend our disbelief and enter the story the author proposes to us *as if it were true*. This allows the object to communicate with the viewer, as it would be impossible to convey any kind of fiction if we are not willing to believe, for the duration of the reading or watching, that what we are seeing is possible, that the characters are real, and that the story is true. There is another layer to this idea, however: it is important for us when we talk about empathy aroused by the representation of human and non-human characters. Pavia et al. point to this when they write that

[...] when we watch a film, or read a book, we do not only suspend our disbelief and look at the characters as 'alive,' but we also establish emotional relations with the characters, even if they are ducks, ants, cartoon or realistic.[36]

33 Ibid., 836.
34 Ana Pavia, João Dias, Daniel Sobral et al., "Learning by Feeling: Evoking Empathy with Synthetic Characters," in: *Applied Artificial Intelligence* 19 (3–4), 2004–2005, 235–266, esp. 3, https://www.tandfonline.com/doi/full/10.1080/08839510590910165 (accessed November 21, 2024).
35 Jonathan Culler, *Literary Theory: A Very Short Introduction*, Oxford 1997.
36 Pavia, Dias, Sobral et al., *Learning by Feeling*, 3.

This idea is important for building on the idea of empathy towards representational characters such as avatars – the personae assumed by the artists whose work I will analyze later. Even if these representations are not "living" characters, the effects their stories have on us can awaken the same feelings of empathy and compassion than a "living" character or a real life could.

In a highly interesting experiment conducted by Matthew W. Campbell et al. at the Yerkes National Primate Research Center, scientists showed chimpanzees a 3D-rendered video of a 3D avatar of a chimpanzee yawning. In most of the chimpanzees of the study, when they were shown the 3D-rendered image of another "chimpanzee" yawning, this triggered the same reaction in the chimpanzee, as yawning is a phenomenon considered to be "contagious" among human and non-human animals. Their experiment concluded that

> *[...] for chimpanzees to display a contagious behavior in response to three-dimensional computer animations, they probably identified on some level with the animations [...]. Chimpanzees processed three-dimensional animated chimpanzee faces in a way similar to the way they processed actual chimpanzee faces.*[37]

Even though they discuss how only half of human subjects react to the yawning of a 3D human avatar and therefore disregard this result, they admit that

> *[...] our emotional engagement with the characters in the various media is why we experience suspense at their predicaments and happiness, sadness or other emotions that ensue.*[38]

We must also consider that this article is from 2009, when 3D animation was rapidly advancing but had not yet reached the level of hyperrealism that it has since acquired. I wonder what would happen if we designed an experiment in which, instead of using old-fashioned 3D avatars, we used *MetaHuman* tool, a character design software released in 2021 by Unreal Engine, a real-time 3D game engine able to create human characters with an overwhelming level of hyperrealism. As one of the reasons Matthew W. Campbell et al. gave for the lack of response in humans was lack of realism, would then only half of the humans participating respond by yawning when confronted with these highly realistic human characters?

A highly realistic digital avatar not only causes me to potentially have empathic responses towards it, but it also creates the feeling of being recognized by this avatar,

37 Matthew W. Campbell et al., "Computer animations stimulate contagious yawning in chimpanzees," in: *Proceedings of the Royal Society* B, 276, 2009, 4255–4259, esp. 4258, https://doi.org/10.1098/rspb.2009.1087 (accessed November 21, 2024).
38 Ibid., 4255.

especially when it appeals to you through dialogue, speech, or actions. Most of the avatars that will be discussed in this paper have human form, which also facilitates identifying their body as a reflection of my body: what happens to them could happen to me, or what happens to them should not happen to anyone, because it is dangerous or causes pain. The authors we have just discussed talk about self-recognition followed by the recognition of the other, whether it is in an off-screen situation or through a representation of another being, someone who is like me but not myself. But there are other thinkers that go farther than this to say that the recognition of the self cannot happen before we encounter the sight of the other. I am interested in both perspectives, as they allow me to explore the possibility of the empathy that is born when we are confronted with a human form, even if it is 3D-rendered.

To discuss this point of view, I will focus on the theories of French philosopher Maurice Merleau-Ponty, who argues repeatedly how we need to acknowledge the existence of the other to discover our own existence, for it is only when we are seen that we have a true grasp of our own existence. In his book *The Primacy of Perception* from 1964, Merleau-Ponty writes:

> *As soon as we see other seers, we no longer have before us only the look without a pupil. [...] For the first time, the seeing that I am is for me really visible; for the first time I appear to myself completely turned inside out under my own eyes. [...] For the first time, the body no longer couples itself up with the world, it clasps another body, applying [itself to it] carefully with its whole extension [...].*[39]

A strong argument lies in the literary quality of these lines: until I see the other, I cannot see myself. Recognition of the other is the prerequisite for an awareness of our own existence. Although this essay doesn't address Lacan's theories of the mirror and self-recognition, it is worth mentioning his ideas to historically frame Merleau-Ponty's argument. To briefly summarize: Lacan argued that until children see themselves in a mirror and recognize themselves in that other being, self-recognition cannot occur.[40] This is a beautiful argument when talking about empathy, as this implies that we can only feel ourselves when we witness other's feelings and can feel connected to them, recognizing them as something that is also within us, which makes us realize that we are similar, even if different. Merleau-Ponty states that the body "can assume segments derived from the body of another [...] man is mirror for man".[41] This idea of the merging of bodies somewhat relates to the rubber hand experiment and, therefore, to the idea that we can potentially absorb any human subject or human form we see into our body

39 Merleau-Ponty, *The Primacy of Perception*, 143f.
40 As discussed by Mulvey, *Visual Pleasure*, 836.
41 Merleau-Ponty, *The Primacy of Perception*, 168.

as part of our own experience. Elizabeth Grosz discusses Merleau-Ponty's ideas in her book *Volatile Bodies.* She writes*:*

> *To see, then, is also, by implication, to be seen. Seeing entails having a body that is itself capable of being seen, that is visible. This is the very condition of seeing, the condition of embodiment.*[42]

This reversibility of the gaze is very important for understanding the feeling of empathy that 3D-rendered images of bodies can convey. This turns the screen displaying 3D-rendered art works that explore the body into a mirror: if you can see someone reflected in a mirror, that means they can also see you. In his text *Paradoxical Body*, José Gil addresses Merleau-Ponty's ideas in relation to dance, a statement we can also transfer to 3D-rendered images of bodies:

> *As Merleau-Ponty described so well, a seeing body enters into a field of vision that sends back its own image, as in a mirror: to see is to be seen. [...] Paradoxically, the narcissistic position of the dancer does not demand an 'I.' Rather, it demands (at least) one other body that can detach itself from the visible body and dance with it.*[43]

Gil thinks that our subjectivity and that of the other can only exist together when we see each other. He further argues this collective subjectivity when he writes: "The space of the body is the skin extending itself into space; it is skin becoming space—thus, the extreme proximity between things and the body."[44]

I find this metaphor for empathy beautiful: when inhabiting the same space, my body and the body of the other become sheltered by the skin of a body that can only exist when we acknowledge one another. Thus, a virtual space is created through recognition of the other and self-recognition: a space where we can be ourselves and at the same time be someone else, even when separated by time. In his later book *The Visible and the Invisible*, which unfortunately remained unfinished, Merleau-Ponty points to this virtual space created through the flight from the self that happens when we recognize ourselves in the other. He writes:

> *There is here no problem of the alter ego because it is not I who sees, not he who sees, because an anonymous visibility inhabits both of us, a vision in general, in virtue of that primordial property that belongs to the flesh, being here and now, of radiating everywhere and forever, being an individual, of being also a dimension and a universal.*[45]

42 Elizabeth Grosz, *Volatile Bodies: Towards a Corporeal Feminism*, Bloomington 1994, 101.
43 José Gil, "Paradoxical Body," in: *The Drama Review*, 50 (4), 2006, 21–35, esp. 24.
44 Ibid., 22.
45 Maurice Merleau-Ponty, *The Visible and the Invisible*, Evanston, Ill., 1968, 142.

This virtual space created through the recognition of another beating heart like my own, a space that resembles a large body with a skin of its own, as José Gil writes, is the landscape for empathy that many contemporary artists use in their 3D-rendered artworks. And this concept of skin is embodied in the digital realm through the concept of the avatar.

Avatars: A brief introduction

According to its etymology, the word *avatar* comes from the Sanskrit अवतार (avatāra), whose root means both *to come across* and *to descend*. This term was used in Hinduism to describe the descent of a god to Earth, who made himself visible to humans by adopting a shape understandable for us—another human, a non-human animal, or even an object. According to the *Collins English Dictionary*, the term is now used to describe a "visible manifestation or embodiment of an abstract concept; archetype" and/or "a movable image that represents a person in a virtual reality environment or in cyberspace".[46] As gods coming to Earth, able to escape time and space, to shape-shift to attain their will and get their messages across, so too do we move around digital spaces with our avatars and change our identity as we switch the platforms we use every day that allow us to work, play, and communicate.

The avatar, however, is not only there to represent us. It exists so that we can represent ourselves *and* present ourselves to others, just as Hinduism believes the avatars of the gods were incarnations used to mediate with humans. In digital spaces, avatars are not only important because they allow us to choose an identity and appearance for ourselves, but also because they allow us to interact and identify with each other. This makes avatars an object of study for representational and identity politics, as they are the digital extension of these "off-screen" issues. As Castronova defines when talking about virtual world building:

> *[...] the problems of designing and then living in shared virtual reality environments are really no different from the ancient human problem of designing and then living in our Earth environment [...]. The attributes of the worlds of humans have always been endogenous.*[47]

We cannot treat virtual spaces as if they were any different than human structures outside of digitally mediated spaces. It would be naïve to believe that avatars, as a rep-

46 *Collins Dictionary*, "Avatar", https://www.collinsdictionary.com/dictionary/english/avatar (accessed April, 7, 2023).
47 Edward Castronova, "Theory of the Avatar," in: *SSRN Electronic Journal, CESifo Working Paper* 863, February 2003, Category 2: Public Choice, 16, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=385103 (accessed November 21, 2024).

resentational tool, escape the problems of representation that we face in "analogue" reality. And this is probably why many young contemporary artists have decided to use the medium of the avatar to talk about representation, identity, and the normative oppression of determinate groups of people, as neither the Internet nor technology have ended the problems of discrimination and bias they must endure outside of their devices' screens. Because they are our vehicle in the digital world—even a user name is a low-representational avatar – avatars become a political issue we need to be aware of.

But it's not all virtual. When we choose a digital avatar or when we encounter the avatar of the other online, we draw information from our physical body and the experience we have accumulated through it. When I see the color of a skin, the shape of a body, the texture of hair or clothing, I interpret them with the tactile capacity of my vision, which is linked to my sense of touch and a library of bodily experiences gained from my tangible adventures in the world. Precisely because the digital is immaterial, it needs the materiality of our bodies to complete its existence. As Mark Hansen writes in *New Philosophy for New Media*:

> *[...] what I claim as specific to new media art concerns the re-functionalization of the body as the processor of information. New media art calls on the body to inform the concept of 'medium' [...].*[48]

The body is deeply connected to the experience of the digital, as it is the vehicle for the experience the digital artwork tries to transmit. The artists and works this paper will analyze call upon the body of the observer to create an empathic bond with the artist's avatar.

To be visible in disguise: The avatar as a political tool

Means of expression are in an ongoing technical evolution that affects everyone's work, including that of artists. Historically, artists have found new means of expression by exploring the creative possibilities the evolution of technology and media offers. From early photography to film, video, and computers, artists have always adapted their discourse to the evolving possibilities of technical devices, finding ways to coherently fit new hardware and software to their artistic practices. As a technology that allows people to think about identity and representation in relation to the self and our surroundings, avatars have always been of interest to artists who ponder these topics. Lynn Hershman Leeson, Cindy Sherman, Adrian Piper, María Evelia Marmolejo, and Nan Goldin, as well as younger contemporary artists such as Amber Rose, Juliana Huxtable, and

48 Hansen, *New Philosophy for New Media*, 22.

Jordan Wolfston have used non-digital avatars in their work to explore identity, surveillance, representation, and the issues they have faced as bodies subject to potential violence and oppression by normativity and hegemonic power. The avatar allows the artist to both hide and show oneself, to be visible by means of concealment. In this paradoxical expressive movement, artists create a mediated space between themselves and their own story, as the avatar becomes a proxy in an exploration of memory, experience, and reality. It is easier to tell a story when it is happening to someone else – in this case, myself, the other, as an avatar—than it is to relive it, as the narrator/performer acquires distance that is especially useful when the artists are forced to go through discriminatory, violent, painful, or traumatic experiences all over again. This oppositional movement of establishing distance while approaching a particular subject matter becomes even more complex when using digital avatars, as the masking of the self experiences another turn, this time technological. It is a layer that separates the artists from their story even more, and even though it requires a certain technical capacity, it is also available to a larger group of people as more and more individuals, especially younger people, have a command of the tools necessary to build an avatar and acquire the information about where this avatar can live and socialize.

Elizabeth Grosz writes:

> *Patriarchal oppression, in other words, justifies itself, at least in part, by connecting women much more closely than men to the body and, though this identification, restricting women's social and economic roles to (pseudo) biological terms.*[49]

Reducing a human being to their body is an act of multi-layered oppression that I believe is at the core of an intersectional approach to oppression and discrimination. If we take a white heterosexual cis woman as the baseline for potential oppression, she has probably experienced her body presenting her *before her identity could do so*. She could be seen as a sexual object and will be interpreted as such, before being thought of as an individual human being. If this woman happens to be a lesbian appearing in public with her partner, the objectification becomes doubled, as another layer of imposed identity defines her before she can say a word about herself. If the woman is Black, this generates information about who she is without offering her the ability to contest it, as an entire set of beliefs and stereotypes precedes her. And if she is a trans woman, she will probably have to deal with all of this, added to which are the potentially violent responses of cis males and cis women. . . Any of the earlier examples can be combined to create a more complex situation for the person defined by their body, whether because of sexualization, discrimination on the basis of race, sexual orienta-

49 Grosz, *Volatile Bodies,* 14.

tion, or gender-related ways of presenting themselves. In any case, a person walks into a space and already information is projected onto them just because of how their body and its way of inhabiting the world signalizes information they cannot change. Scholar Simone Browne has coined a special term to talk about racism and the illusion of race: *epidermalization* or "the imposition of race on the body".[50] She uses this term to talk about how these phenomena not only occur offline, but that technology and digital environments have taken on racist perspectives that are replicated online:

> *[...] digital epidermalization is the exercise of power cast by the disembodied gaze of certain surveillance technologies [...] that can be employed to do the work of alienating the subject by producing a truth about the racial body and one's identity (or identities) despite the subject's claims.*[51]

The fact that information about a body can be produced and neither accessed nor altered by the person the information refers to, resulting in a preliminary definition of this person without them having said a word of their own, speaks to the idea of the body outside white heterosexual masculinity as a space for layered oppression that can, however, also be used as a starting point for empathy. The body is the basic unit for dialogue, understanding, and resistance, as we have all experienced fear because of it—but also joy, community, and tenderness. Therefore, we can offer our body as a space to start a dialogue about the increased pain and danger we are subjected to as we are assigned to discriminatory categories. And this is what the artists using digital avatars are trying to do: create layered experiences mediated by the body of the avatar that can reflect on their experiences and share them less painfully with others. They are sheltered in their disguise, while remaining visible, as is their choice.

Analysis of works

To illustrate these thoughts on empathy, resistance, intersectionality, and digital avatars, I would like to offer a small inventory together with a brief discussion of some artists who work with the idea of the body as a political space using 3D and VR tools. We will look at the work of micha cárdenas, Sondra Perry, Martine Gutierrez, Lu Yang, Carrie Chen, Martina Menegon, and Anneli Goeller.

The earliest example I have found in which a digital avatar is used to explore these questions is a magnificent piece by micha cárdenas, who in 2008 pioneered this topic with her performance *Becoming Dragon*. *Second Life* is a 3D virtual world that preceded the metaverse, in which users could enter a social network by either choosing a 3D

50 Simone Browne, *Dark Matters: On the Surveillance of Blackness*, Durham 2015, 7.
51 Ibid., 110.

avatar from those available on the platform or uploading their own customized avatar. This platform is still active, although it has lost popularity due to the emergence of *VR Chat*, another social media application mediated through 3D avatars which is also available for VR headsets and makes the experience even more immersive. *Second Life* was very important in the early 2000s, and some contemporary artists, including Cao Fei, Eva and Franco Mattes, and filmmaker Chris Marker, have used the platform to create narratives through world building or performative approaches. However, micha cárdenas did something particularly relevant, as she did not merely use *Second Life* from inside the game, but as "an approach of Mixed Reality, where the physical world is mapped into the virtual".[52] In this performance, cárdenas lives 365 hours (approximately 15 days in the game*) as a dragon in *Second Life*, only taking the virtual reality glasses off for bathroom breaks and sleeping. She did everything else with the VR glasses on, including reciting her own poetry and giving three talks about topics related to gender.[53] According to the statement featured on the artist's website, the piece

> *[...] questions the one-year requirement of 'Real Life Experience' that transgender people must fulfill to receive Gender Confirmation Surgery and asks if this could be replaced by one year of 'Second Life Experience' to lead to Species Reassignment Surgery.*[54]

This is a transfer of an off-screen oppressive situation, in this case, having to wait a full year to gain the right of access to gender confirmation surgery, into an online arena to explore the feelings, consequences, and endurance trans people experience while waiting for something that they should have immediate access to when they demand it. The idea that you are "prescribed time" to make sure you are sure of who you are is a form of medical, administrative, and legal violence that is unfortunately still used against transgender people in most countries. I believe that with the use of Mixed Reality in this piece, cárdenas enhances the possibility of the artist to convey feelings of dissociation and dysphoria. The performance has a dual purpose, in that it works as an experience of immersion in an identity the artist chooses for herself and gets to experience (being a dragon), while at the same time the audience sees her as another thing she has not chosen to be perceived as (i. e., a dragon), making the experience of her identity feel one-sided to her, and therefore discriminatory. This conquering of her already existing online *dragonhood* and offline womanhood takes on the proxy of a 3D dragon as a symbol of an oppressive society that affects those who must wait to be-

52 micha cárdenas, Christopher Head, Todd Margolis et al., "Becoming Dragon: a mixed reality, durational performance in Second Life," in: *Proc. SPIE* 7238. *The Engineering Reality of Virtual Reality* 2009, 723807 (26 January 2009), 1, https://doi.org/10.1117/12.806260 (accessed November 21, 2024).
53 Ibid., 2.
54 micha cárdenas, *Becoming Dragon*, n. d. [2008]), https://michacardenas.sites.ucsc.edu/becoming-dragon/ (accessed May 25, 2023).

come *who they already are*, having had their power to decide taken away from them.

Another artist using avatars to talk about the inability to properly define oneself is Sondra Perry. One of the more representative works of the artist is *Graft and Ash for a Three-Monitor Workstation* (2016), in which the viewer must sit in a biking workout station while being confronted with a 3D avatar of Perry, whose speech critiques hyper-capitalism as a space of exploitation from within and outside the self. Sondra Perry uses digital images to talk about labor, history, family, and the self, interweaving everything with the concept of Blackness and her experience as a Black woman while illuminating different technical aspects of new media tools that are coherent with her artistic intentions. Perry uses avatars to show how "in the software that you create these avatars with, it really shows you not just the biases but also what the beliefs of programmers are".[55] Through the avatar, Perry also talks about the discrimination in 3D character-creation software, as it eliminates the possibility to create certain body types (such as a fat body) and because it perpetuates representational stereotypes through the use of racial templates embedded in software. In the artist's words:

> *[...] there are not options for a fat body and there are all these templates for certain phenotypes, Asian phenotypes, African, Caucasian, etc. The software already allows you to change all the parameters needed to make a realistic avatar, so is it really necessary to have a phenotype of an African that looks a specific way, that has a certain nose?*[56]

In *Graft and Ash for a Three-Monitor Workstation*, Sondra's face is projected onto a thin body she does not recognize herself in. As someone who identifies as big/fat, it was impossible to find a body that could reflect her experience in the world, so she imposed her face as a projection on a thinner model. This especially affects Black people, as most designers of 3D bodies don't think about racial diversity, and if they do include different races, they do so by modifying the skin and facial features of the same thin, stereotypical bodies. Women in general are very badly represented on platforms offering 3D digital bodies, but the form of oppression is intersectional: it becomes worse as you try to represent more than one targeted group that is misrepresented. Sondra is making a commentary not only on the impossibility of finding a body other than thin when you identify as a woman; she also shows how this becomes even more difficult when you are Black. The feeling of frustration and inadequacy she conveys in this piece is not hard to understand in our own bodies. The representation of women, especially Black, Asian, Indigenous, and Hispanic women, is a problem in 3D software

55 Laura Snoad, "Artist Sondra Perry uses avatars and animation to challenge representations of blackness," in: *It's Nice That*, 12 March 2018, https://www.itsnicethat.com/articles/artist-sondra-perry-uses-avatars-and-animation-to-challenge-representations-of-blackness-120318 (accessed July 25, 2023).
56 Ibid.

3 **Carrie Chen, *Temporal Portrait: Carrie,* 2022, 3D animation with audio, TRT: 1 min 17 sec loop**

and 3D object libraries. When a search of the term "woman" is conducted today in one of the most important 3D object libraries, *CGTrader*, a Black woman only appears on the third page of the search results, amid dozens of highly sexualized 3D objects of white and Asian women and dozens of adult content warning signs. From navigating most video games and virtual representations of women, we can infer that the digital existence of a woman is that of a hypersexualized white or Asian woman designed to please male audiences.

The idea of Asian women or female-coded Asian bodies being under- and misrepresented as the fetish of white male 3D modelers and video game designers is explored by Carrie Chen and Lu Yang, two Chinese-born artists. Chen was raised between the US and China and is currently based in Los Angeles, while Lu Yang was born and raised in China and is based in Shanghai. In different ways, they both explore the possibilities of self-representation of Asian females (Chen) and non-binary bodies (Yang). In *Temporal Portrait: Carrie* (Fig. 3) Chen represents herself not only at different ages, but also in different time periods and personae, presenting to the viewer a multiple portrait of herself based on fictional past, present, and future representations. To the right of the portrait, women are represented in traditional roles and costumes, including a female soldier of the Communist Party. To the left, we see differently aged "Carries" portrayed in a more Western attire and less connected to Chinese tradition. As someone who was raised between two places as different in culture and values as the US and China, she imagines herself with this portrait as two opposite ways of being that could have been possible, had she lived in only one of these countries. The reality is that she lives in the gap between her travels, in a mix of cultures and experiences, and she talks about her

4 **Carrie Chen, *Primavera,* 2023, Digital simulation**

experience as a hyphenated Chinese-American who balances two cultural forces. Besides talking about her experience as someone who looks different from everyone else in two different countries, her work also makes an important contribution in that she is able to self-represent as she desires (Fig. 4) breaking through the 3D stereotype of Asian women's representation in digital spaces. In a more radical way, artist Lu Yang also explores a rejection of gender coding and sexualization of the body using godlike and monster-like avatars that merge the traditional with hyper-pop culture.

On an interview featured on their website,[57] they say that they wish "to only be a tellurian being, no gender, since we all can't select a gender when we come to this world." Through the years they have developed a sexless avatar version of themselves in which any parts of the avatar's body that could be used to decode its gender are eliminated, creating a digital version that is closer to this "tellurian" being they describe. Considering that traditional Chinese values and the government are quite strict on ideas of gender and sexual orientation, their work becomes a milestone for other non-binary, queer, and gender non-conforming Chinese artists. Their work is mostly focused on traditional ancient beliefs and on a Buddhist and Hindu approach to life, death, and the idea of the body as something that can be transcended, which they then merge with ideas of hyper-capitalism and acceleration culture. However, the most important aspect of their work is the extensive use of different types of avatars to create bodies that cannot be decoded by normative standards. Lu Yang's latest project, *DOKU*, offers a series of 3D video pieces in which a reworked version of their original avatar is split into six different beings that represent different parts of the self. In some of their previous work, *Motion Capture Performances*, a Mixed Reality approach is used, confronting the viewer with an analogue body and its digital iteration, similarly to micha cárdenas's

57 Lu Yang, "Nonsexual Humanity Takes Form as an Artist's 3D Avatar," 2017, http://luyang.asia/2017/02/15/nonsexual-humanity-takes-form-as-an-artists-3d-avatar/ (accessed April 15, 2023).

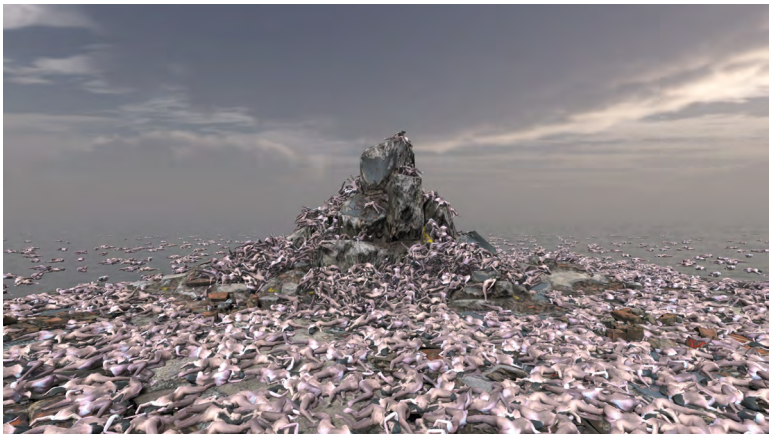
approach. In these performances, a real person performs on stage, while in the digital environment, up to ten characters follow the dance moves of the person on stage. This is an interesting approach, as it shows how one person is in fact many, God, monsters, human and animal shapes that dance on the screen, representing all a single body can potentially be.

Mixed Reality can work in two ways: like cárdenas and Yang, bringing the digital into the analogue, or like Martine Gutierrez, bringing the analogue into the digital. In Martine Gutierrez's *China Doll* (2020), the artist, in cooperation with Ryan Lee Gallery, created a VR environment to generate a spatialized experience of a video artwork in which they feature themselves in a non-digital avatar. Using a game engine space to build their own labyrinthine "doll house," the viewer can become the artist's voyeur, while the artist asks for consent to potentially become the viewer's voyeur—and gain access to the user's reaction when the artist is online in their piece. In the art work's statement (2021), Gutierrez defines their piece as "the experience of wanting to be 'the image' so badly that you sacrifice what you truly need." Embodying a nondigital avatar of the stereotype of the bombshell—something society would locate far from Gutierrez's nonbinary, Latinx identity – the VR space creates a place where the user can experience at the rhythm they choose, encountering parts of Gutierrez's film and poetry online at will. We enter both this labyrinth and Gutierrez's intimacy while they talk about sexual objectification and the joyful and painful experience of being an object for male desire, turned into an image and dematerialized. These are arguments they not only make through their poetry, but also through choosing a VR space to perform and recite—as VR space stands for the realm of fantasy, idealization, and imagination.

Martina Menegon's piece also talks about the problem of finding one's identity while navigating on-screen and off-screen spaces, which tend to turn certain groups labelled as sexual objects for normative bodies or as the *otherness* of normative bodies into images of themselves, multiplied and lost in their fragmentation. In her pieces, she inserts the viewer in virtual reality spaces where her avatar, or parts of it, is endlessly repeated, up to the point where her identity is diluted and becomes unimportant. In her work, a multiplicity of the body and the body as an object for mass production are very present. This element of multitude of the same body (the artist's own) is also present in *when you are close to me I shiver* (2020) (Figs. 5 and 6), a work depicting hundreds of human bodies piling up on rocks as if they were seals on a shore, a feeling enhanced by the voiceover of the piece, which mimics a wildlife documentary.[58] We can very easily connect with these bodies, portrayed almost as if they were the casualties of a disaster, as if they were animals: bodies that have had their humanity stolen from them. The feeling this piece provokes goes beyond the uncanny: it suggests that our bodies are

58 Martina Menegon, *When You Are Close to Me, I Shiver*, Live Simulation, Installation, 2020, https://martinamenegon.xyz/when-you-are-close-to-me-I-shiver (accessed April 17, 2023).

5 **Martina Menegon, *When you are close to me I shiver,* 2020, Live simulation, installation**



6 **Martina Menegon, *When you are close to me I shiver,* 2020, Live simulation, installation**

worth nothing; they are piled up, abandoned, abused. The human form and its repetition in Menegon's work allow us to feel like one of the iterations of her body, and to think critically about the ways that we treat ourselves and others.

One of the works that asks the most of viewers in terms of endurance is Anneli Goeller's *Pleasure after Consciousness* (Figs. 7 and 8), in which they narrate the consequences of sexual abuse. In the piece, we see the artist's body inhabiting a space of glass. As everything moves around them, their body remains still, in the same space, trapped in the memories of the traumatic experience, yet fighting for a new space of sexuality and agency in the aftermath. We hear and see the text for a poem Goeller cowrote with an artificial intelligence they taught to write like them, blurring the authorship about who, Goeller or the AI, wrote which part. I was lucky enough to interview this artist, and their comments on the piece and what it enables them to portray and discuss are worth noting. They describe the concept of the piece as follows:

> *In daily life I have a hard time feeling connected to my body. I experience dissociation often, and have for a long time, as a symptom of PTSD. I exist as my cerebral-self, and I*

7 **Anneli Goeller, *Pleasure after Consciousness*, 2019, 4K video, augmented reality, binaural sound, wallpaper, Lycra iPad stands, 3D printed iPad cases, 4:22 min**

8 **Anneli Goeller, *Pleasure after Consciousness*, 2019, 4K video, augmented reality, binaural sound, wallpaper, Lycra iPad stands, 3D printed iPad cases, 4:22 min**

> *must remind myself that I have a body walking the earth and that I have to care for that body to continue existing. My work is a visual way to connect my mind and body. And then for viewers, I am sharing the experience of switching from disconnection to connection and back again. In my work I use the idea of body solely as my own body. A virtual replica of my own body that I can hold outside of myself—manipulate, rig, animate, pose—to study the connection, or disconnect, I have between mind and body.*[59]

The idea of connection and disconnection is not only delivered through the 3D-rendered, digital body as an avatar, but also with the blurring of the different parts of the poem—we never know if it is Goeller talking or their AI avatar. This piece offers us an emotional space, whether for empathy or for anger, frustration, or grief. These are all emotions Goeller has experienced as a reaction to the piece:

59 Anneli Goeller, *Interview* conducted by Mayte Gómez Molina, May 1, 2023.

I have had a varying degree of reactions to my work. Some people expressed empathy after experiencing my work and some have felt anger—depending on the subject matter. I think, if using it in an immersive way—3D and VR can produce empathy but it depends on the viewer and how they perceive virtual beings. Do they think of them as puppets, as vessels or as conscious beings?[60]

I think this is very thought-provoking, in some ways connected to Martina Menegon's pieces, as Goeller raises an important question: do we see digital bodies as mere puppets? But beneath this question lies another, darker one. Do we see ourselves and others as puppets? Humanity in general and individuals have been—and unfortunately still are—capable of multiple atrocities, to individuals or groups of people, even to society as a whole. That's why raising questions about how we perceive digital, 3D-rendered bodies and avatars is important and can lead to further exploration, as they are the digital proxies of the bodies that surround us. The way we treat them in the digital realm says a lot about how we see and treat others outside technologically mediated environments.

Conclusions and limitations

Digital avatars, whether two- or three-dimensional, are a part of our identity online, and we have a right to use and define them in ways that represent us. While using these avatars in 3D and VR environments, we communicate to others who we are and how we want to present ourselves. These are choices we are entitled to, but this freedom becomes highly mediated by the tools available to create these re-presentations of ourselves. When someone cannot choose how to represent themselves correctly—especially if this limitation is created by a stereotypical view of the user and their social group—the right to represent yourself as you wish becomes highly political. This is important both on and offline, but as our lives are increasingly populated by screens, it becomes a political issue that the creators and actors of digital spaces have to take into consideration. The artists and artworks we have analyzed in this paper are doing exactly that: using the tools at hand to create dialogue around the idea of identity and politics, around oppression and resistance. 3D and VR have the capacity to replace reality by reproducing the conditions in which vision, in combination with the brain, informs what we believe to be the reality we navigate in our day-to-day lives. And avatars are a tool of these mediums that then inform our sense of self and the self of others. The capacity of 3D and VR to produce real feelings in the users of and visitors to online spaces and/or digital and immersive artworks can then have a real experience while in the

60 Ibid.

digital space, which means that these tools can be used to generate spaces of dialogue, education, denunciation, or care. It is important that we understand the potential of these tools for empathy, but also for oppression, something the artists we have discussed in this paper have done and continue to do through their artwork. Their work, therefore, is important for the present, as it can help others to understand and experience facets of technology and digital spaces that need to be considered from a critical perspective for a potential critical application.

This research has faced limitations caused primarily by three problems. The first is the lack of contemporary theory about 3D and VR as a phenomenon that alters the way we see the world and how we interact with it. There's a lot of literature on digital applications, mainly social media, but it's harder to find theory in the humanities about the importance of 3D and VR software. Second, it is also difficult to find information about 3D and VR art and art exhibitions in general because of the vast number of analogue and online exhibition spaces and the many artists using these mediums to express themselves, so much so that it is hard to parse through the content. Many young artists use 3D and VR as a form of expression, which is in itself political but not in the sense this paper is striving for. And the third and most important problem is the private character of most of the pieces discussed in this paper. I hope to continue expanding this research by interviewing artists and accessing more video pieces online with the permission of the artists, their gallery, or the institutions that own these pieces. With this information, I will be able to better build a data set of artists using 3D and VR as a means of artistic and political expression, and more specifically using avatars as a way to simultaneously hide and show themselves. As digitally generated art becomes more accepted in cultural institutions and of increasingly more importance, this discussion of politically implemented digital avatars will prove important in terms of education, curation, and the meditation of these artworks to the public.

References

Simone Browne, *Dark Matters: On the Surveillance of Blackness*, Durham 2015.

Guy Debord, *The Society of the Spectacle*, Detroit 1970 [Paris 1967].

Gilles Deleuze, *Cinema 1: The Movement-Image,* London 1986.

Matthew W. Campbell et al., "Computer animations stimulate contagious yawning in chimpanzees," in: *Proceedings of the Royal Society B*, 276, 2009, 4255–4259, https://doi.org/10.1098/rspb.2009.1087 (accessed November 21, 2024).

micha cárdenas, Christopher Head, Todd Margolis et al., "Becoming Dragon: a mixed reality, durational performance in Second Life," in: *Proc. SPIE 7238. The Engineering Reality of Virtual Reality 2009*, 723807 (26 January 2009), https://doi.org/10.1117/12.806260 (accessed November 21, 2024).

micha cárdenas, *Becoming Dragon,* n. d. [2008]), https://michacardenas.sites.ucsc.edu/becoming-dragon/ (accessed May 25, 2023).

José Carlos Casado, *Sacrifice,* Video Work, n. d. [2013], https://www.josecarloscasado.com/?/video/sacrificeV01/ (accessed May 10, 2023).

José Carlos Casado, Video Works, n. d., https://www.josecarloscasado.com/video (accessed: May 10, 2023).
Edward Castronova, "Theory of the Avatar," in: *SSRN Electronic Journal, CESifo Working Paper* 863, February 2003, Category 2: Public Choice, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=385103 (accessed November 21, 2024).
Collins Dictionary, "Avatar," https://www.collinsdictionary.com/dictionary/english/avatar (accessed April, 7, 2023).
Jonathan Culler, *Literary Theory: A Very Short Introduction*, Oxford 1997.
José Gil, "Paradoxical Body," in: *The Drama Review*, 50 (4), 2006, 21–35.
Anneli Goeller, *Interview* conducted by Mayte Gómez Molina, May 1, 2023.
Oliver Grau, *Virtual Art: From Illusion to Immersion*, Cambridge, Mass., 2003.
Alison Griffiths, "Sensual Vision: 3-D, Medieval Art, and the Cinematic Imaginary", in: *Film Criticism* 37/38 (3/1), 2013, 60–85 http://www.jstor.org/stable/24777977
Elizabeth Grosz, *Volatile Bodies: Towards a Corporeal Feminism*, Bloomington 1994.
Gutierrez, Martine, *China Doll Press Release*, Ryan Lee Gallery 2021, https://ryanleegallery.com/exhibitions/vr-exhibition-china-doll-rated-r/ (accessed May 15, 2023).
Mark Hansen, *New Philosophy for New Media*, Cambridge, Mass. 2004.
Jones, Amelia, *Self/Image. Technology, Representation, and the Contemporary Subject,* London 2006.
Carmen Martínez Ribera, *A Computer Animated Hand / Mano animada por ordenador,* 2015 [1972], 6:32 min https://www.youtube.com/watch?v=XdY_q_CbZK4 (accessed March 20, 2023).
Brian Massumi, *Parables for the Virtual*, Durham and London 2002.
Martina Menegon, *When You Are Close to Me, I Shiver*, Live Simulation, Installation, 2020, https://martinamenegon.xyz/when-you-are-close-to-me-I-shiver (accessed April 17, 2023).
Maurice Merleau-Ponty, *The Primacy of Perception,* Evanston, Ill., 1964.
Merleau-Ponty, Maurice, *The Visible and the Invisible,* Evanston, Ill., 1968.
Erich Mülla, *Ed Atkins—Ribbons*, 2014, Video Excerpt, January 12, 2015, https://www.youtube.com/watch?v=3EkqVWXBVOQ (accessed January 30, 2025).
Laura Mulvey, "Visual Pleasure and Narrative Cinema," in: Leo Braudy, Marshall Cohen (eds.), *Film Theory and Criticism: Introductory Readings*, 5th ed., New York and Oxford 1999, 833–844.
National Geographic, "Is that my real hand? The Rubber Hand Experiment," 2016, https://www.youtube.com/watch?v=DphlhmtGRqI (accessed February 10, 2023).
Son Nguyen, *Microcosm Miao XiaoChun,* 2014, https://www.youtube.com/watch?v=p5YFDiSFpig (accessed February 15, 2023).
Brad Pasanek, "The Mind is the Metaphor," in: http://metaphors.lib.virginia.edu/metaphors/16905 (accessed March 25, 2023).
Ana Pavia, João Dias, Daniel Sobral et al., "Learning by Feeling: Evoking Empathy with Synthetic Characters," in: *Applied Artificial Intelligence* 19 (3–4), 2004–2005, 235–266, https://www.tandfonline.com/doi/full/10.1080/08839510590910165 (accessed November 21, 2024).
Miao Xiaochun, *Restart, 2008–2010,* Public Delivery 2019, https://www.youtube.com/watch?v=bPJKcKsabhI (accessed February 15, 2023).
Serpentine Galleries, *Sondra Perry: Typhoon Coming on,* Sondra Perry interviewed by Hans Ulrich Obrist at the Serpentine Galleries, 2018, https://www.serpentinegalleries.org/whats-on/sondra-perry-typhoon-coming-on/ (accessed August 28, 2023).
Jenny Slatman, "A strange hand: On self-recognition and recognition of another," in: *Phenom Cogn Sci* 8, 2009, 321–342, https://doi.org/10.1007/s11097-009-9127-5 (accessed November 21, 2024).
Laura Snoad, "Artist Sondra Perry uses avatars and animation to challenge representations of blackness," in: *It's Nice That*, 12 March 2018, https://www.itsnicethat.com/articles/artist-sondra-perry-uses-avatars-and-animation-to-challenge-representations-of-blackness-120318 (accessed July 25, 2023).

Joel Snyder, "On Picturing Vision," in: *Critical Inquiry* 6 (3), 1980, 499–526.
Vivian Sobchack, *Carnal Thoughts: Embodiment and Moving Image Culture,* Berkely 2004.
David Summers, *Real Spaces. World Art History and the Rise of Western Modernism,* London and New York 2003.
Unreal Engine, *MetaHuman Creator: High-Fidelity Digital Humans Made Easy* | unreal engine, 2021, online at: https://www.youtube.com/watch?v=S3F1vZYpH8c (accessed May 15, 2023).
Watermill Center, *José Carlos Casado in Residence, January 15, 2014–February 3, 2014*, https://www.watermillcenter.org/jose-carlos-casado/ (accessed April 20, 2023).
Oliver Wendell Holmes, "The Stereoscope and the Stereograph," in: *The Atlantic* 3, June 1859, 738–748.
Lu Yang, "Nonsexual Humanity Takes Form as an Artist's 3D Avatar," 2017, http://luyang.asia/2017/02/15/nonsexual-humanity-takes-form-as-an-artists-3d-avatar/ (accessed April 15, 2023).