Digitally Mediated Culture: Cybernetic embodiment and memory-making in Social VR and VRchat

Introduction: Where is my digital mind?

Our world is in constant change. New technologies are rapidly emerging, following each other up and getting outdated. Today big parts of our lives and experiences have become more and more digitally mediated thanks to advancing technologies. How does this affect our body, our thinking and our memory?

This paper will discuss the importance of embodiment in digital mediated experiences regarding identity and memory formation. Following in the footsteps of Amanda Lagerkvist, this paper will use elements of her text *'Embodiments of Memory Toward an Existential Approach to the Culture of Connectivity'* (Lagerkvist, 2017) to think about digital memory studies (DMS) and embodied identity. In particular, this paper adds a cultural approach via a brief exploring case study of virtual reality and VrChat.

First this text will introduce DMS and situate phenomenological existentialism in a digitally mediated world. Therefore some remarks on the digital world or 'cyberspace' and 'hyperreality' will be discussed. This way this text will clarify the main thoughts of Lagerkvist's sociophenomenological and existential approach to DMS. In her text she focuses on embodiment and presents four 'media bodies'. By presenting an analysis of virtual reality and VrChat I want to study in depth two of these 'media bodies' via a cultural approach, namely the performative body and the device body. It will become clear that digital media shapes our way of being, our way of living, our body and our experiences, the ways we think, remember and forget. At the end of this paper we will conclude we need to think about this 'postmodern condition' with the help of cultural embodied DMS.

Digital memory studies: My first digital memory!?

To begin: what are memory studies and DMS? Memory studies is a multidisciplinary and interdisciplinary academic field that studies memory (Erll, 2011). It is a fusion of anthropology, education, literature, history, philosophy, psychology and sociology (Roediger & Wertsch, 2008), among others such as crip theory, gender studies, media studies, game studies, digital humanities, cultural studies, and so on (own addition). Memory here is seen as

an instrument or a tool for reactivating, remembering and using the past, making the past into the present (Pushkareva et al, 2019). Another useful definition actually is stated about the journal '*Memory Studies*' on their website: "*Memory Studies examines the social, cultural, cognitive, political and technological shifts affecting how, what and why individuals, groups and societies remember, and forget*" (SAGE Publications, 2022).

One can distinguish several forms of memory, such as individual, collective and cultural memory (MEMO, 2015). Without going into much detail: individual memories are often personal and private. They can be shared, but are mostly important for a person or individual to connect to the present. Collective memory refers more to how groups remember and share their past. It strengthens belonging and reawakening the past (Tessarolo, 2014). Cultural memory is a form of collective memory and refers to society and culture. It is often related to objects and practices, presented in history books, museums or as heritage. National Geographic defines cultural memory as *"the constructed understanding of the past that is passed from one generation to the next through text, oral traditions, monuments, rites, and other symbols"* (National Geographic Society, 2020).

This leads us to the question: what is a 'digital memory'? A digital memory can be understood as a memory mediated by digital technology (KULeuven, 2020). Almost everybody uses digital technology these days. Digital devices are an integral part of our daily lives. Lots of daily activity gets mediated by these digital and virtual structures. This way digital media, networks and archives reactivate and revitalize individual, social and cultural memory (Hoskins, 2018).

In her text Lagerkvist adds an existential approach to her already established sociophenomenological approach towards DMS (Lagerkvist, 2017). Simply said, she also studies the relation between digital media and memory, and does this (in this text) via embodied experience, because she relates embodiment with existentialism. Lagerkvist writes: digital media "*construct and exploit rather than merely enable connections between users*" (Lagerkvist, 2017, p. 173). In that sense, they also shape our memory. For her, the digital influences the way we perceive and experience the world. In what follows, this text will try to further clarify the significance of Lagerkvist's double approach..

The experience of the digital and the virtual: Cyberspace or hyperreality?

First of all this text will address the topic of cyberspace and hyperreality. These topics will become important when addressing virtual reality and VrChat as a case study for Lagerkvist's

approach. It is necessary to note some important aspects of the digital and virtual realm (cyberspace), and how it relates to the physical realm (hyperreality).

There is no general definition of cyberspace. Here cyberspace will refer to the digital and virtual computer world, and more specifically electronic and digital media and platforms that are used to facilitate online communication (Technopedia, 2020). Cyberspace is often confused with the internet. The main difference might be that *"the Internet is a technological artifact that one goes on , whereas cyberspace is a virtually accessible cultural space that one goes in"* (Slaughter, 2012). Simply said, the difference lies between surfing on the internet and deep-diving into cyberspace. This means cyberspace is immersive, and most importantly a social space. You can share experiences, create simulations and co-create actively. This also means it is constantly changing (Dudenaite, 2019).

An important issue is the relation between the physical world and cyberspace. The philosopher Jean Baudrillard coined the term 'hyperreality' in his work '*Simulacra and Simulation*' (1981). A simulacra is a copy or representation of something without an original, or that no longer has an original (Goldman & Papson, 2003, own variation). Simulation is the representation of the structure of a worldlike process or system over time (Banks et al, 2001, own variation). In the beginning of this work Baudrillard writes: *"Simulation is no longer that of territory, a referential being, or a substance. It is the generation by models of a real without origin or reality: a hyperreal"* (Baudrillard, 1994 [1981], p. 1). In hyperreality things get their meaning as a representation, not as what they are. Everything is a copy of a copy without an original. representations come about by a given without origin or without a 'reality' (De Sutter, 2020).

Therefore, one could say the distinction between the real and the virtual has become vague. Cyberspace and reality are converging (Bakhtiari, 2020). The virtual is turning into the real, and the real into the virtual. Both worlds are porous and influencing eachother. Cyberspace is a practical manifestation of postmodern reality, or rather hyperreality. (Introna, 1997). It creates all kinds of simulacra and simulations without referent or original (anymore): *"We are no longer exchanging the real for a reproduction, but creating a real, a "reproduction," a simulacra all by ourselves with no help from mommy, daddy, or (ultimately) God"* (Sichler, 2010, p. 49).

The construction of the hyperreality, for Baudrillard, can be seen in media simulations of reality, Disneyland (amusement parks), virtual reality games, social networking sites, and so on. What interests us most here is the media simulations of reality,

virtual reality games and social networking VR, such as VrChat. Hyperreality provides experiences more intense and interactive than banal everyday live via simulations and changes the structure of everyday life. The hyperreal is becoming more real than reality, and influences our thoughts and behaviour (Kellner, 2020).

The experience of the lifeworld: 'Meatware' in 'meatspace'

To understand the sociophenomenological position in DMS better, this text will briefly introduce some general ideas of phenomenology regarding cyberspace and hyperreality. Important here is that phenomenology is a disciplinary field in philosophy, and/or a movement in the history of philosophy, initiated by Edmund Husserl (1859–1938), and later Martin Heidegger (1889-1976) and Maurice Merleau-Ponty (1908-1961). The phenomenological discipline can be defined as the descriptive study of phenomena, or better said, structures of experience and consciousness. Important here, phenomenology does not perpetrate psychological or ideological (subjective) discourses, and does also not bring about exact scientific or objective discourses (Woodruff, 2018). It works without active-passive, subject-object, mind-body dichotomies. In our case we can add the dichotomies of real-virtual or analog-digital. With phenomenology we have the ability to think about experience, memory and consciousness from a standpoint that can overcome these distinctions in DMS.

A key term in phenomenology is 'intentionality'. Intentionality is the fact that consciousness is always consciousness of something (Husserl, 1925). In other words, intentionality has an 'aboutness' or 'directness' (Verhamme, 2016). To understand phenomenological memory, we can look into the concept of 'motoric intentionality' and the 'intentional arc'. For Merleau-Ponty motoric intentionality is the designation for a non-reducible ontological embodied relationship with the world (Merleau-Ponty, 1945). The intentional arc is a structure of motoric intentionality. Through our embodiment we are always living situated (in the present) from our factuality of the past and our possibilities in the future. The body is (also) aimed at the past, and so always creating a future for the present. It is the action of remembering (and forgetting), or in other words, the experience of turning past into future and present (Verhamme, 2017).

If we try to think of 'digital intentionality' or 'digital mediated intentionality', we can repeat consciousness is always consciousness of something, in this case of the cyberworld. We are constantly existing in relation to technology, digital media and cyberspace. An

existential part of our lives, our ontological relationship has become cybernetic and digitally mediated. More nuanced, intentionality is aimed not only at reality or cyberspace, but towards hyperreality altogether. The two are becoming inseparable. Herein also lies the importance of a digital past, present and future that needs to be nourished and acquainted with. Our digital embodiment and digital presence (being-there) is defined by our digital past (presence) by which we learn and grow over time, and we can use this digitally mediated embodied knowledge in daily life.

This brings us to the phenomenological concept of the 'life-world' (Lebenswelt, cf. Husserl). The lifeworld refers to the worlds of experiences in daily life (Behnke, 2011). Husserl describes the life-world as the (natural and cultural) world of the pre-given, familiar, present, surrounding and taken for granted world. The life-world provides a set of backgrounds or horizons for all human activity. The life-world is the foundation for all human meaning and purposive activity. Husserl's view goes against the naturalistic view, where consciousness can be approached by natural and scientific methods based on empirical facts and causal explanations (Taylor, 1999 ; Verhamme, 2016).

Cyberspace or virtual realities could be considered as lifeworlds on their own to investigate. Hardesty remarks: *"Phenomenologists have not seriously considered the possibility that in our experiences of the everyday life-world, we could encounter a boundary on whose other side lies another life-world that we could inhabit"* (Hardesty, 2019, p. 368) Husserl, among many other phenomenologists, assumed that there was only one 'universal life-world a priori', that forms the precondition for all our actions. It is the continuously created communal background structure for experience and consciousness, in which all our actions take place. Cyberspace and hyperreality show we can live in many life-worlds or universes. The plurality or multiplicity of life-worlds in cyberspace or VR, for example VrChat indicates universal structures are still there for each life-world, but it does not suffice to put all experience together on the basis of one life-world (Hardesty, 2019). Different forms of digital media technology and re-embodiment can create new conditions of existence, new intentionalities and new lifeworlds. This is obviously visible in virtual reality and gaming industries.

Techno-existentialism: Being-digitally-in-the-world

This part wants to clarify the importance of the additional existential approach in Lagerkvist thinking. Existential philosophy for her relates to phenomenological embodiment.

Existentialism does not deny the validity of physics, biology, psychology and other sciences, but claims that people cannot completely be understood in such terms. For existentialist thinkers my essence is my existence, and vice versa. This means that a full description of who I am would be infinite. It means that my life consists of possibilities, which are not fixed. My life cannot be confined to a checklist of goals, properties or characteristics. In the case of cyberspace or virtual reality, new conditions and possibilities arise for another existence, embodiment and/or lifeworld. By exploring cyberspace and VR we can discover experience and consciousness that open up new ways of possible being. In what follows I will explore the meaning of 'being-digitally-in-and-to-the-world'.

To do this I want to refer to philosopher Martin Heidegger and his work '*Being and Time*' ('*Sein und Zeit*', 1927), because being for Heidegger is most importantly 'being-there' (Dasein). Being is always being somewhere.[1] Therefore, Dasein is also 'being-situated'. I could not choose the place I grew up in. I could not decide my gender or the structure of my body. I could not choose the world I'm thrown into. Being-there is being-in-and-to-the-world (In-der-Welt-sein). In general, this means I'm always already a body, with others (Mitt-sein), in a shared world (Welt), with a background in a horizon of existence and temporality ('being-to-death', Sein-Tum-Dode). Important here for now, is that Heidegger and other existentialists such as Merleau-Ponty, will say that experience always shows itself as a direct connection with the world (Heidegger, 1927; Merleau-Ponty, 1945). This connection refers to a direction, a location and a (possessive) relation. It means that we can be part of the world, but also have relations to things in the world, which makes us different from it (Baeyens, 2004).

If we look back on Lagerkvist, we find she refers to 'digitally-being-there' or 'being-in-and-with-the-digital-world' (Lagerkvist, 2017). All the ways of being mentioned above can be reconsidered in digital mediated hyperreality or virtual reality. In cyberspace being-situated means choosing wherever you want to be, as whatever you want to be, even a dragon (Sier, 2017). There is no fixed body, world or situatedness any longer. Being-to-death is no longer a confrontation with your own mortality or temporality, but instead an exploration of immortal beings with experiences. You can start over life differently. Being-with-others has become adjustable, you can even select what type of other people you can come across (public, private, friends).

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[1] This connects with the concept of intentionality of Husserl discussed earlier. Consciousness is always consciousness of something.

Cyberspace has the potential to make users live up to their possibilities and be free from constraint, solving problems with gender and race (Wertheim, 1999), or with disabilities or age (own addition). Intersectionalist freedom and experiments are important factors in virtual communities, for example on Discord and VrChat. Most servers are free in the sense that they are created as safe spaces. Most social VR is meant to be inclusive and protective. On the other side there are still problems with privacy, anonymity or responsibility (Dudenaite, 2019). For this reason communities and Vrchat have strict settings and rules to follow. One example is that it is forbidden to use mods from outside the platform. Yet, still it is a common practice and accepted as long as security for specific threats is guaranteed. (virtual rape, avatar and identy theft, obscenity, intrusion, profile hacking…).

Being a furry rainbow unicorn: Cybernetic ontology and digital embodiment

So far we have generally discussed the importance of sociophenomenology and existentialism, next up is embodiment. In what follows, this text will build upon the notion of embodiment by Merleau-Ponty to understand Lagerkvist position on the importance for DMS.

Merleau-Ponty explores the relation between consciousness and the world through embodiment. He puts 'being-in-and-to-the-world' as well as motoric intentionality central in his thinking. This way he wants to replace the concepts of consciousness, memory, body and world by speaking about the body-subject (*corps-sujet*). This being is a third conceptualisation, next to being a body as pure object, and a person as pure immaterial subject. Just like Husserl, Merleau-Ponty makes a distinction between the physical or material corpse (Korper) and the phenomenological body (Leib). The phenomenological body is never a discrete or complete physical object that can appear before itself. Corpse refers to a physical body that is completely objectified. For Husserl, the body is a centrum of experience, a point zero for orientation. Perception, self-perception and kinesthesia (consciousness in movement), are key terms on how we interact with the world and other embodied beings in a shared world (Husserl, 1931; Verhamme, 2016).

Another key term is the 'body scheme' (merleau-Ponty, 1945). The body scheme is a necessary aspect of embodiment to understand how we can use, change and extend our body: how we can drive a car, how we can dance, how we can see through glasses, how we can use a smartphone, and how we get immersed in new virtual worlds. It is a motoric unity that makes the body malleable. The scheme makes it so that you don't have to think where your

hand is in relation to your body and the space you are in. This way you can effortlessly grab a glass of water from the table in front of you. you don't have to think about every seperate part of your body before doing so (Merleau-Ponty, 1945).

In the body scheme lies the 'I can' (merleau-Ponty, 1945). It embodies knowledge or self-referential intentionality of the senses and limbs towards my environment. This gives me the possibilities to interact with my surroundings and the world. The psychophysical body scheme gets an existential dimension by Merleau-Ponty. The body is always aimed at its environment and is embedded in the world - in the sense that it always (partly) coincides with that world. if you play guitar for example, your body coincides with or inhabits the instrument. Your fingers knows where the strings and notes are before you have to think explicitly. Thinking to hard would make it more difficult and get you 'out of the zone'. This shows one is always standing in relation towards things and the world via the body scheme, which is not only mental. Through embodiment I have a form of knowledge of which I am not directly conscious. This way we can extend the body scheme and or phenomenological or virtual body. Think of the extension of the body by prosthesis to counter lost limbs and phantom pain (Merleau-Ponty, 1945; Murray & Sixsmith, 1999).

The body scheme forms a key element to understand embodied experience in cyberspace of hyperreality. It makes us understand how we can be 'digitally-in-and-to-the-world' and can be 'digitally-there'. Digital mediation happens first of all through the body. The physical body can connect to cyberspace and hyperreality via the phenomenological body and embodiment (Bailey, 2016). Here we can also understand how we can interact with virtual worlds and get acquainted with these spatial environments and learn to interact with the objects in it. If you jump off a ledge in virtual reality, even without jumping in the real world, you will have a falling sensation in your body without any device creating it. Another example is drawing in virtual reality. You can grab a pencil that has no physical referent in the real world. You grab in thin air, but still have the sensation you are holding the pencil. While drawing you can get aware of the spatial dimensions of your virtual space and draw around your virtual body, giving you a more immersive feeling.

There are different gradations of immersion and embodied experience. Depending on what setup and what devices one uses to immerse into cyberspace and virtual reality, different aspects of the body scheme or phenomenological body get activated and developed. The devices can go from desktop setup with computer, screen, keyboard and mouse, to full body tracking with multiple cameras, a headset, a haptic suit and high end PC. Embodiment never completely coincides with the physical body, and that is obvious in VR. But, this creates

possibilities for new forms of embodiment, disembodiment, and re-embodiment. VR shows a big part of our embodied experience can be digitally mediated. In virtual reality players often use virtual avatars which have trans- and posthuman, even cyborg features. These avatars can see and be seen, feel, hear, interact, touch, dance and give thrilling embodied and even erotic experiences. These digitally mediated embodied experiences extend and open up new possibilities for the body scheme to explore by virtual technologies. in cyberspace or hyperreality. Virtual reality shows the body is able to suspend disbelief of other worlds and emerge itself in other lifeworlds. Even if we know virtual reality is a simulation, we agree for our body to inhabit that world as if it is real (Walton, 1980).

A body of bodies: The four media bodies of Lagerkvist

Now that we have the stage set, we can properly explore and understand media bodies discussed in the embodied sociophenomenological approach of Lagerkvist. Earlier we stated that the body is the main gateway to sensorial immersion in cyberspace or VR (Murray & Sixsmith, 1999; Bailey, 2016). Earlier this text also indicated we do not live in one lifeworld (anymore), but multiple (Hardesty, 2019). A similar point can be made for the body. We are a body of bodies. Embodied experience consists of different forms of embodiment. Lagerkvist writes: *"Inspired by this insight, I propose that we consider a plurality of embodied modes of being human in the digital memory ecology"* (Lagerkvist, 2017, p. 179).

   Lagerkvist describes four media bodies which unfold for media memory studies: the performative body, the device body, the body as implicated, and the body as implied. While enmeshed, these forms or instantiations of mediated embodiment constitute and structure experience and consciousness in the digital world of cyberspace or hyperreality. These bodies are topics for further research (of digital memory), and important for 'being-digitally-in-and-to-the-world'. In what follows the performative body and device body will be explained and illustrated via social VR and Vrchat.

   It is important to note that most of the following information about Vrchat is collected through participatory observation and 'face-to-face' conversations in Vrchat and outside of it in the real world with other users. At the moment I'm working on a different text about a sociophenomenological and existential approach to identity and community building in VRChat, specifically about virtual rave culture. To do this I'm planning multiple sociological in depth interviews in Vrchat, as well as participating and observing events from desktop,

with or without headset, and with and without full body tracking. Here I already use some of that unpublished information to gain insight in cultural topics for further exploration.

With this small anecdote I quickly want to address the major role of sociology for phenomenological research. To obtain descriptive material about the experience of the virtual world and cyberspace we need qualitative and quantitative research to present descriptive data, for example through interviews, observation, participation and other methodologies.

Digital embodied social media: Welcome to VRChat!

First this text will quickly introduce some general elements of VRChat. VRChat is a free-to-play immersive virtual reality social platform that allows users to interact with other 3D characters, or avatars and different (virtual) worlds. Plus there is a lot of other content, from players and developers, available on other platforms, for example Discord, Twitch, Youtube, etc. VRChat was launched in 2017 by Graham Gaylor and Jesse Joudrey. Since then VRChat has become widely spread in the gaming world. This VR social platform relies heavily on user-generated content (VRChat, 2021).

The basic concept is that you wear a headset with controllers. This way you are immersed into another world. Via different forms of body tracking and gadgets this immersion can be enhanced. Some features of VRChat include: avatars with lip sync, eye tracking, and a complete range of motion/full body tracking, 3D spatialized audio, chat, collaborate, draw, sculpt, or watch videos, play games, watch movies, go to concerts or parties, erotic roleplay, discover and create your own customized avatars, worlds, and games. *"VRChat quite literally opens up a whole new world of possibilities. You can co-create, share, and play with your friends in virtual realities you build together from anywhere in the world"* (Poetker, 2019).

Performative body and avatars in VRChat

The performative body refers to a form of embodiment that is performative and digitally mediated. The meaning of performative here can refer to the capability of performing actions. The performative body has influence in a virtual world, but the virtual worlds also interact with the performative body. This structure of embodiment relates strongly to 'being-in-and-to-the-world'. It gives you the sense of 'being-there'. Via the performative body, motoric intentionality is woven into the virtual environment. This way the performative

body animates our being and creates capabilities in digital environments. it is knotted into virtual reality through the body scheme, which can extend to this new environment.

An interesting example of a digitally mediated performative body is an avatar (lagerkvist, 2017). Simply said it is a graphical representation of a user or a persona, but it is also a performative second body sensorially immersed in virtual environments. Today digital environments, especially gaming environments, are providing sensory immersions in different ways. Think of headsets such as Oculus Quest, 360° live audio immersion concerts, full-body tracking and haptic suits. Many possibilities are emerging: therapeutic uses, VR immersion in museums, virtual tours or concerts, Metaverse even wants to integrate VR into your home and work. This results in different possibilities of performativity.

In Vrchat your avatar can move. When walking or moving you have what Husserl coined 'kinesthetic sensations' (Husserl, 1931). You have the feeling that your body is in movement. For Husserl consciousness is always consciousness in movement. Your movements, kinesthetic sensations and walking speed affect your thinking (Solnit, 2002). Moving in VR might even change your movement and walking speed in real life (Reinhard et al, 2020). This again gives insight into how we immerse into virtual worlds through the virtual embodiment.

In Vrchat you can be anything you like. You can choose multiple avatars and configure them accordingly. There exist trends, where a majority of the players for example choose anime girls or, more recently, furries (furry animals). These trends seem to explore visual effects, including light traces or soft fur-like textures to interact with. People go as personalizing size, facial expressions, hand gestures, lip synching, eye-tracking, body dynamics, and of course genitals. It is sometimes all about how creative you can get. Modulations are endless, yet some are restricted.

Other performative elements are the posting of emoji's, gestures and effects. Just like on other social platforms you can post emoticons, with the difference that in VR they are 3D and often have more animation-like features. With your virtual body you can also generate flashy light effects and sound effects. VRchat has a built-in function to restrict the visibility of these, as some players apparently hop from world to world to make them crash by stacking lots of visual effects on top of each other ('World Crashers').

Sensory overload is an interesting topic (cf. Baudrillard). Virtual reality and VRChat are built to work onto our senses. As we indicated implicitly, the senses form a holistic structure where sense is built in the interaction between the modalities such as taste, touch, sight, smell and hearing. Also proprioception, sense of hot and cold, and other features could

be added to this list. Embodied sense originates, for Merleau-Ponty, in the shift of consciousness between the senses. The senses empower and substitute each other. In VRChat it is clear that proprioceptive, audiovisual, self referential and tactile sensations are presented intensively. An extreme example is virtual rave culture in VRChat: here you will see the craziest modded avatars, beautiful virtual stages, futuristic beats, and environments with lots of interactive elements and visually stunning effects. The richness of sensory stimuli can have a positive effect on the depth of the immersion. World Crashers reverse this idea to a point where embodied and digital systems overload.

Another important aspect of the performative body relates to identity and memory. In his work Ulrike Schultze questions how embodied identity is performed in virtual worlds. He contrasts representationalism with performativity. He states: *"In our current technology landscape, people's digital self presentations are so enmeshed with their physically embodied selves, that online and offline identities can no longer be separated by who is on and who is in front of the computer screen"* (Schultze, 2014, p. 94). Earlier he says: *"Identities are thus the effect rather than the source of people's identity performances [Hickey-Moody & Wood, 2008]. it are our* [digital embodied] *performances that form our* [digital embodied] *identity. Rather than seeing identity performances are conscious, willed and staged, performativity regards them as the unconscious enactments of mundane, everyday practices…"* (Schultze, 2014, p. 86, *own addition*). Performative identity refers to a subject that is produced through material and discursive practices. In the case of the avatar in VRChat, we can also add digital mediated practices to the concept of identity.

Interesting here for embodied identity, are bodily integrity and topics such as cloning and avatar identity theft. Embodied identity comes with a sense of 'self' and security. This means to be protected. There have been issues of 'virtual abuse', 'virtual rape' or 'virtual murder' of avatars (Wolfendale, 2007). In VRChat there are very strict social rules and community members look after each other to make sure these are followed accordingly, so that violence and aggression have their appropriate place in the virtual world. When playing VRChat you might come across communities living up to destructive pervert ideologies, yet often these members are kicked out of the related communities and have to resort to other, more private, platforms or servers. Another interesting issue we stumbled upon, was the idea of playing with another person's avatar, in this case the avatar of a friend. This could create a very uncanny feeling seeing me play his or her persona.

With the digital persona, there is also the issue of avatar cloning and identity theft. A player of VRChat showed a particular case, where his models of Blender and Unity (the

software used to create your own avatars and worlds) were stripped and put online for sale on other platforms (Fiverr). Similar cases have been reported (Lake, 2020). His avatar, which had cost him money and time to build, was stolen by another user. The cloning per se is not the problem. One can ask for permission to clone an avatar, and there is even a built-in VRChat feature to clone a friend's or stranger's avatar. The violation here lies in the lack of agreement of both parties. In VRChat you always need permission from the other player to use their avatar. A user whose sole purpose is to spot interesting custom-built avatars and hack into the data-files to sell them, invades the embodied and digital integrity, the identity of an individual. The risk here lies in that the performative body and individuality would be reduced to a bunch of information and our lives could be doomed to an endless technical reproduction without any original existence (cf. Baudrillard). Our digital memory and identity could dissolve in an endless stream of information.

A last point I want to address shortly in relation to embodied identity and memory is about long term engagement with your avatars. In VRChat there are many aspects to make you feel more immersed and embodied through your avatar. A special case is the use of mirrors. In almost all of the worlds there are mirrors that can be turned on and adjusted, so you can watch yourself and others while being close together. They seem very popular and players almost always put them on during conversations or activities. It seems the mirrors are there to strengthen the embodied and immersive feeling or connection with your avatar in the long term. With it come 'selfie-machines'. This is just as important. Almost everything is photographed and screenshotted during a night out, so you can share it with other friends and communities on different social platforms later. It takes a while to get used to taking selfies in VR, but screenshots are an important thing to talk about, remember, share or connect between users.

The work of Oyanagi researches the effect of long-term use of an avatar in social VR, and specifically VRchat. He is mostly interested in what he calls the ' illusion of virtual body ownership' (IVBO). This refers to having the embodied sense to coincide and perform with your avatar. In his qualitative research it is stated that the daily use of an avatar in social vr enhances the sense of embodiment (Oyanagi et al, 2020). He let fourteen people play in Vrchat with a pre-made avatar for at least 30 days for 2h/day. His results show a correlation between the number of days and the intensity of IVBO. This improvement effect of IVBO was found regardless of the avatar's appearance. He also came to the result that (pre-made) avatar-identification could not be correlated with the number of days (Oyanagi et al, 2021). Concluding with Oyanagi, we can say that an avatar gives us a positive effect in terms of

sense of immersion, psychological effect, body ownership, and spatial awareness (Oyanagi et al, 2020).

b) Check my gear: A body of devices

The second aspect of digitally mediated embodiment this text wants to discuss, is the device body. This body is a carrier of media devices and hence of our personal archives of data, such as text, music, images. It is a body that enables connectivity; think of connections with devices as smartware, such as watches, phones, televisions and laptops, but also archives of images or our social networking service accounts and their timelines and feeds) or lifelogging devices, means of self-quantification, body worn cameras, or other wearables such as smartwatches. The device body thus carries around a number of different registering applications and tracking devices (for instance, health apps and fitness and activity trackers). Here, devices that enable or fire our personal digital archive fever are both mobile and thoroughly environmental. In addition, this body is an enabler of connectivity (Lagerkvist, 2017).

The device body is thematized in talks between users and players. A main topic that also relates to this is what I would call 'gear-talk'. You talk about the best gear and tech in the domain of your hobby. In this case users talk and discuss their equipment and gears to connect to and in VRchat. The model of processors, graphic cards, glasses, body tracking, router, and so on. The device body is the embodiment of devices and through digital media. It is implicit in the sense that it is an automated way of interacting with your gear and setup. An interesting moment when this flux is broken is when an error shows up, for example glitches, freezes or crashes. The phenomenology of experiencing errors with digital software and digital hardware would be too broad to investigate here, but a lot of examples can be thought of and would be very interesting.

Making hardware and software a part or extension of my actual body through the body scheme is essential here. At a certain point I do not have to think about my actions with devices anymore. The usage of VR gear has to blend in with the body as smoothly as possible, so that the body would forget it is connected with and through them with a digital world, and in the case of VRchat a digital or virtual avatar for better immersion. In other words, the device body is the cyborg body. the experience of not only being a body of flesh and bones, but also of metal and plastic, of digital cybernetic devices.

VRChat can be played with or without VR equipment. You can play VRChat on your desktop computer with a mouse, keyboard and audio-headset. You can play with Oculus quest or even with other supported VR systems. This can be a virtual headset with two controllers, but also a full-body tracking suit with sensors, cameras and bass stations, or even more, such as haptic gloves, walk pads, and so on. All of these make up for different digitally mediated embodied experiences. In VRChat you carry a kind of smartwatch with a hologram to navigate through the universe and configure certains aspects of your experience. In the beginning you have to learn to get used to it. This is also part of your device body. With the hand controllers you can make hand gestures. These devices also have to be integrated in your embodied experience, and so on..

A final interesting aspect of the device body in VRChat is 'the grid'. It is a grid you draw out before starting your deep-dive into VR. It shows you how far you can walk in real space, before hitting the walls of your room. This way you can also map your couch or bed for sitting or laying down in VR. In the beginning you really have to get used to where the grid is. If you go past it, a blue gritted field pops up and turns more red where you cross it. After playing a couple of times the grid gets integrated in your body, and you have an orientation in the room without actively having to think about it. It gives you almost perfect spatial awareness or your own virtual body and room. The device body facilitates the performative body into immersion. We can only expect advancing technologies regarding VR equipment that will broaden experience and immersion. One last thing to note is that the device body is growing in number of devices and growing in complexity. Interaction between devices and digital media will become of greater importance. We will connect Facebook with Instagram, Youtube, Spotify, Goodreads, VRChat, Discord, Whatsapp, Reddit, smartphones, laptops, smartwatches, controllers, body tracking, tablets, and so on.

Conclusion: Many bodies, many worlds, many memes.

In this text I clarified the embodied existential sociophenomenological approach of Amanda Lagerkvist towards digital memory studies. It tried to think about how our embodied memory is influenced by digital mediation, cyberspace and hyperreality. At the same time I briefly illustrated this approach via a cultural study of VRChat. First this text introduced cyberspace and hyperreality to show we have entered a posthuman era. Next I situated phenomenology, existentialism and embodied philosophy. I discussed motoric intentionality and 'digitally-being-there'. In the next step this text used the concepts of 'intentional arc',

'body-subject' and 'body scheme' to understand more about embodiment and immersion. Lagerkvist discusses four media bodies: the performative body, the device body, the implicated body, and the implying body. In this text I discussed two of these media bodies, namely the performative body and the device body. The implied and implicated body can be just as interesting forms of digitally mediated embodiment to analyze, but here I choose not to do that (yet). Virtual reality and VRChat are great examples to study new forms of digitally mediated embodiment and new virtual lifeworlds as well, and to think about digital memory and identity. How will we remember and be remembered through our devices and performances? What will be forgotten and what not? Here we will have to put concepts of phenomenology and existentialism to the test via sociological research.

So there are more bodies to explore. This text tried to explore some topics more in depth that were mentioned in Lagerkvist's text. There is too much to tackle for now. For example, in this text I did not explore the implicated and implied body. The implicated body is a form of digital mediated embodiment that could relate to our body image and how we are and want to be presented or identify ourselves online and offline. It is how we as embodied beings get represented visually and virally in the digital world, cyberworld or virtual reality. 'Implicated' refers to how we are perceived by and involved with others. The implicated body is vulnerable in the sense that it can be graphically and digitally recorded and be subject to trolling, cyberbullying, revenge porn and other forms of shaming (Lagerkvist, 2017). VrChat has made many rules and features to protect and regulate their communities and platform, which deserve further research into these topics.

The same applies for the implied body. Almost everyone online leaves a digitally mediated embodied signature(s). Whatever you do in the digital world or cyberspace can leave a trace. We know we are distributed across digital systems. There exists an indirect, ephemeral, almost ghostly sense of fractured presence and embodiment of yourself online. Today vague digital and virtual connections are interwoven with our embodied existence; we should question the status of our digital data traces and our incapability to gain a hold on them. We simultaneously know that they exist, that they are present, yet we do not know where. The implied body is invisible and more indirectly engaged, but it is nonetheless somewhere: there are traces of "digital me" out there. In an unclear sense I am somewhere (else). This vague knowledge makes room for vulnerabilities, insecurities and abuse ((Lagerkvist, 2017). VRChat is an interesting example that tries to be open and implement structures to prevent vulnerability, insecurity and abuse by moderating this info on different levels. Again, further research is needed.

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