

Virtual Rave Culture

Embodiment, identity and community in the virtual music scene of VRChat

Verhamme Jenske (student)

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Supervisor: Dr. Rutgeerts Jonas
Co-supervisor: Decraene Ewout
Mentor: Vandendriessche Jan

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ABSTRACT

This text studies virtual rave culture on the basis of three questions relating to where, what and why of virtual raves. In chapter one this text shows how raves can be accessed. This focus lays on hardware, software and wetware. Material and technological preconditions, the workings of VRC and Discord, as well as virtual reality (internet, cyberspace, hyperreality and metaverse) are discussed. This text therefore focuses on the digital communities in Discord and the social settings of VRC. Important for virtual raves, especially in VRC, is that all worlds, venues and avatars are self-made and self-regulated. In chapter two this text shows virtual raves are and how they are experienced. First a short development of VR and VRC is presented. In a second part virtual raves are studied in a comparative (semiotic) analysis. Thirdly, this text presents my experiences of a virtual rave and the experience of other people in the virtual rave scene. In chapter three this text looks at the cultural meaning of virtual raves from the perspective of embodiment and identity formation. This way this text focuses on embodiment, identity formation and community building in the virtual rave scene of VRC.

(208 words)

Virtual Rave Culture: embodiment, identity and community in the virtual music scene VR-chat.

“Was it Laurie Anderson who said that VR would never look real until they learned how to put some dirt in it?”
(William Gibson, 2012)

Introduction: The party is going virtual?

Have you ever been to a ‘dirty’ rave in virtual reality (VR)? One will need the right equipment, some knowledge about VR and social connections too. Leading-edge technology digitally mediates our experiences, but one needs to know how to connect with it and how to use it. This text wants to analyze social VR and virtual raves, focusing on embodiment, community building and digitally mediated identity formation. This text hopes to lay some stepping stones for further research into the cultural phenomenon of club culture in virtual reality and virtual rave culture.

Therefore this text will introduce specific research questions and propose a thesis statement. In chapter one this text will discuss the preconditions to partake in virtual raves and the working of digital communities. Chapter two will discuss what virtual raves are and how they are experienced. Chapter three will look at embodiment and identity. VRChat (VRC) will be used as an example throughout.

State of the field: Collective ‘meta-madness’ for virtual reality?

Virtual reality industries (VRI) are rapidly growing and becoming more relevant since the recent pandemic. Global spendings are skyrocketing (Vardomatski, 2021). Numbers of users are growing every day (Alsop, 2022). This emerging trend also shows the rise of interest for different new VR platforms such as Horizon Worlds, Altspace, Rec Room, VRChat and so on. With the rise of these platforms new immersive VR technologies come along, for example the Meta/Oculus Quest 2 headset. This headset consists of VR-glasses with controllers for both hands and is one of the most used headsets by the public nowadays. IDC estimates that ‘13,24 million units of AR and VR headsets are to be shipped to customers worldwide in 2022’ (Statista, 2022). Not only new headsets, but also new full body tracking systems, treadmills, haptic suits, gloves and many other technologies develop quickly and find their way to the public (Thrillseeker, 2021). Especially important is the development of new applications and functions for VR. The possibilities of VR seem infinite. VR-platforms are not only used for gaming, but also for social activities, work, therapy, education, art, simulations, and entertainment. In a not so distant future, VR technologies might become an integral part of our lives, just as it came to be with other forms of technology and digital media, for example the internet, your laptop or smartphone.

Research questions: digital matrix of where, what, why

This text will try to answer three main questions within the specific case study of VRC:

1) Where are virtual raves taking place? How to find and access them? How can we find and access the emerging virtual club/rave culture in VRC? How can we access them externally and from within digital communities?

2) What are virtual raves about? How do they take place? How can one understand (embodied and digital) experiences as virtual ravers?

3) Why are virtual raves socially and culturally interesting and/or important? How do virtual ravers and communities form their (virtual) identities and how do they build their (virtual) communities in relation to these experiences? How does this compare with real-life club and rave culture?

Statement: The community of virtual club life is here to stay!

This dissertation suggests that virtual rave culture is an interesting developing domain for research, because of the growing number of users and growing importance of VR-technologies and intermediality in daily life. These questions can help us gain insight in today's trends and directions humanity might be heading towards. With the arrival of metaverses we might be entering a posthuman era. Relations between the real world and the virtual world might become more important.

Therefore this text will show that virtual raves do not seem to (only) aim to replace real-world raves, but aim to go beyond or to do something different. Idem dito for the virtual raver: he/she doesn't want to replace a real life music concert per se, but wants to freely experiment with new creative forms of (music) experience. Therefore this research will present a variety of different experiences, expressions, behaviors, activities regarding VR, social VR, VRC and the virtual rave scene in relation to real-life raving.

Methodologies: how do we collect (qualitative) data about virtual raves?

Through observation, participatory observation and digital ethnography, virtual raves and ravers are investigated. In a series of steps I got initiated into the setup needed to go to a virtual rave. After understanding the preconditions for VRChat, discord, VR and virtual raves, I participated in virtual events and virtual raves myself and became part of several communities in the last year. Here I got to speak with multiple VR users and ravers. Technological limitations and the niche virtual rave scene made it difficult to present (semi-) structured interviews of these talks. In the attachment one can find one short, one medium and one long interview with virtual ravers. Ravers were found via snowball effect in VRC or via Discord communities. One community I followed in particular is Virtual Relics. It is a server on Discord connected to VRChat for (young) adults in Europe to meet up to hang out in VRC, mostly to talk, watch movies or go to parties. At the moment the selection list consists of discord servers or communities extending to: VRchat Party Hub, Virtual Relics, Club Reality, Club 808, Club

Poseidon, Rizumu Dance Community, DanceDanceVR. Each of these groups consists of between 250-2000 members, and numbers are increasing rapidly.

Approach: garden of wares

In this text a cultural studies approach is implemented. Within participatory observation and digital ethnography of VRC, this text will focus on popular VR technologies (hardware) in relation to the body, software design and application of VRC, the creation of communities and networks, and cultural identities in VRC's rave culture. In the words of Nayar:

“(...) “approaches” to cybercultures: ethnographies of cyberspace would include a study of software design and their applications at the user end, the creation of online communities and networks, popular cultural forms of such technologies, the cultural identities that emerge in the new techospace, and the political economy of cyberculture.” (Nayar, 2010, p. 173)

We can also look at virtual rave culture as a form of cyberculture. This means virtual rave culture in VRC can be studied as an expression between three factors, namely hardware, software and wetware.

“A cultural studies approach would address questions of agence, power and identity. This book’s use of a cultural studies approach means that it treats cyberculture as an articulation between three crucial elements or actors: hardware (the machines, computers, cable networks), software (programs), and wetware (humans), where all three are deeply embedded in the social and historical contexts of the technology, and therefore also other “elements” or factors such as gender, race, symbolic and cultural forms, economy, politics, and identity. The book proposes that it is not possible to see cybercultures as simple ICT’s without reference to questions of power, identity, ideology and culture.” (Nayar, 2010, p. 174)

Hardware, software and wetware are connected to social and historical background conditions in which technologies and digital mediation developed. These factors are related to gender, race, symbolic and cultural forms, as well as identity. Virtual raves therefore are connected to issues of power, ideology and culture. Cybercultures are not simple information and communication technologies, but refer to things that happen in relation to society.

1. FROM MEATSPACE TO VIRTUAL RAVE COMMUNITIES

“You could draw a picture on the screen with the lightpen - and then file the picture away in the ... memory... magnify and shrink the picture to a spectacular degree... Sketchpad... allow room for human vagueness and judgment... You could rearrange till you got what you wanted.... A new way of working and seeing was possible. The techniques of the computer screen are general and applicable to everything – but only if you can adapt your mind to thinking in terms of computer screens.“ (Nelson, 1977, 120-23, as quoted in Shields, 1996, p. 80)

Today big parts of our lives and experiences have become more digitally mediated due to advancing technologies. These technologies can be difficult to access and hard to learn or understand. Therefore, this chapter will show how to enter virtual raves and how the virtual rave community of VRC works. Referring to the quote above: we have to think in a certain way and act or ‘adapt’ accordingly. Important to note is that this chapter will not look into depth at what virtual raves are (yet).

1.1 Hardware: Materials and Technological Preconditions for a ‘deepdive’

“(...) that cybercultures and virtual worlds have a *material* dimension. The “hardware” of virtual worlds and digital games is made of bodies, cities, concrete, cables, sentiments, workspace, and labor that are subject to the dynamics of race, class, gender, economic inequalities, governance, and injustice.” (Nayar, 2010, p. 173)

Simply said, virtual raves are similar to real-life raves, but take place in virtual reality instead of in a real club. Instead of going to a real-life club, one puts on a headset and logs into a virtual club. Here one can dance, talk and do most of what one would do at a ‘normal’ rave. Nevertheless, VR is founded on a material basis of hardware that we tend to forget. In what follows, this text discusses the material setups that were used for this study.

Four setups for VRC: digital mediated experience

Material setup(s) should be analyzed for methodological reasons, as these material setups form an extension of our body through which we perceive the (virtual) world in different modes.

The first setup consists of a computer that runs VRC in ‘*desktop mode*’. ‘Desktop mode’ means that one can play VRC on a computer with a display without VR equipment. Of course, this setup has limitations. One cannot have the (full) experience of VR as no VR-technologies are used. On the positive side, VR technology is not necessary to participate. One can still move, talk and do some minimal actions. One can still enjoy the experiences of others. This setup might be interesting to observe and have talks with people who are experiencing VR from a non-VR user perspective.

A second setup consists of a head-mounted display (HMD), in this case VR-glasses and two handheld controllers. I use the Meta/Oculus Quest 2 (Meta, 2022). This setup can be used as a ‘*standalone*’ system. Nothing but the headset and internet is needed to play VRC. Limitations of this setup are that the headset alone is not that powerful as a computational

device. This is noticeable, because VRC has many apps, worlds and avatars not accessible in desktop mode or standalone mode. In this setup one is able to move their head, shoulders, arms, hands and upper body while they are tracked by the headset and controllers.

A third setup consists of a computer connected to the headset and controllers. This is called ‘PC-VR’. To solve the problem mentioned above, one can use this setup. A (wireless) connection between headset and pc can be established with the applications such as ‘virtual desktop’ (VD). This way one can play and operate their computer with a headset and controllers and run VR-simulations that are sent to the headset and controllers (Virtual Desktop, 2021). This extra computational power can make up a smoother, more immersive experience.

The fourth setup consists of a headset with two hand controllers, a PC and ‘*full-body tracking*’. My system consists of three Vive motion sensors (trackers), three cameras and two Valve base stations. Motion trackers are technological devices that connect real objects and the virtual experience. In that way they can capture full-body movement with pinpoint accuracy (HTC, 2021). In this case I use one for the middle of the waist, one for the left ankle and one for the right ankle. Base stations power the presence and immersion of room-scale virtual reality by helping the headset and controllers track their exact locations (Valve, 2022). They send lasers through the room that gets intercepted by the tracked devices to figure out their location. With full body tracking, one is able to move their avatar in sync with their physical body in real time: move their legs and arms, jump and dance (VRChat, 2021). There are many forms of body-tracking and all kinds of new technologies being developed to enhance immersion such as haptic suits and omnidirectional treadmills (Thrillseeker, 2022). All these features contribute to a different form of our physical and mental embedment into VE’s and VR. In the images below, you can see an example of this setting.

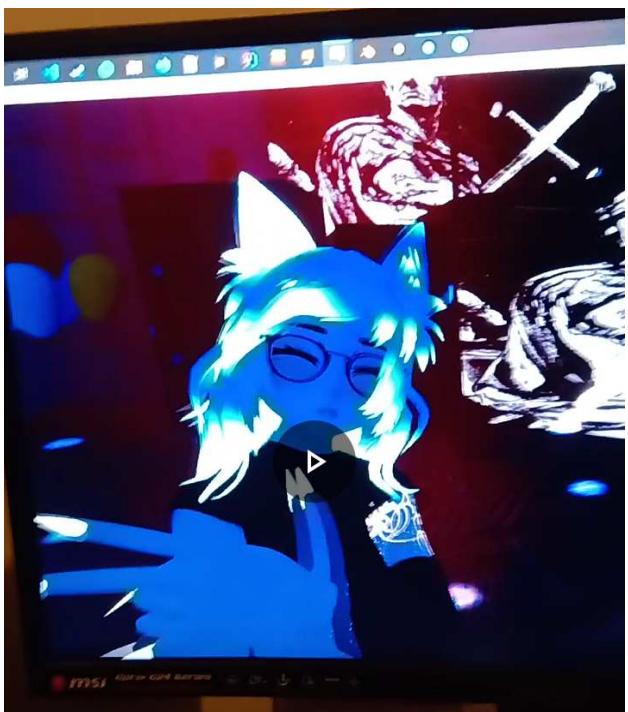
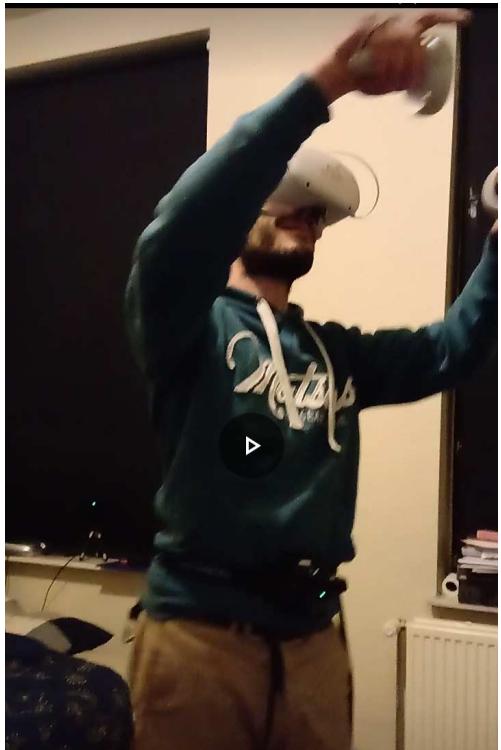


Image 1-3. Image top: player wearing headset, controllers & body tracking (trackers around waist and legs), image middle: view from second player watching player one perform, image bottom: 1st person view of player one through the headset (own source).

Entering virtual space

After having looked at hardware, it is time to set up and launch VRC. On the computer one can use an internet browser to visit the website of VRC to make an account and log in via browser.¹ One can scroll from the VRC homepage through some worlds and start their journey, mediated by mouse, keyboard and display. On a headset one navigates differently. After booting up the headset, one will first have to choose their playing modus. These modes can be static or dynamic and are linked to respectively stationary VR and '*room-scale VR*'. Stationary VR experiences are experiences where the player navigates across the VE using a joystick or other controller for input to move. One can not walk or move in the real world in this modus, because one will immediately cross the borders of the (virtual) playspace and the headset will stop showing the VE. The Quest 2 does this by showing one an infrared real-time image of the worlds through cameras that are installed on the outside of the device. In contrast, '*room-scale*' VR stands for VR experiences that can be experienced from home within a small room with some open space and a headset. A dynamic playspace can be defined by the user itself: A boundary is set up by marking the edges of their physical room via the headset, where one can move freely in real life. With some experience and features one can also map out their chair or bed (Liu, 2022).

After defining a playspace, one first enters in a virtual environment (VE) from Oculus/Meta that serves as a kind of homepage or homeworld. The Oculus starting screen is an intermediate zone, where you can navigate to different menus and features of Oculus/Meta. From here one can browse on the internet and use social network applications (Facebook, Instagram...) to make video calls, watch movies, or check out what friends are doing and join them. One can find the application of VRC in the app store. After downloading and booting up VRC, one will land in the homeworld of VRC.

1.2 Software: The magical maze of VRChat and Discord!

“When Hiro goes into the Metaverse and looks down the Street and sees buildings and electric signs stretching off into the darkness, disappearing over the curve of the globe, he is actually staring at the graphic representations -- the user interfaces -- of a myriad different pieces of software that have been engineered by major corporations. In order to place these things on the Street, they have had to get approval from the Global Multimedia Protocol Group (...)” (Stephenson, 1992)

So far, this text has mainly covered the material and technological conditions to enter VRC and the virtual rave scene. Next this text will give an introduction to the use of the software or programs used, such as VRC and Discord.

Welcome to VRC!

VRC is a free-to-play immersive VR social platform that allows users to interact with others in the form of 3D characters (avatars) in different virtual worlds (VRChat, 2022). The platform relies heavily on user-generated content and community-based. There is also a lot of content

¹VRChat login screen: <https://vrchat.com/home/login>

available on other platforms about VRC, for example Discord, Twitch, Youtube, Fiverr, Etsy, and so on. It was launched in 2014 and became really popular since its release on Steam in 2017 (Valve, 2022). The central idea is to be immersed into other (virtual) worlds. Some features of VRChat include avatars with lip sync, eye tracking, and a complete range of full body tracking, 3D spatialized audio, chat, customizable avatars, worlds, and games. By interacting with a display menu on the arm of one's avatar, one can change avatars, worlds, safety and social settings, and so on. One can go to clubs, check out different worlds and storylines, play games, hang out and talk with some people, watch movies, paint, play music and so on. Interesting to note is that a world is not necessarily limited to one instance. There can be more instances of the same world at the same time, and each of these might contain a different party.

Note here that VRC raves are organized by communities and users for communities and users. The platform is built bottom-up, transparent and horizontal by its users. There is no structure where industries monopolize the organization of this platform or these events. VRC might be quite unique in this as there are several other examples where virtual clubs and raves get commercialized and are not free. Every virtual rave venue states rules and remarks at their entrances. Via social control people look after each other and rude players are reported and removed from the world instance. During raves moderators, hosts and stewards of the community itself make sure everybody can have a good time. The established members often take the time to chat with almost everyone and keep a general overview of who attends parties more often. Before 2017, the scene was not that big, meaning lots of users know each other through the years (Steam, 2022).

In VRC one can find a diverse public of users. Within communities of VRC and the virtual rave scene there is much focus on social inclusion: race, gender, age or ability are often discussed. For example there are significant groups of users that are transgender and queer. Also notable is that around a fifth of players are women (Reddit, 2021). This can be exceptional in game culture as it is still often seen as an activity of mostly men. The low social threshold of VRC also makes it interesting for people with social anxiety.

Next to the community regulations, VRC users can adjust their social safety settings in the portable menu. There is a trust rank system that is exclusively of VRC. Users can be divided into visitors, new users, users, known users and trusted users, that can be achieved by being active and sharing/creating content in VRC. For each of these trust ranks a user can choose to adjust or block voice, avatar, audio, light & particles, shaders and custom animations. Many users block the features of visitors, users and new users automatically, and re-adjust manually, when more personal trust is gained. One could do this to block intimidating or irritating users, prevent game or event crashers from ruining the experience, or lessen intensity of computer processing (VRChat, 2021).

Discord: communication of communities

Another central aspect of VRC is the use and convergence with Discord. Discord is one of the indispensable platforms to find virtual raves and connect with the virtual rave scene. Discord is a digital platform to talk over voice, video, and text. This way one can talk, chat, hang out, and stay close with their friends and communities on certain topics. As a text-based

communication platform it is similar to Facebook Messenger, Whatsapp, Snapchat, and so on. Next to this, Discord is also a voice-chat and/or video chat. A lot of VRC players use Discord to communicate, add players as new contacts or friends, and to find groups or communities who share events, such as virtual raves in VRC. Participation is free. Users determine themselves with who they communicate and what kind of experiences they want on Discord. There is no algorithm that determines what one sees.

The structure of Discord is divided into so-called *servers*, *channels* and *threads* (Benet, 2020). Servers can refer to groups of people. They can be public, meaning accessible to everyone. They can also be private, meaning for specific groups (friends). In those cases, one can only enter with an invitation. In servers one can distinguish two categories of channels: text-based channels and voice channels. Text-based channels can be used to place messages, upload documents and images. Other members can check and react to these messages any time they like. Voice channels are used to talk to each other via voice or video chat, and share their screen to ‘go live’. However, the contents of channels are not just text or voice. One can use text channels to share their favorite music videos, share photos, or upload files and documents (Discord, 2021).

Each server is dedicated to a certain person, group, game(s) or topic(s), for example a virtual rave club in VRC or a group of people who like to go to raves in VRC. Channels also have dedicated functions and are often categorized into subdivisions and groups. This can be combinations of voice and text channels. One can find servers that are only about VR, or more specific VRC, or even more specific virtual clubs and rave events in VRC, and even more specific about one virtual rave community or one virtual rave venue. Special kinds of servers exist, for example ‘*aggregators*’. Here all servers and channels on a certain topic get unified in one ‘meta-server’, often with the help of bots. An example regarding virtual rave culture might be VRchat Party Hub. This is a server on Discord that actively scouts other servers on Discord with the help of bots and API. This way the server combines all kinds of VRC party related servers, channels and events into one overview of lists to check out and participate in. At the moment there are more than a hundred virtual clubs, venues and communities connected in VRChat Party Hub.²

Here one can refer to social ethics and social safety net of digital communities in Discord: for every server one joins, there are rules one has to accept. Via social control communities supervise what is said and what players do within communities with the help of moderators. There are different functions that members can have in servers to regulate the community in Discord and VRC. One can be a clubber, but others can be moderators, hosts, DJ’s and so on. These differ from group to group and are created by the community itself. If one looks at the example of Discord server Club Poseidon, that focuses on virtual raves and parties, one can see an extensive structure of roles and number of users: owner (1), co-owners (1), admin managers (2), dance sector leaders (2), sector leaders (9), Discord admins (1), dance captains (5) event managers (2), amazing Poseidon hosts (8), life guards (5), Poseidon superstars (3), poseidon all stars (11), the juicy jellyfish (11), bubble butts (9), steamy sea turtles (10), go-go dancers (41), atlantis media (9), Poseidon's legends (1), Poseidon associate's (18), super VIP (5), VIP (31), creatives & artists (21), happy birthday, Atlantean clubbers (1276), and

² Partyhub, <https://discord.gg/S8BXsdq7tg>

online bots (15).³ In smaller Discord servers such as Virtual Relics the community is structured in a simple way: moderators (3), greeters (1) and online players (394).⁴ These and many other communities focus on social inclusion and try to create digital safe spaces. Everybody (with good intent) is welcome to join. Again this creates diverse communities that discuss and transcend topics of racism, gender, age, abilities, social anxiety, and so on.

1.3 Cyberworld: Digitally mediated minds and technosocial preconditions of VRC

Now that this text has discussed hardware and software, this text can address philosophical aspects regarding human beings (wetware) in the digital and social world of virtual rave culture. Therefore this text will briefly explore Web 3.0, cyberspace and the metaverse. Crucial here will be the relationship between the real and VR.

Internet is changing: Web 3.0 and the boundaries between the physical and virtual world

The development of the internet must have been one of the biggest digital and technological turns for humankind. With the change of the World Wide Web, one may also see a change in one's ways of thinking and acting in relation to technological, digital and virtual worlds.

Web 1.0 dates roughly to the period from 1991 to 2004, where most sites consisted of static pages. They were not changeable and almost nothing could be added by the user. It was considered '*read-only*' (Ethereum, 2022). The internet and its content was consumed rather than produced by the users and there was almost no interaction between users. Graphic content and digital space was very limited (Madhurkant, 2022). The era of Web 2.0 dates from approximately 2004 until today. Web 2.0 puts user-generated content and interaction central and also defined as the '*participative and social*' web (Wikipedia, 2022). It is dynamic or defined as '*read-and-write*' (Ethereum, 2022). Users define the content on the web and increase its interactive character. User-created content can be uploaded to forums, social media platforms and networking services (Facebook, Instagram, Twitter...).

Web 3.0 is still evolving and being defined. It may be referred to as a '*read-write-execute*' (Maxwell, 2010) or '*read-write-own*' web (Ethereum, 2022). With Web 3.0, computers can interpret information like humans via machine learning and artificial intelligence. Web 3.0 is also supported by new layers of technological innovation, such as blockchain (cryptocurrency and NFT's), decentralized peer-to-peer data networks, virtual reality (metaverse), semantic web and artificial intelligence (Ibeawuchi, 2022). Web 3.0 and its content is based on user-ownership for content creators. Data storage is distributed across the users. The audience consists of interconnected users across multiple platforms and devices.

One of the key web 3.0 features of VRC and the virtual rave scene is the possibility and use of visualization technologies to create VE's. VR and the metaverse are basically a (part of a) new form of internet. As stated in the quote below, this might blur the boundary between the physical and virtual worlds. Web 3.0 structures our daily lives and makes a new level of immersion possible.

³ Club Poseidon, <https://discord.gg/XBB822xyAV>

⁴ Virtual Relics, <https://discord.gg/virtualrelics>

“Web 3.0 can also be referred to as a spatial web, as it aims to weave together the physical and virtual world by revolutionizing graphics technology in the form of immersive three-dimensional (3D) graphics. The 3D graphics feature of Web 3.0 brings about a new level of immersion into the virtual world, as it blurs the boundary between the physical and virtual worlds. Its applications can be seen in gaming, e-commerce, real estate, health, and many more areas.” (Ibeawuchi, 2022)

Cyberspace and hyperreality

“(….) Cyberspace. A consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts (...) A graphic representation of data abstracted from banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights, receding (...)” (Gibson, 1984)

When one goes to a virtual rave, one in virtual reality. VR can be understood as cyberspace, or part of it. The concept was first introduced by William Gibson in *Neuromancer* (1984). For Gibson it meant something as a digital or virtual realm that could be a collective hallucination, a graphic representation of data, lines of light that create meaning in the mind (Gibson, 1984). It might be considered as a non-physical place or ‘*nonspace*’. Another definition of cyberspace can refer to the digital and virtual computer world, and in particular to electronic or digital media platforms that are used for online communication and activity (Technopedia, 2020).

It is useful to compare cyberspace and the internet. An interesting difference could 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). The difference, one might say, lies between ‘surfing’ on the internet and ‘deep diving’ into cyberspace or virtual reality. Cyberspace is immersive, and most importantly a social space. The Internet is a place one goes on. There is no immersion and interaction with a simulated world (Verhamme, 2022).

Cyberspace is constantly changing and this might be one of the reasons why it is so hard to define what cyberspace is exactly. It is a digital space with a changing set of technological and social relations. As new technologies, software and applications develop, cyberspace changes too. This means that as cyberspace changes under influence of the real world, virtual rave culture and the scene might also change accordingly. To investigate this relation further, this text shall investigate the term ‘*hyperreality*’, coined by the philosopher Jean Baudrillard in his work ‘*Simulacra and Simulation*’ (1981). He describes the convergence of the virtual and the real as the ‘*hyperreal*’. In hyperreality things get their meaning as a representation, not as what they are. Representations come about by a given without origin or without a ‘*reality*’. For Baudrillard: “*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 the virtual era “*we are no longer exchanging the real for a reproduction, but creating a real, a “reproduction,” a simulacra (...)*” (Sichler, 2010, p. 49).

Hyperreality is more and more visible in daily life. VR, VRC and virtual raves are only several of the ways that hyperreality is manifesting. The construction of hyperreality can be seen in media simulations of reality with explicit examples such as the news, Disneyland (amusement parks), virtual reality games, social networking sites, and so on. Hyperreality

provides experiences more intense and interactive than banal everyday life via simulations and therefore might change the structure of everyday life (Verhamme, 2022).

Cyberculture: A daily dose of VR and metaverse

“In the lingo, this imaginary place is known as the Metaverse. Hiro spends a lot of time in the Metaverse. It beats the shit out of the U-Stor-It.” (Stephenson, 1992)

VR and the metaverse are connected. Virtual reality can be defined as “*a simulated 3D environment that enables users to explore and interact with a virtual surrounding in a way that approximates reality, as it is perceived through the users' sense*” (Sheldon, 2022). Neal Stephenson coined the term ‘metaverse’ in his 1992 novel *Snow Crash*, where it referred to a 3D virtual world inhabited by programmable avatars of real people. Today, a metaverse can be considered as a network of 3D virtual worlds focused on social connection (Breia, 2022). Examples of VR metaverses can be found in Fortnite⁵, Roblox⁶, Minecraft⁷, Decentraland⁸, Voxels⁹ (Ethereum), Axie Infinity¹⁰, NVIDIA Omniverse¹¹, Sandbox¹², OpenSea¹³, Second Life¹⁴ or VRC. The metaverse could become a successor to the internet.

One could describe four phases in the possible development of the metaverse (Centieiro, 2021). We are currently in stage one with the modern-day VR technology that allows for a relatively immersive experience in a virtual world with just a headset and two hand controllers. VR today can only influence senses such as our sight, hearing and limited forms of touch. In stage two the mass market will have access to affordable haptic bodysuits and omnidirectional treadmills. These new applications will explore full-body movements and sense of touch and reach deeper immersion. Stage three is called ‘Advanced VR’, referring to neurotechnology that can send signals directly to the brain to fully replicate VE’s without needing any sort of external user interface. Stage three will provide full immersion, and it will be hard to distinguish between ‘real life’ and the Metaverse. The Metaverse will be part of our daily activities. In the fourth phase the Metaverse and real world becomes totally indistinguishable. We enter a new type of civilization.

1.4 Are we there yet? Wetware: human fabric of VRC and virtual raves

“(… all sparks and tastes and tangles, all its stimulus/response patterns – the whole bio-cybernetic software of mind.” (Rucker, 1988)

⁵ Fortnite: <https://www.epicgames.com/fortnite/en-US/home>

⁶ Roblox: <https://www.roblox.com/>

⁷ Minecraft: <https://www.minecraft.net/en-us>

⁸ Decentraland: <https://decentraland.org/>

⁹ Voxels: <https://www voxels.com/>

¹⁰ Axie Infinity: <https://axieinfinity.com/>

¹¹ Nvidia Omniverse: <https://developer.nvidia.com/nvidia-omniverse-platform>

¹² Sandbox: <https://sandboxvr.com/>

¹³ Open Sea: <https://opensea.io/>

¹⁴ Second Life: <https://secondlife.com/>

Now that this text will look at the human factor (wetware). To find a virtual rave, one needs to find the right people or communities.

What is the ‘real’ deal with reaching raves?

First this text wants to describe the search of a rave in the physical world. To find a rave in real life, one could use the snowball effect and ask person-to-person until one finds someone who knows more or find a planned event via friends or social media. Eventually one has to prepare oneself and go to the location, and come back home. This might be by foot, bike, bus, train..., but it will take some time. In comparison to club events, raves are often under the radar. One needs the exact location, which is often not publicly accessible and/or illegal. Often GPS coordinates are shared between friends and friends of friends to keep strangers and authorities away.

An example might be going to a rave in Brussels (Belgium):

“After preparing myself at home (take a shower, choose clothes and put on some make up) I walked half an hour to the station of Leuven and took a train to Brussels. After a half an hour ride, I arrived and met my friends at the station. After waiting for everyone, we went to the Warandepark to watch a concert of jazz band Azmari. After the concert we continued our journey a bit further in the park until the bar closed around 1 AM. We wanted to continue the evening and were looking for a rave in Brussels. We started talking to everyone to find a rave nearby. We got to know of the existence of a rave under a little bridge in a small forest outside the center, but had no idea of the location itself or how to get there. We gave up after a while and went to the center of Brussels to continue our night. We had missed the last train home already and had to wait for the next one around 6 AM. We found some club parties, but these were not the kind of parties we were looking for. Eventually we text our contacts who live in Brussels for more information or a place to stay. Eventually we met with one of our other friends who happened to be on a date with a girl from Brussels. She knows the coordinates and we go together. It was a one hour walk to Schaerbeek, a part of Brussels outside the center. We entered a little forest and could hear some electronic music playing in the distance. In the darkness we came across several other people who clearly looked like ravers. They looked young, exhausted, sweaty and intoxicated. Eventually we ended up at a small tunnel or viaduct in the forest. At one end of it a van was parked backwards with the backdoors open. In it was a soundsystem with a DJ booth. A DJ was blasting a mix of underground genres and around 50-100 people were dancing and raving. We had made it. The rave was here. It was a smoky, damp dark dungeon full of people dancing to niche electronic music. We danced, talked and chilled until around 7 or 8 AM. The sun was already high up. We had to walk back one hour to the station. We took the train back with four of us. One friend also had the company of a girl. I was home around 11 AM.” (own source, 2022)

Virtual escapades

In VR raves are found differently. One option could be to check on the internet via search engines such as Google for some events or Discord servers. One can for example also check Youtube, Discord, Twitch, Steam or Reddit to contact or follow certain people or groups. If one looks for virtual raves on the internet, one immediately finds lists with some places to start. Google searches lead to Discord servers Rizumu¹⁵ and DancedanceVR¹⁶ (DDVR) as well as some

¹⁵ Club Rizumu: <https://www.rizumu.club/>

¹⁶ DanceDanceVR: ddvr.club

clubs in VRC with the name ‘Loner’¹⁷ and ‘Shelter’¹⁸. After looking into the matter and questioning some members of the communities I found on Reddit, Discord and VRC, I’ve ended up with a list of some well-known worlds and venues (Lolastrasz, 2021). Another overview of virtual club or rave events can be found on VRCC.events.¹⁹

The best way to look for a virtual rave is to look for posts on a Discord channel in a Discord server and directly contact a host or a DJ. A standardized rule is that one’s name on Discord matches the one on VRC to find each other easily. Before or during the event one sends an invite to the hosts and/or to the DJ. When they are in the instantiated world where the rave is going on, one will be able to join their world or ask them for permission to join. This works very well, because the social settings of VRC allow one to see where another person is hanging out in VRC and that person can adjust their settings to allow one actively or passively to join their world. In this sense, venues are also moderated and regulated by hosts and the community. After a while, one has a ‘friends’-list full of hosts and DJ’s, which one can try to join whenever they are at an event. In the picture below one sees a Discord invitation. In the picture one can see emoticon use, the original poster (OP), several hosts and DJ’s with a timetable and some rules. The links to the hosts make it possible to send them a friend request to join the party later. Each DJ has a different host.

¹⁷ Club Loner: loneronline.com

¹⁸ Club Shelter: <https://sheltervr.club/>

¹⁹ VRCC: <https://vrcc.events/>

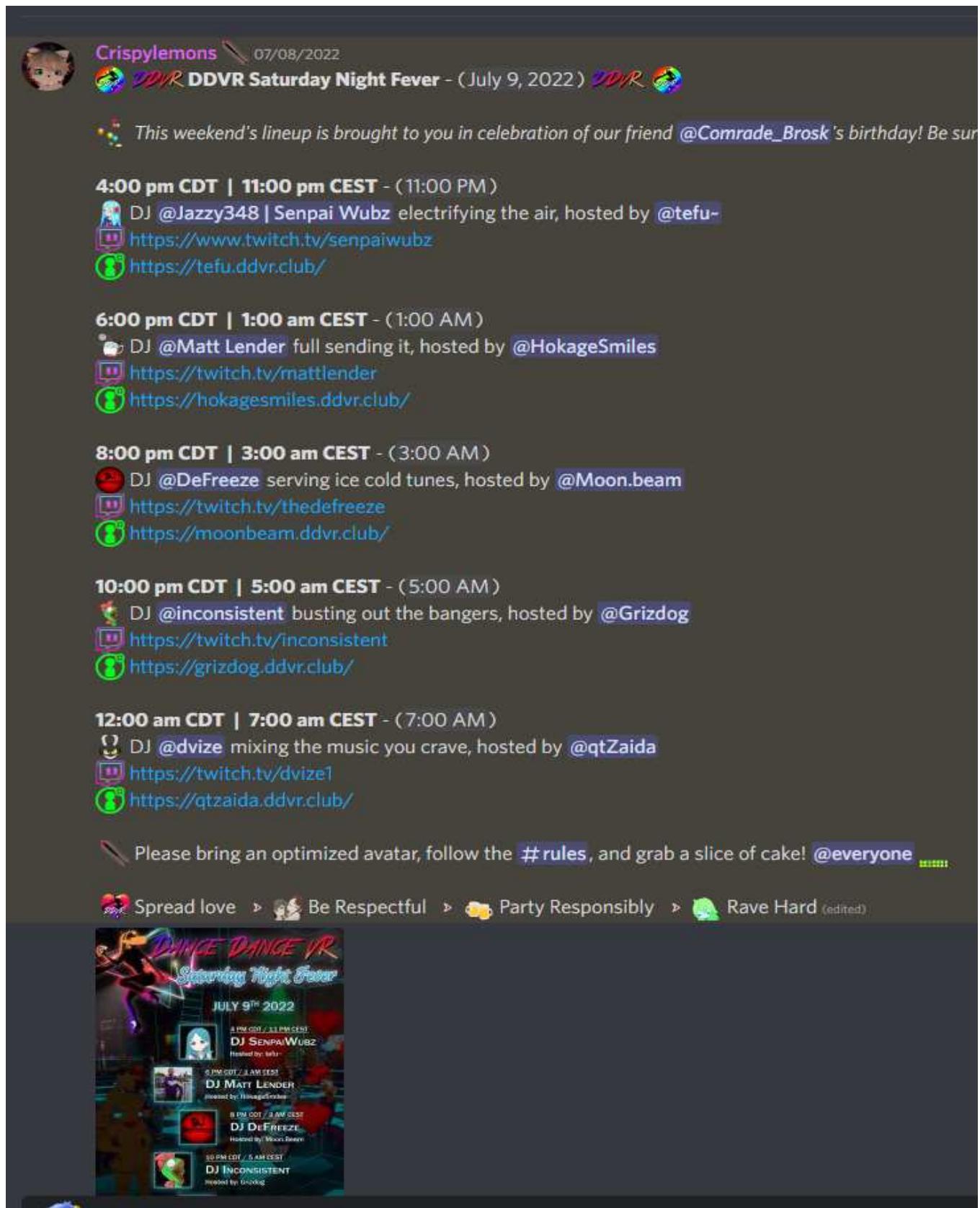


Image 4. Showcase of a notification in Discord for a virtual rave (own source).

Houston? We have a virtual problem!

Finally, this text wants to address problems reaching a virtual rave. First one needs to be able to play fluently enough. One needs some experience in VR and VRC. Otherwise this will show at parties. One cannot be standing on the dancefloor and not know what to do with their controllers or how to move properly. If one stands there struggling with the menu and interfaces, or communicating, people will ask one to go away from the venue, and give others a chance to enjoy the show.

Another related threshold for new players in the virtual rave scene might be the player trust rank system, exclusive to VRC. Virtual raves are not always open to everyone: sometimes one needs a certain trust rank to get in. This means that if one is a new inexperienced player, one might be seen as an untrustworthy player. Trust is earned through spending time on the platform, adding friends, uploading content (avatars, worlds), and having users experience their content. There are four standard trust ranks. Visitor (first twelve hours), user, known user and trusted user (highest rank). Other ranks refer to special members of VRC. Another interesting category is the '*nuisance*'. These players have received multiple strikes or reports from the community and are often silenced or given a blank avatar (VRChat, 2021).

Another issue is the use of an appropriate avatar for virtual raves. Next to the trust ranking system, there is also an avatar performance ranking system in VRC. This shows how much a user's avatar is affecting system performance of their computation devices via analysis of the components on an avatar. It informs users what can be optimized for their avatar. In this system avatars can be rated very poor, poor, medium, good and excellent quality on the basis of different criteria (VRChat, 2022). Often virtual raves do not accept the entrance of very poor avatars. They might take too much computing capacity and/or do not look or perform well.

This connects to an issue related to the need for PC-VR. Almost all virtual raves in VRC demand for PC-VR, because it would otherwise be impossible to render lots of detailed avatars, worlds and features. A standalone headset such as an Oculus Quest 2 is not enough and will not get you into most parties or raves. A final problem is the limited number of people that can enter a virtual rave. In general parties in VRC are run between 20-50 people, but bigger ones with 80 people or more exist. Main events or instances can get full fast. When that happens, the event organizer can instantiate a couple of new instances, where people listen and watch a live stream of that performance in another instance of that world. These instances are often called '*overflow*' worlds (Strazfilms, 2021).

2. FROM CAVES TO VIRTUAL RAVES

“... a few months will pass and a shy early twenties socially anxious neat will turn into a dancer with an e-girl behind him running her fingers through his hair. That's me or was me. Also a furry will become your friend and you'll be blown away by the swag avatars they make.” (anonymous, in Strazfilms, 2021)

In this chapter this text wants to address the question of what virtual raves are today. This chapter will do so by looking at the developments, meaning and experience of virtual raves.

2.1 Musicking much: From gig to virtual rave

What the rave?

A rave is essentially a form of a dance party. Typically it is associated with big sound systems and electronic dance music (EDM) which diversifies in a lot of different styles and genres such as techno, house, industrial, psychtrance, and so on. Often raves are also associated with secret, illegal or underground settings and connected to drug use. Raves also seem eccentric places, because they are often accompanied by special lights, lasers, settings and fog machines. The number of participants can vary, but is often limited to around 50-150 people. Raves can consist of more people, for example at commercialized festivals such as Space Safari²⁰ (Belgium) or Tomorrowland²¹, but these are mostly not the standard for regular ravers and are discussable. Another characteristic of raves is that they often start late at night and go on until early in the morning or noon of the next day.

A rave is not essentially a thing, object or substance, but mainly an activity or practice. To sustain our cultural studies approach this text shall define virtual rave culture as a form of cultural practice. In the words of one of the founders of cultural studies Raymond Williams, one can define culture as a '*way of life*':

“There are three general categories in the definition of culture. There is, first, the ‘ideal’, in which culture is a state or process of human perfection, in terms of certain absolute or universal values. (...) Then, second, there is the ‘documentary’, in which culture is the body of intellectual and imaginative work, in which, in a detailed way, human thought and experience are variously recorded. (...) Finally, third, there is the ‘social’ definition of culture, in which culture is a description of a particular way of life, which expresses certain meanings and values not only in art and learning but also in institutions and ordinary behavior. The analysis of culture, from such a definition, is the clarification of the meanings and values implicit and explicit in a particular way of life, a particular culture. (...) but will also include analysis of elements in the way of life that to followers of the other definitions are not ‘culture’ at all: the organization of production, the structure of the family, the structure of institutions which express or govern social relationships, the characteristic forms through which members of the society communicate (...)” (Williams, 1961, pp. 57-58)

One should maybe not say ‘a rave’, but ‘a raving’ or ‘raving’. Therefore, this text will elaborate by explaining the term ‘musicking’. Raving could be seen as a form of ‘musicking’ as ethnomusicologist Christopher Small indicates that dancing is integrally part of making music

²⁰ Space Safari: <https://space-safari.com/>

²¹ Tomorrowland: <https://www.tomorrowland.com/home/>

or '*musicking*' (Small, 1998). Interesting to note is that all kinds of experiences are taken into account as part of musicking. In a similar way one could consider that (virtual) raving is much more than dancing to music and partying. It is a cluster of cultural and communal practices.

"To music is to take part, in any capacity, in a musical performance, whether by performing, by listening, by rehearsing or practicing, by providing material for performance (what is called composing), or by dancing. We might at times even extend its meaning to what the person is doing who takes the tickets at the door or the hefty men who shift the piano and the drums or the roadies who set up the instruments and carry out the sound checks or the cleaners who clean up after everyone else has gone. They, too, are all contributing to the nature of the event that is a musical performance." (Small, 1998, p. 9)

Developments of music formats and the experience for the listener and performer

Raves are only one of many forms of musical and cultural practices. Music, music performances and musical experiences have been changing through the ages. Live performance by a couple of musicians with or without acoustic instruments is often inseparable from dancing. This could be in a concert hall, a café, a church, in the street, on a city square or in a private house. Over the ages people have performed together and played together in all kinds of ways. These events can be considered as people playing at a shared time and physical place, a 'here' and 'now'. There were no electronic amplifiers, only acoustic amplification such as architecture (churches, amphitheater). There was a specific and direct connection between the listener(s) and performer(s).

As musical instruments developed and changed over time electronic instruments were invented and standardized. Sounds could be produced, amplified and recorded by metal wires, magnetic properties and electricity from the start of the 20th century. This led to electronic instruments such as synthesizers, electric guitars, and so on. In this period the first popular samples and remixes were made of songs and sounds. This also formed a major influence for new kinds of music and new cultural forms such as hip hop, EDM, techno, house, etc. This resulted in new forms of musical performances and experiences from concerts to club parties and raves. The sounds one hears are synthetically produced by machines, instead of acoustically. There is a technological mediation between what one is hearing and what is being played. Different experiences and formats can be perceived listening to recorded digital media as well, for example between studio and live recordings or listening live to the radio. People often do not listen at the same place and time anymore.

A third form of music performance and experiences might be found in 360 degree concerts, hologram concerts and VR music concerts. In 360 degree audio events, one can watch the concert through camera's and rotate 360 degrees to look in all directions. The camera is often fixed/static in first person view. A person cannot move or choose only fixed locations. These events can be live streamed or recorded. In a hologram concert one sees a digital image of the artist. The artist is not there at the moment one is watching or does not exist as a physical entity. In VR concerts one can perform for an audience that is not present physically, but digitally mediated through avatars. Musicians can use real-life instruments and track their

movements with full body tracking on an avatar. This way a virtual audience can see the movements of the musicians in real-time.

History of VR and virtual raves

VR today is a very recent development and its history knows several stages. VR was first coined in 1935 by Stanley Weinbaum in a fictional story ‘Pygmalion Spectacles’. It introduced a device that allows one to escape reality into a simulated environment with a pair of goggles, leaving their body on earth. Later, in the 1960's the first VR HMD was presented for flight simulations. In 1980 the company VPL was known as the first company to make and sell both functioning VR HMDs as well as tracked gloves known as the data glove and the headset was called the iPhone. The 1980's are also interesting because NASA presented a headset helmet as a virtual workstation. This is also the period where gaming company Atari started their Atari VR research lab. In the early 1990's Sega, Nintendo and other arcade companies announced that they started working on their own VR devices. There is no interaction between players yet and players cannot create their own content. Nevertheless, it is the first time that VR comes onto the consumer market, but their technologies failed as they were not interactive and the tracking caused motion sickness (Thrillseeker, 2020).

Hibernation set in for VR during the 1990's and 2000's. Gaming culture changed: people did not meet at gaming halls or arcades anymore. With the internet, people could connect from a distance and play together in a different way. Social networking games and massive multi online role playing games (MMORPG) are becoming mainstream and popular. It was not until after 2008 that VR got more attention again. A key developer for the future of VR was Palmer Luckey. He was able to solve distortion problems of lenses with the use of software. Together with game developer John Carmack, he launched a kickstarter for the Oculus Rift. Valve and Oculus started working together at this time. This collaboration went through until the end of 2014, the same time that Facebook bought Oculus. In 2014 VRC was launched and the first virtual raves in VRC could take place. Valve and HTC started a new partnership shortly after. To give an idea of the size of the VR community back then: in 2015 Facebook and Oculus sold around 100 000-150 000 headsets (DK1, DK2) that year. Aside from these also the Valve 5 headset was available at the time (Thrillseeker, 2020).

The year 2016 is important as VR hits the consumer market successfully and the hardware race has fully started. In this year SteamVR releases on gaming platform Steam (from Valve). In this period one also starts finding VR related content on Youtube, Twitch, Reddit and other platforms. One sees new developments such as Sony VR, a new Oculus Rift, and so on. Vive trackers were released and the first affordable full-body tracking experiences became possible. In 2017 VRC was launched through Steam PC-VR. Virtual raving in VRC really begins. In 2019 almost everybody has seen or started trying VR in the gaming scene. That year the standalone headset Oculus Quest was presented. Valve and HTC break partnership and will focus each on their own devices. In 2020 Oculus Quest 2 launches. In 2021 Facebook becomes Meta (Poetker, 2019).

Recent social VR and music productions

Since the revival of VR around 2016 a lot of different interesting VR productions have been developed. More and more one sees mixtures between videogame structures and social VR apps. A main example is again VRC. In 2017 it (re)launched via Steam and gained massive popularity among the SteamVR community. It is particularly interesting for a unique rave scene. Another is Zenit MMO.²² The platform was released in 2021. It also supports desktop play just like VRC. In these worlds one plays as an anime hero and develops their character along the way. It is an open and player-driven world. Another one is Rec Room.²³ Rec Room is also free, and is accessible on every device from phones to VR headsets. You and other players create and play games. Another social VR platform to mention is Horizons Worlds. Horizon Worlds (formerly Facebook Horizon) is a free online VR game with an integrated game creation system. Another interesting platform is Altspace.²⁴ AltspaceVR is a social VR platform that was founded in 2013. The platform largely consists of user-generated spaces or worlds, which can be visited by other users. Live virtual events are frequently held, where individuals can gather, talk, collaborate, and be co-present with others.

Recent virtual raves scenes in VRC

Next it might be interesting to highlight some interesting virtual raves of the virtual rave scene in VRC. Examples of other interesting VR music concerts could be in Fortnite, WaveXR²⁵ or Lost Horizons Festival²⁶. Examples of festivals could be Slyfest²⁷, Muzzfest²⁸, and Porter Robinson Secret Sky Festival²⁹. Examples of venues in VRC could be Rizumu, DanceDance VR, Shelter, Ghost Club³⁰ and Loner.

Sly Fest is a three-day VR festival that originated in 2020 during the global pandemic. While real concerts and festivals were canceled, the founder Sly searched for a new, more immersive way to bring the experience online. In 2020, over 40 incredible DJs performed for the event. Each day lasted for more than 10 hours. After the show concluded, there were over 8,000 attendees total in-game and over 8,000 who streamed online on Twitch. The festival is also going on in 2022. Muzzfest is a virtual festival that focuses on drum and bass genres. The founder Muzz is almost full time active in VR. He organizes these parties, which he teases with AR games to know location time, who to friends, which avatar themes, audiolink, animations, and so on. In 2022 Muzzfest will take place in collaboration with Rebuff Reality. Rebuff Reality offers an array of high-performance VR accessories and peripherals built to the highest standards of quality and design, such as power banks and track straps. (porters robinson secret sky festival).

²² Zenit MMO: <https://zenithmmo.com/>

²³ Rec Room: <https://recroom.com/>

²⁴ Altspace: <https://altvr.com/>

²⁵ WaveXR: <https://wavexr.com/>

²⁶ Lost Horizon: <https://www.losthorizonfestival.com/>

²⁷ Slyfest: <https://www.slyfest.com/>

²⁸ Muzzfest: <https://www.slyfest.com/copy-of-home>

²⁹ Porter Robinson Secret Sky Festival: <https://secondskyfest.com/>

³⁰ Ghost Club: <https://xn--pckjp4dudxftf.xn--tckwe/>

Shelter is a fully interactive and immersive virtual nightclub that's run through VRCHAT. Shelter is a musical venue within VRChat started by Kye and 2Tone. Since its formation at the beginning of 2021, it has garnered a large and dedicated following. Loner is a collaborative club event of Zeal and Laces, looking to bring alternative styles of electronic music to VRC. Their events are well known in the music scene and their bi-monthly events always attract a lot of people. Loner features DJ's and producers from both the IRL and VRChat scenes. Rizumu is an online virtual club in VRChat that organizes events on a weekly basis. On their website it states that Rizumu was founded by a group of VRChat players who shared a love for EDM rave culture and wanted to create a fresh, immersive virtual dance scene focused on dancing. They also state that they want to minimize the fixation on drinking, often found in other virtual clubs. They listen to DJ's in all EDM genres from Electro House to Happy Hardcore, and from Dubstep to Drum 'n' Bass... and everything in between. Dance Dance VR is a Discord community centered around bringing fun and engaging parties to VRChat! They have community parties with live DJ's that stream through Twitch directly into their own custom VRChat world. They have a club. They organize events on Wednesday and Saturday in between events of their members. They have their own venue in VRC, named DDVR Club.

Ghost Club is a special underground virtual rave venue. It is hard to join and opens when the mysterious twitter user @gst_kkgr announces it. It offers a unique raving scene experience. The music extended from everything to deep house to hardstyle. When it's all over, people flood outside and resume talking (Aemeth, 2020).

"Getting to ghost club isn't easy whereas getting into most fiera clubs is just a matter of joining a discord the ghost club discord is hidden you have to know the right user to add if you want to get in which generally means knowing someone else that's been there already on top of that ghost club operates on japanese time that means if that you're on est you're going to be getting up at 8am to get in on a friday if you're pst well you can do the math likewise because it's so popular you have to get there early or you're not going to make it in that means americans have to get up early before work or stay up all night to manage to get in" (Strazfilms, 2021)

Other popular rave venues in VRC at the moment are Club Orion, Dark Mana, HOM3, Virtual Bass Festival, Focus Entertainment, ZD Underground, The Castle, 7D/7th Dimension, Club Lumi, VR Pyramid, Just Party, Cannon Cove, Miami Vice Parties (MVP), The Resonance Room, The Tube, VR Palace, Ragehauz and Club Orbit, among many others (Reddit, 2021).

2.2 Semiotics: 'virtual raves' as a cultural sign

This part of the text will do a short semiotic analysis of the concept/sign of 'live virtual raves'. Therefore this text will use an earlier work of mine, where a semiotic analysis was performed on the sign 'live virtual reality music concerts' (Verhamme, 2021). This will give a better description of what virtual raves are and what they are not, their cultural meaning and experience. Live can best not be described on a physical and temporal criterion of 'here' and 'now'. Also giving up the physical criterium can be problematic. Today 'live' is used more for 'real-time' experiences. A third way is phenomenologically: 'liveness' is no characteristic of the object or an effect by a medium, but it is an experiential interaction which is produced,

because we are involved with a (virtual) object and are willing to accept the claim that it is live (Auslander, 1999).

What is a virtual rave (not)?

Via theories of semiologist Ferdinand De Saussure (2002) one can generate oppositions between virtual raves and similar other formats of music performances. If one looks at temporal syntagma or diachronic/linear temporal structure of a VR rave, one could distinguish the preparation for a rave, going to the rave, the rave itself, the after of the rave. In the case of a VR rave a big part of the preparation is different from a real-live rave. One stays at home. One does not need to take a walk, a train or bus to get to a concert hall. One does not need to change their outfit or put on some makeup. Instead, one prepares their room and put on a VR set and/or pc. The user logs into their account on VRC. Via Discord or their friend list one can try to join a virtual rave by navigating through some menus. One might lose time booting up a computer, a headset and VRC (Verhamme, 2021).

The temporal aspects during virtual raves can vary. Some are more static looking with a standard stage, human avatars, simple music genres, little to no interaction, and with a similar pace and duration as real-life concerts. Other events are shorter, fast paced and more dynamic, f.e. Fortnite or WaveXR. A DJ in VRC plays an average of one or two hours. Applause and shouting are uncommon as it does not work well with microphones. People spend this time using emotes (as jumping or dancing) instead to respond. At the end of a virtual rave people can stay in the virtual world to talk, until the servers closes. Afterwards, one continues elsewhere in the virtual or logs out their session and takes off the VR-set. One doesn't need to walk outside of the venue, one doesn't need to take a train back home with their friends. One is still in their room (Verhamme 2021).

Spatially, there are many different aspects of virtual rave to discuss. Normal raves take place in forests or buildings, on the other hand virtual raves take place mainly at home behind a computer or with a VR-set, alone. At the same time the concertgoer is immersed into a virtual space that feels real. One can disconnect from these spaces and they can be reproduced or deleted. Sometimes there is a stage, sometimes the world itself is the stage. One can walk next to the artist and be on stage. VR can change the location of the participants making them appear in outer space, underwater, in a mix of light beams, literally everywhere during a concert, f.e. the concert of Travis Scott in Fortnite. Avatars can become huge or objects can become small. Where one has limited and closed space at a normal concert, one has infinite and open space at a VR-concert. Virtual raves try to transform space for spectators into a space for participants (Verhamme, 2021).

Comparative meaning and narrative of virtual raves

Virtual raves in VRC are not completely virtual. In what follows, this text compares the concept of real, virtual, non-real and non-virtual and applies these to virtual raves (Verhamme, 2021). This is done on the basis of the concept of the semiotic square (Greimas, 1991). The first element 'the real' stands for here-and-now experience of music, like during a real-life rave.

This means that the listeners and the artist are at the same time and at the same place ('here' and 'now'). There is a qualitative opposition with the second element, 'the virtual', which can be conceived as a music experience where the listeners and artists are not physically present at the same place and time. An extreme example would be a rave in a fully virtual world such as the Matrix, where time moves differently than in the real world. The third element is the non-virtual, which could refer to something as the digital or digitally mediated. It can consist of the not-here-but-now of music experience. The fourth element 'not-real' could represent the 'here', but not the 'now'. Audience and artists are at the same place, but there is no real-time experience. An interpretation of the non-real could be the 'fake' or 'illusionary'. There is an audience, but there might be no real artist or vice versa. It might only be a reproduction that shares the same space (in the form of a fake/illusion), and therefore not the same time-continuum. A famous example is the Tupac Hologram concert of 2014 (Verhamme, 2021). In VRC this would be a pre-recorded set of an avatar DJ that is being played at a later moment.

'Metaterms' can be generated between oppositional elements as well. Between the elements of the (fully) virtual and the real, one could try to locate 'live VR raves' in VRC. These create a different 'here' somewhere else ('there'), a shared virtual space while being physically apart. One has shared real-time music experience in a virtual location. Between the elements of the non-virtual and the non-real, we could think of a (360°) livestream of a (virtual) rave. Between the non-virtual and the real, one could place a full-production live rave. It is a shared 'here and now', but also digitally mediated by a lot of electronic and digital devices to enhance it. Between the non-real and the virtual one could locate recorded virtual raves, recorded 360 degree experiences and hologram-concerts. These have virtual components (virtual space), but lack the real, because the performance is (partly) prerecorded (Verhamme, 2021).

If we move from the real, we first need to go to the non-real, to end up at the virtual. If we move from the virtual, we first need to go through the non-virtual to arrive at the real. One can never go directly from the virtual into the real or vice versa. Live virtual raves originate from real live raves, but came into existence through the development of holograms, 360° streams and recorded VR. Live virtual raves are not located at the end of the virtual axis, but between the real and virtual. It is a real-time 'there' (fake) experience, trying to combine the best of both worlds (Verhamme, 2021).

Intensity and extension of a virtual rave experience

We can also look at virtual raves in terms of intensity and extension (Fontanille, 1999). If we create a double axis figure with on the x-axis the extension (small or big input quantity) and on the y-axis intensity (weak or strong arousal) we can map out these dimensions of bodily experience in function of virtual raves and other music performances. If the quality of a music performance is perceived by the subject as high, the experience will be more intense. Extension is about perceiving quantity in terms of space and time. Certain (live) VR music experiences have little extension as they are short, but are more intense because they have much more visual, auditive and interactive virtual elements. Today we can already see that the extension of virtual raves is expanding and moving towards VR festivals with very high extension and

very high intensity. The same is happening with real-life raves. Today, real-life raves are in the middle of the figure because it has moderate intensity and extension: just as club concerts, they are less intense experiences in comparison with live virtual raves, but have (at the moment) more extension. In VRC you already have raves of eight to ten hours and festivals as well. Virtual raves are more intense than livestreams or recordings and have less extension in comparison with a recorded rave or studio album of an artist from the scene. Recordings have the most extension because they can be listened to over and over again, at any time, at any place, but listening to a record has the least intensity. A VR recording can be more intense (Verhamme, 2021).

Virtual rave as a series of interpretations

One can interpret virtual raves in several ways on the basis of Peircean semiotics (1931). Live VR raves can refer to real-life raves, and those can be interpreted as an experience of a here and now. The combination of avatars, virtual audience, instruments, and stage represent a live rave. But, the ‘here and now’ interpretation is problematic, because the physical ‘here’ live concert, turns into a ‘there’ for virtual raves. Therefore we can interpret virtual raves as a ‘there and now’ or ‘real-time’ experience of live raves. Thirdly, virtual raves and rave festivals could be interpreted as a substitute for real-life events, for example during the pandemic lockdown last year. A fourth interpretation looks at the perspective of virtual rave festival organizers. Organizers of VR festivals and communities such as VRC do not seem to (only) want to substitute real-life events. They want to create experiences beyond here and beyond now. This means new kinds of music experiences. If we look at the investors of virtual raves (companies of communities) and related marketing teams, we can conclude that (live) virtual raves could be promoting new forms of music industries and business (Verhamme, 2021).

Virtual rave as counterculture and/or anticuture?

One can make a distinction between culture, anti-culture and non-culture (Lotman, 1990). Culture can be interpreted as real-life raves, anti-culture as virtual live raves, non-culture as no raves.³¹ Virtual raves can be seen as formations by digital communities who do something else with a similar idea of having a rave. Anti-culture influences culture as its popularity rises, but culture is invading anti-culture. As real raves are growing in size and numbers, virtual raves are doing as well. Once it becomes too popular and generalized, virtual raves might not be offering the same revolutionizing music experience. Interesting to note is that virtual raves also influence non-culture: more and more people who could not properly participate in a rave (f.e. people with disabilities or geographical restrictions) now create their own avatar and can join.

Secondly, cultural change can be defined in terms of center and periphery. (Virtual) raves can be seen as a form of cultural periphery. VR games have been developed for quite some time, but music concerts only really started more recently. Today, it is still underground and niche; basically unknown. The last couple of years more and more platforms arise to offer all kinds of (live) virtual music experiences. Since the start of the global pandemics (Covid-19)

³¹ Other interpretations are possible.

earlier this year, the new decade might bring live (virtual) raves to the center of music experience and music (cyber)culture (Verhamme, 2021).

2.3 Observation, participatory observation and digital ethnography in VRC.

The best way to understand what a virtual rave is like and what the experience is, would be by doing and experiencing it yourself. In the last part of chapter two this text wants to share some of my experiences and those of several other users. These will hint at topics for chapter three on the cultural meaning and relevance of VRC rave subcultures.

DIY: Experience of a virtual rave beginner

First I used desktop mode to perform observation. This way I got to explore parts of VRC, before going virtual. I got to speak to several users and explored several worlds. It seemed like any other social game. Even a bit unattractive at first. I did not understand what I should do. Luckily, I could join and follow a friend in VRC, certain communities and the virtual rave scene. At home I created my own Discord account and my own VRC account. In a later phase, I participated with a friend and used a PC-VR with headset. I got acquainted with Discord and VRC's social settings and community conventions. I learned several ways to find raves. After a while I got used to the controllers and wearing a headset to a point I would forget wearing them. I learned to create and interiorize my 'boundary' or playspace. I watched interactive movies, played Zelda Breath of the Wild, and so on. I could start doing unique gestures and stand or sit normally. In the beginning the positioning of my hands looked weird in VR, but after a while I got a natural pose. In the beginning I could only play sessions of one to two hours long before I needed a long break and my eyes started to hurt. I felt nauseated. My friend said he never experienced any symptoms of sickness while playing. He can do sessions of six to eight hours in VRC.

In the next session the friend showed and explained his body tracking system to me at home. This was a total gamechanger for the immersive experience. With desktop mode it felt like any other game, even a bit boring. With a standalone headset or PC-VR it felt as if I were there, but it also still felt static and distant. I could not move my legs properly, and sitting or laying still wasn't perfect. The experience of being able to see my whole body moving tracked in real time, as well as seeing others in full body tracking gave the best immersive experience. I really had the idea of being there and being together with others. Depending on the venue, one has to walk into the venue, party or rave. Outside or on the entrance might be all kinds of worship and tributes to members of the community and founders of the venue. During these nights out I would see and talk about topics, such as erotic role playing (ERP), mirror dwelling, anime girls, furries, mutes, identity theft, and so on.

After several weeks I bought my own Meta Quest 2 headset. From then on I got invited easier to new discord communities about dance, music venues and virtual raves. In VRC I met a player from Ieper (Belgium) who has his own Discord server and VRC venue. I also had reached the trust rank of 'user'. With my own headset and Discord I was able to find multiple rave scenes and servers. But, I run into the same problem as with desktop mode. Most virtual raves

are only accessible through PC-VR. Luckily, I was able to borrow a laptop rather quickly. Not long after that I reached another problem. I needed a qualitative avatar to be able to enter most exclusive parties. So I discovered the fact of avatar worlds and avatar cloning. The quality of most is poor, but I manage to find a medium quality anime girl avatar with unique expressions. Another one I got from another player is a robot furry with a nice texture skin.

On multiple occasions I joined an event or rave of specific digital communities, in particular Virtual Relics and through the Partyhub. An evening could look a little like this: first some activity and notice was made of the start of the event in Discord. Earlier that week it was already announced the community would organize a party. We meet by befriending the host or use the invitation link in the Discord. We started with a virtual snooker tournament, while people talked about all kinds of stuff in front of mirrors. Eventually an intense conversation of about two to three hours went about transitions from man to woman and vice versa. Two of the people there were transgender. Not much later someone mentioned a rave party was going on somewhere else. A portal was dropped by another user and we went to my first virtual rave. I came into a busy world with around thirty to forty people. The room was rectangular, a colorful venue with a bar on the left. In front there was a stage with a DJ booth. Two DJ's were playing in full body tracking behind their desks. A third person played with an avatar looking like Kermit The Frog from The Muppets performed the role of master of ceremonies (MC). He was holding a cigarette and smoking it. The movement was perfectly tracked. He hyped up the crowd. Everybody was loving it. Almost everybody was dancing in full body tracking, including myself. There were a lot of visuals in the background and on several surfaces of the room. There were also glow sticks that one could grab and dance with. These left light traces across the room. Eventually one person created an animation of an energetic orb that one could interact with and pass on through the room to others. Everybody was using extreme avatars with special tattoo's, neon glows, flashy outfits, cyborg features, special attributes, beautiful anime girls, extreme fairy-like furry animals. People were touching, speaking in different voices, using non-verbal language and so on. But most importantly, everybody was dancing on the dancefloor. Talking was possible in the rooms above and adjacent to the stage room. In these other rooms one could find couches and beds where people were laying, talking and ERP'ing in front of mirrors. There was also a staircase to get above the dancefloor and sit or stand there to cool down. In the room were hanging two dance cages where one could teleport into.

On the occasion I met a disabled man of 25 years old, who is incapable of taking care of himself. He explains he spends most of the time here because he feels more free and is able to communicate with people. His voice sounds like that of a robot, and he explained he spoke with the help of software. His headset was connected to his room service and nurse. From there he could contact them whenever he needed help in the physical world. Another man I met was 78 years old and lived in a retirement home. He bought a headset and felt less insecure about meeting (young) people, because he felt too old to go to parties in real life. Since then he logs in almost every day and talks with people, goes out to parties, watches movies, and partakes in several communities. I met a 17 year old person who tried to commit suicide and started playing VRC short after. He reached about 1000 hours in VRC in less than three months and would rather live in VRC. He mostly wants (sexual) relationships in VR and

goes out almost every night to find a lapdance. I met another person who identifies as a ‘catfish’ and likes to mimic women’s voices and trick other players into believing he is a woman to reveal the surprise when they have virtual intercourse. I met a transgender person of 45 years old who was transitioning already for four years. She told me her whole life will be a transition. She had a family with a wife and two kids, but after spending time in VRC, she realized she felt better as a woman. These are only a couple of the interesting experiences I had on my journey within the virtual rave scene and VRC, and no exceptions. Every night was full of people with interesting background stories and special raves.

Experiences of experienced users

In this part this text wants to let the voices of other users be heard. In a series of talks multiple members of the virtual rave scene in VRC were questioned about their experiences as raver, DJ, venue owner, event organizer (host), and so on. In the attachment of this dissertation one can find two short interviews, and one longer interview. Here I will discuss several of these responses and responses collected by Strazfilms (see bibliography).

One of the interviewees describes a virtual rave similar to normal raves, but explains how certain events do not take place. There are advantages to virtual raves such as distance and comfort, but also differences. Often these are connected to small embodied details and micro-events, such as bumping into each other, confusing stares, drunkenness, sexual intercourse, etc. The user speaks of different sets of opportunities and different sets of perception. Virtual raves bring forth a different set of interactions between people.

"Virtual rave is a virtual experience of a known way of going out, partying, in which you provide a great deal of advantages of your own home (distance, availability, comfort means, food, drink and toilet) tremendously play through. On the other hand, the limitation of that virtual raving compared to real raving are the realities that are missing in VR, such as holding someone, walking into someone, knocking over a pint, getting angry, sorry sorry interlude, and maybe meeting him later. The opportunities to interact with people are completely different, for example addressing an avatar goes much faster, is a more made choice, more pronounced than in real life, in real life that doesn't happen much, someone's voice or dance doesn't stay the same, opportunities for entropy are much more in real life. Yes, you can dance, yes, you can have cool conversations, get stupid drunk with your own beer, but you're not going to take that girl to bed. In VR you can have equivalence, but you won't have R-love, maybe VR love. The sensory limitations will always remain. You can spend a lot of money on haptic, so you can suck on a nipple." (Anonymous, Long interview)

These different sets of interactions, opportunities and perceptions can be confusing at first. One user describes their experience with hardware and getting used to VRC. Here someone describes how VRC and virtual raves are a bit weird and uncomfortable at first, but became better until a point of where it becomes ‘hyperreal’ and one notices a ‘suspension of disbelief’:

"In the beginning, it felt very uncanny to see all these avatars partying around me, knowing that the persons behind the avatars would look entirely different. It all felt very fake to me. However, after a couples of hours already, one starts to get used to the new ‘world’ and the headset/body tracking already starts to feel as if it's a regular part of your body. " (Anonymous, Short interview)

Another raver pointed out the authenticity of the experience of a virtual rave in comparison with real raves. He explains:

"my first experience was important for the authenticity of the experience. When going in I expected it to be a minigame of going to a party. It was a proper experience in its own right. It's just the way it felt. It supported by technological features, if there were for instance you were lagging could snap you out of it. authentic because of how well it tracked. How realistic the interactions came across. It is designed properly and working properly, there is not a lot of friction. like moving your hands, moving your head, moving through the rooms, if you move the whole place tilts, like in the real world. It's funny to see how glitchy the hands move, but it becomes more natural. it was quite easy to crawl in this virtual skin and use the virtual body as a proper body. the real party experience would be one I haven't had a full body suit. vr parties with glasses but could not help but feel a bit isolated. Real experience is with what your avatar is doing." (Anonymous, Medium Interview)

Once one gets used to full body tracking, one gets a deeper meaningful immersion. For many, full body tracking seems a gamechanger for immersive experiences. Strazfilms states the following:

"when you're in vr dancing next to people it feels real. Throw in a haptic vest and you'll feel the and your whole body will rumble and you'll look over and see someone having the exact same experience as you it's intoxicating in a way that just watching a twitch stream on a flat screen just isn't now" (Strazfilms, 2021)

From these interviews I had to come to the conclusion that a lot of VRC users also might have never been to a real-life rave, but still have a unique party experience. The feeling of togetherness and connection to a community of people experiencing the same is incomparable. It is this connectivity that separates VR technologies from other technologies. Users have the feeling that they are going to a real venue and meet real people. it has an authentic feeling to it, a place like no other.

"I've never been to a rave before so i can't really say that these venues are authentic but i know you have so are they loner for instance feels like a really real venue um like loner and shelter both shelter is a little bit more fantastical i think on the interior but like loner just feels like a just a room with a bar in the back and there's a bathroom (10:00)" (Anonymous, Strazfilms, 2021)

Another person remarks:

"There's all these people who joined either within the last year or before this who have never been and some of them have been dancing for years right some have been dancing for two or three years and they've never been to a irl rave or even like an edm event or show or a festival or anything and they're still in love with the music and in love with the scene and love with dancing in a way that's that's really really similar to the way that i hear people talk about real festivals like festival heads talk about you know the love they feel the festival and this human connection they get from going and attending and you hear the same terminology get used here in this scene but just sort of in this completely different lens right of of virtual reality um where there's a little bit there's more layers of sort of i guess." (Strazfilms, 2021, 10:48)

Virtual raving is all about the music and the people. It might be about finding unique music styles and things one has never heard before, and being able to share these experiences with others:

“(...) before I found Loner I'd been mostly burned out by the VRC rave scene. I didn't want to go virtual clubbing. I wanted to have my mind blown by the sort of music you hear for the first time in someone's dank shitty basement. I don't want it to seem like I'm saying other venues in VRC are bad . They aren't. But Loner gave me something that was missing. Loner feels like it's engineered top to bottom for music lovers. It feels like the epicenter of a real thriving music scene in virtual reality. It wanted to change people's impressions of what it is like to go to these smaller venues and underground venues and show how it's not just like scuffed crackheads like drug addicts and like random bros and like chicks and... like it's actual people. (...) the idea was to sort of change people's perspective on these sort of dingy looking places” (Strazfilms, 2021)

For some it's even all about the music:

“I tend to be a corner dweller at shelter, and I'm definitely not alone in being annoyed by some of the people in the back of the dance floor just loudly talking about unity shit all night instead of listening to the music. In the main instance. It'd be nice if they at least went upstairs.” (strazfilms, 2021)

One of the interviewees relates this approach to music to underground culture and alternative free communities:

“(...) Stuff and i mean i think part of it is the fact that you know it's uh it's completely voluntary right there's no sunk cost there's no getting into your car and driving somewhere that's you're there because you want to be at a concert um and just the very nature of being there for that maybe more so than a particular act right um or like social obligation or something is is very powerful and people end up just with a better disposition in terms of approaching music i think you could probably draw a parallel to like underground scenes in general where it's less about the individual performers or the you know the prestige or the venues and it's more just about the community right um so that's something that's very difficult to find uh outside of big cities” (Strazfilms, 2021)

The diverse community is one of the most important parts of VRC and the virtual rave scene. It is a place where all kinds of people meet for the purpose of dancing and interacting with each other. The idea is to meet people from all over the world and do what one likes together.

“(...) back then it was like dude it was like the shittiest little dive bar there's like goth kids skater kids all the gay dudes all the internet dudes or like the fashion kids and everyone just got along together” (Strazfilms, 2021)

This relates to the many different and random avatars one can see in VRC and the endless series of magnificent leading-edge avatars. This way virtual rave experiences can also be related to ‘novelty’. Virtual raves can provide endless new music experiences to share. All these experiences feel real because they are shared with many others.

“You can see a lot of fashion and different avatars at a virtual party. It is the same as with real life parties. Some have it, and some don't. When you go to a rave in VRC, you will see for example eboys, Lollis, e-girls, thoths, meme avatars, game avatars, original content, furries, pop culture avatars (such as Mike

Maiers or Trump)... Anime Girls can be subdivided into game avatars, e-girls, lollis, thoths, and more. I mean, there is a lot to see." (Anonymous, Long Interview)

Another interviewee describes what he sees in this way:

"there were stock avatars, virtual characters, some very over-designed. some were based on 3d rendered real life objects. There were totally random objects, like large document and charizard pokemon card first edition, a realistic , really tiny people, animals, movie characters, the big snake, hulk like creature, but not the hulk, bulky dude, lovely girl who had pancakes, cowboys, yoda sitting in a throne... (...) one was a furry robot, a master chief, a main character of the halo games, but then pink and fluffy with a pink tail, some furry things sticking out of the uniform. And also a girl of course, blue hair, anime girl, i kinda like the funny ones." (Anonymous, Medium Interview)

3. VIRTUAL RAVE THEORY

In this chapter this text will look at the cultural meaning and relevance of virtual rave culture. Here this text focuses on embodiment and identity.

3.1 Virtual Embodiment: what are you?

The embodied subject and the body scheme

When one virtually raves, one is involved not only with their mind, but also with their body. Our embodiment is digitally and virtually mediated by technological devices. To think about embodiment in relation to virtual raves one can use philosopher Maurice Merleau-Ponty's concept of the *body-subject* and our connection to the (real) world (Merleau-Ponty, 1945). Here I elaborate on the basis of earlier work of mine on phenomenology and existentialism (Verhamme, 2017, 2022).

According to Merleau-Ponty, one is always related to the world through embodied experience. In short, there is no ontological distinction between body and mind: body and mind are not separate entities. The body cannot be considered as a solely causal object among other things in the world. The body is also not a vessel or medium for us to operate as an immaterial mind or subject. One doesn't possess their body, but one is a body. Our consciousness is always embodied consciousness, because it is formed and mediated through our bodies. Consciousness, for Merleau-Ponty, always means consciousness of something or in relation to something. Merleau-Ponty calls this undeniable embodied relation in and to the world 'motoric intentionality' (Merleau-Ponty, 1945).

With his concept of '*body scheme*' one can think about changes of our phenomenological body in relation to our material body (Merleau-Ponty, 1945). The body scheme refers to a preconscious internalized structure that one has of their own body in relation to itself and the world. One does not have to think about how to move our body when one picks up the phone for example. One could also relate this to motoric or body memory. With the body scheme one can think about the way one adapts and extends capacities of the body. If one drives a car, the car becomes a tool and in a certain sense an extension of one's body. When playing video games or a guitar, for example, the body temporarily coincides with the instrument and the world; Thinking too hard about how to play limits the fluency while playing. Repetition and duration are important, because repeated movements creates a habit: one 'inhabits' the relata, one gets 'used' to them. They become, over time, part of what Merleau-Ponty calls the '*habitual*' body. The habitual body is distinguished from the actual body or the body as one actually is. The distinction between the actual and habitual body relates to two dimensions of the phenomenal body or '*body as lived*'.(Verhamme, 2017).

VR is an interesting case, where one adapts their bodies to new technologies. In the use of VR one extends and revises our body scheme through constant interaction between the habitual and actual body on the basis of technological devices and virtual experience. Thus, one is changing their virtual or phenomenological body. One gets used to the VR devices and

gets used to existing as an avatar in another world. With the help of these devices one can re-embody into an avatar.

Embodiment, disembodiment, re-embodiment: avatars and cyborg bodies

As mentioned earlier, one is embodied in VR in a way that one is digitally and virtually mediated by several technological devices and code. Embodiment can be defined as:

“(...) the centering of the body on the site of subjectivity, identity, and selfhood. An identity or experience is embodied because it proceeds from the body’s interface with the world. It is this experience of the interface that contemporary digital technologies mediate and alter.” (Nayar, 2010, p. 76)

We can interpret embodiment as a kind of interface for consciousness. Consciousness is embodied, because it is always bodily mediated. Similar virtual raves are always embodied experiences, but this bodily mediation is in turn digitally and virtually mediated. As this terminology can be confusing, one could make a distinction between an experience of disembodiment and re-embodiment.

If we continue the terminology of Nayar we can describe disembodiment as:

“(...) the digitized human body, the reduction or reconfiguration of the human’s personality, form, function, and behavior into a set of codes entered into a database. (...) “Real” flesh-and-blood humans can be turned into a set of numbers that can be stored, transmitted, and then reassembled” elsewhere to become a searchable image or object on a screen. (...) Disembodiment allows us to “retrieve” another’s personality, not necessarily by meeting him or her face to face but through a database. Disembodiment is also the extended sensory experience - augmentation - of the body through wire technologies (...).” (Nayar, 2010, p. 76)

Disembodiment has to do with the digitized human body and digital mediation. Human bodies and embodied experience can be turned into code and data. This means people are disembodied in the sense that they lack physical form in the digital world. One is disembodied, because the body is taken away in the digital or virtual world.

Nayar gives a second meaning of disembodiment in this quote, namely that disembodiment is also the extended sensory experience of the body through technological devices. This second meaning might bring us to the concept of re-embodiment.

“What I call re-embodiment is precisely this “extended operational system”, a “mixed reality” paradigm where the (embodied) modes and means of perception - which, it must be emphasized, are also socially informed - are more significant than the contents of cyberspaces and VR environments. Re-embodiment and e-mergence return us to the body, but the body-in-technics, whose convergence with technology facilitates augmented perception, does not reject the body. Re-embodiment or the “mixed” reality paradigm do not split the body and identity between a real material self and the virtual one. Instead, the virtual is experienced through the real, just as the material-real is mediated by the virtual. This is the recursive identity formation of cyberspace” (Nayar, 2010, pp. 78-79)

Nayar refers to the mixed reality paradigm coined by Mark Hansen (Hansen, 2006). This paradigm rejects the idea of bodily transcendence in VR. The paradigm suggests that the body

is the interface to the virtual. The body plays a crucial role between the virtual and physical world. Posthuman culture is then not about leaving one's body behind, but about extending embodied in ways that would be impossible without electronic and technological devices.

"Re-embodiment is a convergence of technology and the body facilitates the extension of the body into other dimensions, even while remaining meat. I termed this re-embodiment of the corporeal in technology e-mergence: the merger of the body with electronic technologies and the emergence of a new networked human form." (Nayar, 2010, p. 77)

Now that we have a better understanding of embodiment/disembodiment/re-embodiment, we can think about avatars in virtual raves. An avatar that is used daily in the social VR contents enhances the sense of embodiment (Onayagi, 2020). One is digitally mediated and represented by an avatar. One gets re-embodied into an avatar. Nayar defines an avatar as:

"An avatar is an online identity. It is usually a graphic representation of the user in a virtual environment. It can be modified and made to look like anything the user wishes, and it can also be made to perform actions in the online environment." (Nayar, 2010, p. 3)

One is represented as a 3D figure in a virtual world. In this form one interacts with others and their surroundings during virtual raves. There is a secondary industry devoted to the creations and trading of avatars. Avatar customization is one of the most important entertainment aspects in many virtual worlds. In VRC one can find a whole section of 'avatar world'. These worlds are full with avatars to copy, save and use in VRC.

"The people are pieces of software called avatars. They are the audiovisual bodies that people use to communicate with each other in the Metaverse. Hiro's avatar is now on the Street, too, and if the couples coming off the monorail look over in his direction, they can see him, just as he's seeing them."

(Stephenson, 1992)

To understand more about re-embodiment and avatars one can conceptualize a (posthuman) body as an '*e-merging*' body (Nayar, 2010). E-mergence can be defined as an umbrella term to signify the mixing of wetware (organic) and software (or electronics), but also the emergence of a new kind of human. Embodied experience in a virtual rave scene means you are a physical body, a visual body, a simulated model of a body, and/or a body based on data and code.

"The e-merged body is itself a medium for various technologies. It is a biological body (organic), a body compiled through visualization (X-rays, scans); a body compiled through simulation and modeling (the CHS or VHP); a body compiled through databasing (HGP)". (Nayar, 2010, p. 68)

In other words one can speak of re-embodiment and e-merging bodies as '*cyberbodies*'. 'cyborged' bodies are a combination of wetware (organic), software (computer codes), and hardware (prostheses, electronic implants, and computer chips) whose interaction with/experience of the world is mediated through technology. Bodies are modified by technologies to a point where one achieves cyborg or robot-like qualities.

"cyber-bodies or techno-bodies are human bodies interfaced with machines, mostly via electronic linkages and electronic modifications to the organic substrate that is the human body. They are bodies

modified to enable them to overcome disability or to enhance their capacities (...) Cyber-bodies are technologically modified or networked bodies that seem to transcend, at least for the time, their immediate physical, geographic, locations by being able to be or do things elsewhere or through other means." (Nayar, 2010, p. 66)

Techno-existentialism & techno-bodies: Digitally 'being-there'

Now that this text has given a better understanding of re-embodiment into an avatar, it is interesting to look at how one experiences oneself as an avatar that is embedded in the virtual world. In an earlier work of mine, I clarified the embodied existential sociophenomenological approach of Amanda Lagerkvist towards digital memory studies (Verhamme, 2022).

In his work 'Being and Time' ('Sein und Zeit', 1927), Heidegger coined the concept of 'being-there' (Dasein) to express that experience always shows itself as a direct connection with the world. Being/consciousness is always being somewhere, being situated. One could not decide the gender or the structure of their body. One could not choose the world one is thrown into (Heidegger, 1927).

To talk about the experience of presence at virtual raves one could refer to 'digitally-being-there' or 'being-in-and-with-the-digital-world' (Lagerkvist, 2017). In cyberspace being-situated means choosing wherever one wants to be, as whatever one wants to be, even a dragon (Sier, 2017). There is no fixed body, world or situatedness any longer. Being has become adjustable. If one tries to think of 'digital intentionality' or 'digital mediated intentionality', one could refer to the phenomenological statement about intentionality that consciousness is always consciousness of something (Husserl, 1977[1925], p. 34), in this case of the cyberworld or hyperreality. Cyberspace, VR and virtual raves have their own virtual lifeworlds to investigate. Lifeworld, in the phenomenology of Husserl, refers to the world as one experiences it daily (Taylor, 1999). Hardesty states: "Phenomenologists have not seriously considered the possibility that in our experiences of the everyday life-world, One could encounter a boundary on whose other side lies another life-world that one could inhabit" (Hardesty, 2019, p. 368). Hyperreality and the metaverse show one can live in many life-worlds or universes. There might still be universal structures to these life-worlds in cyberspace or VR, for example VRC or virtual rave scene, but it will not suffice to analyze all experience on the basis of one life-world (Verhamme, 2022).

Immersion, telepresence and tele-existence

If one speaks about the experience of being present in the lifeworld of virtual raves, it might therefore be interesting to look at the concepts of immersion, telepresence and tele-existence. Immersion or tele-immersion can be described as how absorbed or engaged the user is by the virtual experience (Wigmore, 2016). For example, desktop computers alone are non-immersive or very low immersive systems, because they do not adequately generate VE's. The user can look away from the computer display to know that they are not in a VE. VR headsets and full body tracking covers sight (almost) and movement almost completely. If viewers look in

another direction, the headset changes their point of view in the VE and the avatar of the user moves with it. Immersive VR is the creation of an artificial environment that replaces the real-world convincingly enough for users to suspend disbelief and engage with the created VE (Wigmore, 2016).

Telepresence has to do with the feeling of being present somewhere (else). VR technologies can give one the idea that one is in a different space and place (Cambridge Dictionary, 2022). When one wears a HMD, one will have the feeling of being present at a virtual rave, as if one is really there. Tele-existence refers to the extension of human existence. It means one can exist somewhere else, in this case the digital world. For existentialists the essence of a human being is his existence, meaning goals are not predefined in human life. Existence means something as standing open the world. Virtual raves can give you telepresence or the feeling of 'being-there', but also engage you more and make you explore all kinds of possibilities in VR. Tele-existence might be considered as a sustained form of telepresence, where one has the possibility to exist and act in other worlds. Telexistence allows human beings to experience in real-time the sensation of being in an interactive virtual place (Susumu, 2016).

Interesting remark: In VRC one can always see if you are 'there' or not. You can have several modes available, namely 'do not disturb', 'join me', 'ask me', 'available' (VRC, 2021). We could image it like this:

"The idea of being online is being in a big house. People know whether you are at home or not. You can choose, not in vrchat, but on discord, whether you are at home or not! Discord: invisible, idle, online, do not disturb. VrChat: in vr you are always at home, everyone always knows you are at home. You only have available, ask me, do not disturb, and join me." (Anonymous, Long interview)

Media bodies: Device body

Earlier this text indicated one does not live in one lifeworld (anymore), but multiple. The same can be said for the (e-mergent) body. One is 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). The embodied sociophenomenological approach of Lagerkvist to digital memory studies describes four media bodies which form aspects of digital embodiment: the performative body, the device body, the body as implicated, and the body as implied. These bodies show different ways of 'being-digitally-in-and-to-the-world' (Verhamme, 2022).

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. This structure of embodiment relates strongly to 'being-in-and-to-the-world'. An interesting example of a digitally mediated performative body is an avatar (lagerkvist, 2017). An avatar is woven into virtual reality and made operational through the body scheme and technology. An avatar is not only a graphical representation of a user or a persona, but it is also a performative second body sensorially immersed in VE's. With new VR technologies, new uses and performativity are emerging such as therapeutic uses, VR immersion in museums, virtual tours or concerts or at home and work (Verhamme, 2022).

The device body refers to embodied experiences as a carrier of media devices and personal data, such as text, music, images. It provides connectivity with devices, for example smartphones, televisions and computers, but also archives of images or our social networking service accounts (Lagerkvist, 2017). Earlier this text discussed several setups such as desktop mode, standalone headset and full body tracking. Making hardware and software a part or extension of my body through the body scheme is essential here. At a certain point one does not have to think about actions with devices anymore. One lives through them. The device body can be a concept of the cyborg body, meaning the experience of not only being a body of flesh and bones, but also of metal and plastic, of digital cybernetic devices (Nayar, 2010). The device body is thematized in talks between users in VRC. A main topic that often pops up during virtual raves is related to ‘gear-talk’. One talks about their used and favorite gear and tech (Verhamme, 2022).

The implicated body is a form of digital mediated embodiment that relates to how we are and want to be presented in the online world, visually and virally, in this case in the virtual rave scene. Of course, it relates to multiple platforms, profiles and applications of ourselves in the digital world. In the case of virtual raves, this is also related to avatars and the (virtual) body image we have of ourselves. ‘Implicated’ refers to how we are perceived by and involved with others. A lot of people find avatar appearance important and for example share selfies or stories of themselves in VRC. Another interesting aspect is anonymity of real identity, as users are named differently and have other appearances than in real-life. The implicated body can be graphically and digitally recorded and be subject to insults, hacking, trolling, cyberbullying, and other forms of harassment (Lagerkvist, 2017) or harm (Wolfendale, 2007). VRC and the virtual rave scene have made many rules and features to protect and regulate their communities and platform.

The implied body refers to digitally mediated embodied traces or signatures left in the digital or virtual world. All activities one performs in the digital world or cyberspace can leave a trace. This way there exists an indirect, ephemeral, unclear sense of splintered presence of theirself online. We simultaneously know that they exist, that they are present, yet we do not know where. There are traces of “digital me” out there. 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. For example, there is no logbook history on VRC. One can save worlds, but one cannot check where one went when. Another feature is the social settings of VRC, which can prevent harassment and can regulate social interactions. One problem might be streamers and virtual vloggers. They record streams as they move through VRC and the virtual to upload to Twitch, YouTube and so on. Some users and communities in the virtual raves scene do not like or permit this behavior.

Modalities and senses in VRC and virtual raves.

In this part this text looks at perception and the senses to gain more insight into re-embodiment and experience of avatars during virtual raves. Each of our senses can be considered an embodied way (intentionality) of being from-and-to-the-virtual-world

(Merleau-Ponty, 1945). Only because of our senses, are we involved in the world. This text considers the modalities of sight, hearing, touch, taste and smell, among many others, such as proprioception and thermoception central for (embodied) consciousness as sense is built in the interaction between these. In phenomenology the senses are considered to be a holistic framework of experience, where meaning is derived from interaction between the senses and the outside world (Verhamme, 2017). The senses cannot be reduced to each other, and the meaning they produce together is more than the sum of their individual parts. If one of the senses is taken away from an experience, the whole experience changes. In VRC it is clear that proprioceptive, audiovisual, self referential and tactile sensations are presented intensively. An extreme example is virtual rave culture in VRC: here one 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.

It might be interesting here to refer to the experience of synesthesia. In this case stimulation of one sense (for example, hearing) leads to automatic, involuntary experiences in a second sense (such as vision). Simply put, when one sense is activated, another unrelated sense is activated at the same time. Drugs can make a user have these synesthetic experiences more intense. This phenomenon becomes clear in certain visual worlds in VRC and virtual rave scene, such as music visualisers. If one plugs in some music, it does more than showing sound, but gives one a total experience. One can see the music. For Merleau-Ponty synesthetic perception is always present and ‘standard rule’ in experience (Merleau-Ponty, 1945).

Note here that several talks with people in the virtual rave scene of VRC have indicated a contrary effect than synesthesia. The senses do not melt together into one total experience, but are separated. This creates the unique experience of VR and virtual raves. One interviewee spoke of ‘asynesthesia’ and explained it like this:

“Sensorially, it's just less so. It's on the other side of synesthesia. There is an even greater division between what you feel and perceive. It makes it accessible, for example, to autistic people. Take for example a 51 year old man I know. With that, he can handle that medium so well. That's being more disconnected, instead of letting it flow together.

(...)

Virtual reality is a subset of reality, of your reality. Your reality is your perception of the world. Why a subset? Because actually with a limitation of your perception in an almost unreal plane of existence you can experience limitlessness, creatively limitless. You as a person are not necessarily in the full capacity of your ability to experience something, but with a more limited perception. Many boundaries do fall away around experience, around boundaries of a physical reality. Never will you really experience something but never is it more unreal, but vice versa. If your child is murdered in front of you, you're never going to be able to experience that in VR, unless you're too deep and boundaries of your ordinary reality have fallen away and limitation in virtual reality is no longer considered a limitation or forgotten that it's a limitation. That you have an illusion that it's bigger than you're used to.

(...)

You perceive reality and that reality is unlimited. But you have limits physically. You give up your physical limits, but consequently you also give up part of the sensation/ perception. By making that sacrifice, you end up in a virtual reality in which you can reach a limitlessness with the remaining sensation that cannot be reached in

reality, but because that is with a limitation of your perception, it is by definition always narrower, even if it is more unreal." (Anonymous, Long interview)

It is interesting that a lot of virtual ravers in VRC talk about keeping a distinction between reality (R) and virtual reality (VR) in mind at all times. R and one's experience of R are one's perception of the world. The interviewee states that we are not living up to our full perceptual potential in VR. On the contrary, perception is digitally mediated and reduced. VR has something unreal as a limitation of perception and the senses. If one forgets about this distinction between VR and R, or thinks VR is more 'real' than R, one can become lost in this ambiguity. VR is a subset or part of R. VR is a window of perception to reach another part of R, an infinite VR world, but in doing so one gives up some of their perception and embodiment to reach an experience of infinity, not possible in R. The senses get separated and reduced by digital mediation (Anonymous, Long interview).

a) Audiovisual stream

First we can consider sight in virtual raves. Of course, what one sees is a 3D simulated world that is projected on a 2D display. There is only the illusion of depth and simulation. Depending on the computer or headset one is playing with the resolution and quality of these images might vary. Worlds and avatars are real-time rendered and sometimes delays and lag is noticeable. This can be unfavorable for the immersive experience. Nevertheless, VRC is definitely a visual experience. Visual sensations are heightened in the virtual rave scene. Avatars, worlds and performances are made as visually stunning as possible. Imagine lasers, lights, textures, shaders for the venue and for avatars and worlds. Almost every rave venue has a selection panel on the walls to increase intensity and number of lights or particles in the room. Visual stimuli are present in huge numbers, and can be overwhelming.

An interesting activity during virtual raves is the practice of taking selfies. These selfies and screenshots can be kept in a personal collection as a kind of memoryscape. VRC has a built-in application to take photos and videos with a virtual smartphone-like device (Reddit, 2020). There are even photobooths to be found in certain clubs and rave venues. The importance of these screenshots and selfies can be seen on several social media sites.³² In Discord groups share their pictures of good evening outs with each other and comment on them. On Instagram or Discord one can check several hashtags to find channels posting mainly selfies of themselves and friends during their virtual rave experiences. A moderator of a virtual rave community in Virtual Relics sometimes organizes a photo contest. He sees it as a game to keep the community going. At the same time he thinks about privacy issues and deletes the images after a day (Anonymous, Long interview).

Most interesting to see in VRC and the rave scene is the use of mirrors. This activity is called 'mirror dwelling' among users. During social activities such as virtual raves, a lot of people in the world are not dancing all the time. When people time out, they often go sit in neighboring rooms. These can be at the bar, lounges, next or above the dance floor, lockable rooms for ERP'ing, and so on. Often one will see groups sitting together almost all facing the

³² On Instagram: <https://www.instagram.com/explore/tags/vrchat/>

same direction. If one would not know better, one would think they are staring at the wall or looking out of a window. What is happening is that they are looking at a mirror. In most worlds users can activate mirrors via buttons on the walls, so that they can see themselves interact with each other, not only from a first person perspective, but also from a third person perspective as well. It is interesting to note that almost half of all the people in VRC and social worlds are performing this behavior. In my own experience and on the basis of talks with others, I can confirm that this behavior is satisfying as it helps one coordinate oneself, as helps one strengthen the value of the interactions one is having. One can have the idea of sitting, laying or touching. It fortifies immersion, telepresence and tele-existence. At the world DanceDanceVR one can select mirrors of the dancefloor and ravers there to be projected on the screen behind the DJ booth.

Another interesting part of virtual raves is the auditory experience. Sound quality in VR can be bad and connection troubles may occur. Applause doesn't work well with microphones. Yet, there is a lot of control of one's audible surroundings. One can speak and mute themselves and other avatars. One can control the volume of players or music in the world one is in. One has a basic sound system in their headset of which one can also adjust the volume. Better sound systems can be provided via the output jack for better immersion. This way it is even possible to feel the bass on a heavy sound system. If one walks closer or further away from the venue speakers or from people, one hears more or less sounds. The sound is presented with the help of 360 degree sound effects, so sounds can come from behind, in front or next to oneself. Some players don't talk and are called 'mutes'. One comes across them in the VRC and virtual rave scene quite often. A mute could be deaf in real-life, lack the equipment for voice recording, could have sexual reasons, or one simple does not want to speak. Other people use voice modulators and change their voice. Interesting cases are male players that mimic the voices of females with intent to trick players ('catfishing'). Another interesting phenomenon is 'avatar jukeboxes'. These avatars do not move or interact with anyone, but play music through their microphone or recording system. People can choose to stand closer or further away from them to hear some music. One of the characteristics of raves is that they bring new underground electronic music forward made or remixed by the community itself. Styles can go from house to techno, to future beats, vaporware, drum & bass, hardcore, psytrance, tek, nitzo, K-pop, and so on. Some events bring in people from outside world rave venues.

b) Moving and dancing

One of the most interesting aspects of (room-scale) VR is the possibility of different experiences of movement and walking. Of course, one needs a big enough playspace to do so. Even then one will have to adjust and do some parts with controllers. Therefore developments and prototypes of multidirectional treadmills are booming. People want the experience of walking everywhere, without the use of a controller. Of course, movement in VRC is not restricted to walking. With the headset the movement of the skull is followed in real-time, even eye and lip tracking can be modded into the system. Full-body systems make it possible to move the hands, arms (fingers, wrist, elbow) and legs (ankles and knees). This way in VR

one can experience jumping, falling, laying down, reaching out or crawling, climbing, performing, dancing, and so on. Some avatars even have tails or other features that can be moved by moving one's body, or attach prostheses to the physical body.

In phenomenology, movement can be considered central to consciousness. Central is not consciousness 'of' movement, but primarily a consciousness in movement. Consciousness is for Husserl always kinesthetic consciousness (Verhamme, 2016). Kinesthesia refers to a sense of position and speed of the body parts in relation to each other and the world. When walking or moving one has, is what Husserl coined 'kinesthetic sensations' (Husserl, 1931). One has the feeling that one's body is in movement. One's movements, kinesthetic sensations and walking speed might affect one's thinking (Solnit, 2002). Moving in VR might even change their movement and walking speed in real life (Reinhard et al, 2020). That digitally mediated consciousness is always in movement, is obvious in that we are constantly moving our body or head and the camera is constantly tilting in the direction we are looking. This is relevant for immersion, telepresence and tele-existence. In VRC it is even possible to play without controllers to see their hands and do some basic gestures and movements. One's hands are tracked by external cameras on their headset. It is even possible to make certain finger movements and interact with the menu display by pinching their fingers. With others like the Quest 2 one only has control over the thumb, index finger and whole part with three fingers together. There are button combinations though the avatar can do other things, devil, or peace or other set things. This is not always the same with all avatars. Index controllers have separate finger capacitive motion for all five fingers. Therefore, Index controllers really work like fingers. One can show someone a middle finger.

Next to this certain headsets track movements of face and eyes. One can see the direction of the eyes and blinks of other players in real time. These features are not available in VRC (yet). The face of one's avatar can mimic their expressions in real life. It is/was possible with mods, such as haptics. VRC now officially supports the 'midi-protocol', meaning that one can send midi signals to peripheral devices (VRChat, 2021). One can now officially track and integrate their biometrics such as heart rate monitor and information of the outside world such as time of day or other information into an avatar.

The immersive feeling of movement is also very noticeable, when jumping or falling. Most players experience a real sensation of falling, when jumping off an object. This can be related to the habitual body and consciousness in movement.

"Among the ... bodies of this nature I then find uniquely singled out my body ... the only one in which I immediately have free rein, and in particular govern in each of its organs — I perceive with my hands, touching kinesthetically, seeing with my eyes, etc., and can so perceive at any time, while these kinestheses of the organs proceed in the I am doing and are subject to my I can; furthermore, putting these kinestheses into play, I can push, shove, etc., and thereby directly, and then indirectly, act corporeally." (Edmund Husserl, 1960 [1931], p. 97)

Important for virtual raves is that movement makes it possible to dance. Dancing in VR helps for the feeling of immersion on a virtual rave. This was indicated by multiple people I talked with in VRC. For some the real immersive journey starts with body tracking. Through dancing in full body tracking one achieves one of the best forms of immersion, telepresence and

tele-existence VR today can offer. Full body tracking dancing is a unique kind of experience. People can do all kinds of movements with their avatars, just as in real-life. If the playspace is very big, one can do backflips, breakdance, and so on. At the same time there are limitations. In simple body tracking systems one cannot dance with their arms around their back. If one does so, Dance battles are popping up, where people try out the weirdest moves. Because there is often no knee or elbow tracking, dancers have to imagine new moves and dancing styles. Some people even teach dance lessons in VR. This elaborates on the idea of tele-existence in VR.

Another aspect is seeing other people dancing. As this text has indicated before, seeing other avatars dance in body tracking gives a more immersive experience. Dancing is embodied all over. It can at the same time be a social activity and an individual expressive activity. One does not have to think about how one looks, or one can make one look however one wants or others want. Just as one sees multiple avatars, one can also play with multiple avatars during the same night. Neos might be a better place to dance than VRC in terms of body tracking (The Virtual Reality Show, 2021).

c) Touching and being touched

One of the reasons one cannot speak of full immersion yet, may be the lack of touch in VR. For a lot of players it feels necessary, others don't care and think it is too real. There are haptic suits and devices being developed as one speaks, but they remain rare. If we follow the thoughts of Husserl of the sensation of touch, we could state that a privilege of sight dominates society. Earlier this text mentioned that we orient ourselves mainly on sight. This, however, is not completely true. Husserl proposes the privilege of the sense of touch over the sense of sight. Tactile sensations form the basis of our bodily intentionality.

"The body as such can be constituted originally only in tactility and in everything localized within the sensations of touch, such as warmth, cold, pain, and the like. (...) becomes a body only through the introduction of sensations in touch, the introduction of pain sensations, etc., in short, through the localization of sensations *qua* sensations" (Edmund Husserl, 1989 [1928], p. 151.)

All other senses could be considered arranged around the sense of touch. Sight is the touching of light on your retina, hearing sound is the touch of pressure waves to your eardrum, flavors touch your tastebuds, a smell hits the receptors in your nose. Each of the senses is connected to tactile sensations. These can also refer to the feeling of touching textures of materials, another person's body, feeling being outside, being cold, feeling the bass of the rave, ha sexual intercourse and so on. In VRC it is important to be able to touch and interact with other avatars and one's surroundings to be immersed. In virtual raves touch is especially important to touch, hug or pet others, or to feel the bass and the music.

A special case of experience in VR is the experience of 'phantom touch'. Many users of VRC declare a sense of '*phantom touch*'. This sensation happens when one is playing standalone or with PC-VR. It is the experience of touching another avatar by making visual contact, but there are no devices to send sensations to the users. If one moves through another avatar's hair and it responds or reacts. The two primary features in VRC are Avatar Dynamics and PhysBones and Contacts (VRChat, 2021).

This is also one of the reasons users don't like other users walking through their avatars. A common phenomenon in VRC and virtual rave scene is the activity of 'petting' or 'stroking', a particular kind of attempt to soft touch. This is enhanced in a way that users stand, sit or lay in front of mirrors, so that the visual stimuli of touching somebody's avatar are seen by the user itself. Avatar dynamics are features aimed at creating interesting interactions between avatars. Another aspect why touch could be so important refers to live action role playing (LARPing) and erotic role playing (ERP). The porn industry is huge in VR and the interest for erotic and pornographic content is huge. During virtual raves, ERP'ing is very popular. There are specifically designed 'sex avatars' which carry extra body features to engage in ERP'ing. The problem might be that one cannot get laid on a virtual race, but that is not completely the case. One can experiment with virtual erotic and sexual experiences. On virtual raves a lot of people want to pet each other and lay down cuddling in front of mirrors. Some people like it to be held tightly by another avatar. Ravers will ask one to join them in a lapdance. Actually, there are a lot of private rooms in many vrc worlds and virtual raves that can be locked from the inside, so players can have a private space close to the venue. specific discord servers such as Pussy Squad³³ discord servers focused on erotic virtual raves. There are a lot of different sextoys that can be implemented with the use of mods to have (partial) erotic and sexual experiences with avatars or people all over the world. Teledildonics or cyberdildonics is the name coined for virtual sex toys using technology to mimic and extend human sexual interaction (Howard Rheingold, 1991). An example might be the development of areas on an avatar that suck or prosthetics that are being sucked. In the extent of this one could think about virtual rape. People have witnessed control of their avatar by another person, or have the feeling they have been harassed and their (digital) embodied integrity has been damaged by certain activities (Strikwerda, 2015).

Fashion and future of the body in the virtual rave scene of VRC: OSC and virtual influencers

Eventually it might be interesting to look at fashion in the virtual rave scene of VRC. Fashion refers to how avatars present themselves, what they wear, how they look like, what species they are, what practices they perform, what their behavior is, and so on. This might influence social cohesion in and between communities. It also serves as an influencer for status rank in VRC and the virtual scene. In VRC and the rave scene some major trends of avatars can be seen immediately. The most known within and outside of communities are the anime girls, the furries and cyborgs. In chapter two one of the quotes also mentioned: eboys, Lollis, e-girls, thoths, game avatar, furies and pop culture avatars. These could be subdivided for example under anime girls, you have e-girls, lolli's, thoths, and so on (Anonymous, Long interview).

A lot of players play as anime girls or furries. Anime girls refer to Japanese like characters from comics (manga) or cartoon series (anime). There are whole communities of them. In the virtual rave scene you will see almost half of the players using these kinds of avatars. Often they try to be cute and beautiful. They have an erotic component in them and a lot of players use them to ERP. Furry communities have developed more recently. Furries refer to enthusiasts for animal characters with human characteristics. These can often be

³³ Pussy Squad HQ: <https://discord.gg/pshq>

cartoon-like and often have a moveable tail. Often these have interesting interactive textures to mimic fur. Cyborgs relate to all machine and robot-like avatars. Of course, there exist other avatar types than these, but often a combination of these three will cover a lot of ravers. Also combinations of all three within one avatar exist, for example a pink furry robot. More recently also 3D replica scans that can be performed with a smartphone, are used to map real-life objects and people into avatars as well.

Another interesting feature to mention here can be the role of virtual influencers. These can present the latest possible wares; features and avatars altogether. There is even a business in selling avatars and avatar related content. Outside of VRC one can find influencers on Twitch, Youtube, Instagram, faetwitch, Vtubers, and so on. Another example of virtual influencers are machines run by AI that generate their own content on the basis of some implemented code (Dudenaite, 2019).

A final interesting thing about fashion and avatar development is the recent use of Open Sound Control (OSC). It's a protocol originally intended to allow communication between audio devices and controllers for musical performances, but has capabilities to make weird interactive things. For example, shaders that react to your heartbeat, facial or eye recognition, or tail movement with a joystick, and so on. Other possibilities are to use the gyro sensor of your smartphone to move your eyebrows or let your ears be moved by playing on a drum pad. There is a lot of control of parameters. You can change pixels, colors, shapes, and so on. This way people can create special features on their avatars such as tattoos, glowing outfits, body modifications, and so on (VRChat, 2021).³⁴

3.2 Virtual Identity: Who are you?

After having looked at embodied aspects of experience of a virtual rave, this text will look at some aspects of identity concerning virtual raves. As stated before, cyberidentities and cultures are linked to the real and embodiment. Online interaction might temporarily go beyond “real” identities and bodies, but as studies have shown (Boler 2007; Burkhalter 1999), people in cyberspace use their real-life experience to make sense of, evaluate, and respond to online situations.(Nayar, 2010, p. 81).

Identity can refer to an embodied and psychological self-conception of a person. One can also speak of group identity, referring to the identification or self-conception held in common by a group of people. In social sciences, the term has also been extended to encompass social identity and cultural identity, which refer to the identification of self with a specific social position or cultural tradition. The term can be problematic, because it can imply a fixed or stable quality of a person or group. Therefore It may be more interesting to speak about the process of identification, than an ‘identity’ (Seymour-Smith, 1987).

Embodied digital identity

³⁴ One interviewee brought to attention that fashion in VRC and development of new technological gadgets/features is not necessarily linked directly.

With the four media bodies mentioned above one can think about embodied digital identity in the virtual world. If one looks at the device body one can see that digital or virtual identity is experienced differently when playing through a desktop versus headset versus full body tracking. A lot of people identify with their setup. People are talking a lot about their setup. This is (often) not to brag, but to explain and share part of their experiences. If one says he played on this or that setup, a lot of players understand the difference in feeling or identity between different setups.

The implicated body or the body that is represented in VRC by the user is important for the experience of identity as well. For this reason we discussed the use of avatars in depth. Avatars are extremely important for one's identity in the virtual rave scene. Users embody avatars to express their identity. This is reflected in that people talk about avatars all the time in VRC. There are even avatar worlds to choose between avatars. Another aspect is that one can clone avatars from others if one has their permission or if they have their avatar settings on public mode. In VRC this can be done by opening the display menu on your arm and aim at the player to show their information. An embodied personality in the form of an avatar shows a certain kind of presentation of what or how somebody wants to be. In VRC they are fully customizable. Therefore people can express themselves in endless unique ways. Identity in VRC has become fluid and adjustable. One can be anything one wants to be at any given time. One can change their avatar constantly. This takes away restraints as one does not have to consider their own physical body as a form of display. People do not necessarily identify with one avatar, though many players prefer one or several main avatars. People seem to have the tendency to choose avatars that resemble parts of them in real-life or look more like them, for example humanoid (Nowak & Rauh, 2005).

We can also see embodied digital identity via body as implicated. The way one leaves traces on the internet, VRC, Discord, and other digital media is also important for embodied identity. In VRC one sometimes hears of cases of identity theft and avatar theft (Lake, 2020). Some people care and some don't, if that happens. An interesting case was that an interviewee showed a case where one of his personal or private avatars was copied with authorization. This happens by specific players or bots that hop around worlds and use mods to rip the data of high quality avatars they see. These are later sold on the internet hundreds at a time.³⁵ The question remains what marks of us are out there when we partake in the virtual rave scene of VRC. We have left messages and information of our experiences in Discord communities, people have taken picture where you might also be on, you might pop up in a youtube video of a vlogger, or your self-made avatar may end up on a trading website, your profile names and info, the content you made. People can share material or personal information that was recorded of you. You have no full control about this part of your (digital) identity, but one is indirectly defined by these remains.

The question remains how your virtual identity has effects on your physical identity in the real world, and vice versa. I have heard multiple stories of people who are straight or heterosexual and let go off these constructs once they entered VRC and the virtual rave scene. The reason was that in VRC it does not matter that you are male or female in the real world. Most people only look at your avatar. Surprisingly enough, most people stop to care if a man in

³⁵ for example, Ripperstore: <https://ripper.store/avatars>

a girl anime avatar gives them a lap dance. They don't bother that the voice of a male is connected to a female avatar. VRC takes away many of the social breaks of our society. Norms and values can get questioned much faster if you are spending lots of time in VR regularly.

One can conclude that there is definitely an ambiguity between the personality one has in the virtual rave scene versus the personality one has in the outside world. The avatar will always stay a masked identity, another personality. Almost nobody shows themselves as how they look in real life, and even if they did, it would not be the same. Earlier for importance I mentioned how people make realistic 3D scans of themselves to mesh with avatars. Other people find this too realistic and uncanny. One interviewee came to this conclusion during one of our talks:

"And the other thing that i'm attracted to is the idea of being masked, being in an avatar, but at the same time in such a world especially i would also think it would be cool to be there as myself, with my own 3d rendering, and stuff." (Anonymous, Medium interview)

Performative identity: identity as performance

The performative body can be related to performative identity. In his work Ulrike Schultze questions how embodied identity is performed in virtual worlds. Identity is not the reason or essence for certain acts and performances, but these performances constitute an identity. Performativity goes against essentialism and representationalism. One's actions, performing and behavior create one's identity. 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 (Lagerkvist, 2017). In the case of the avatar in VRChat, we can also add digital mediated practices to the concept of identity. People can do whatever they want in the virtual world and be whatever they want. The VRC community supports this idea of free identity completely, and is supportive. The virtual rave scene might be considered one of the playground of these communities to experiment with new identities.

Performative identity can also be related to gender performances. In VRC there are a lot of transgender and queer people. VRC has a big lgbtqia+ community, and the reason might be that gender can be performed here as well. Gender is often seen as a construct. In VRC one does not have to think about their own gender, or one can do it in a free way. A lot of men play with anime girls, but players can choose any creature and gender. A central concept of the theory is that your gender is constructed through your own repetitive performance of gender. If one agrees with Butler then gender becomes an unstable system, not from something inherent in our bodies but results from cultural practices that are intelligible/readable as

gendered. Performativity of gender is a stylized repetition of acts, an imitation or miming of the dominant conventions of gender. To say that gender is performative is to argue that gender is “real only to the extent that it is performed” (*Gender Trouble*). It is interesting to note that many users notice this breaking open of boundaries and stereotypes about gender, taking some of the freedom with them to the outside world (Butler, 1990).

Subculture identity: cyberpunk

The virtual rave scene in VRC is a form of subculture. Also the (virtual) rave scene in general, the communities of VRC, or even VR users in general can be considered a subcultures. Subculture can be defined as:

“usually a group of practices occurring on the fringes of mainstream culture, and frequently in opposition to it. These could be cultures formed around particular political ideas, fashion, or taste in music. Subcultures are unofficial cultural formations that seek to escape or subvert state and corporate power, often through the use of similar technologies. With the advent of ICT’s subcultures have taken to online lives and communities that work at breaking the corporate stranglehold of information, software, and cultural meanings.” (Nayar, 2010, p. 88)

In other terms, subcultures are social groups with cultural forms and practices used for the political purpose of opposing high or dominant culture. Cyberspace enables the existence of subcultures and countercultures. Cybercultures and the virtual rave scene are essentially a set of social practices that use computer and digital technology. Membership and peer recognition in subcultural groups solidify identity. Subcultural practices often evoke moral discussion, social consternation and oppressive measures by society and the state, because they are seen as being subversive. Each subculture portrays a unique set of principles to indicate a particular set of beliefs or practices. The style chosen by each subculture consists of artistic expression traditionally not called art. Each group chooses elements of language, music, and fashion to articulate meaning.

We can also make the connections between the identity of underground rave culture in VR and identity of the underground scene of rave and punk. Virtual raves are the expression or articulation of an underground scene in VRC. VRC and the virtual rave scene are not (directly) dependent on big music industries, are not (yet) commercialized, and (try to) stay under the radar of commodification and capitalism. There are no big profits gained directly from these virtual raves. In this view they are also contrasting with club culture. A virtual rave is also punk or underground, in the sense that the scene is built similarly built up of many people who find no fitting place in society, as well as non-conformists, alternative thinkers, hackers, rebels, anarchists, and DIY creators. Content is user-generated and user-regulated in the form of communities. The subculture is more about the community and the music. Virtual raves are accessible and socially inclusive. VRC might be quite unique in this as there are several other examples where virtual clubs and raves get commercialized, are exclusive, and are not free. Of course, it cannot be denied that the identity of the scene is also connected to ‘party drug’ use, just as the punk or rave scene. Finally an interesting relation between the identity in the subcultures of punk and VRC rave scene, might be the mix of multiple unrelated elements into

a style. Here we can refer to Hebdige's work on the cultural meaning of style regarding punks, mods, rastafari, and so on (Hebdige, 1979).

In the 1960's punks gained attention, because they chose to dress and behave in a way that gained them attention. The punks also made it a point to combine elements from a variety of subcultures. The punk style clearly displayed the various elements but there was no concrete relationship between the ripped T-shirts and pogo dance style, which involved jumping up and down in place.. Taken separately the two acts had nothing in common but taken as a whole there was a relationship between them as characteristics of punk style." (Hero Course, 2016)

In VRC and the rave scene one can find a mixture of all kinds of clothing, avatars, worlds, features, or better said, styles. The number of unfitting elements and weird combinations of things to see, make it all seem a bit chaotic, plural and fragmented. There is not one style of clothing, avatars, speaking, or behavior in general. The virtual rave scene is a mixture of all kinds of styles.

Following up on punk, the subcultural identity of the VRC rave scene can also be connected to the subcultural identity of cyberpunk cultures. Cyberpunk originated as a subgenre of science fiction literature, but can also be defined as a particular kind of subculture and style. As a genre it features advanced science and technology in an urban, dystopian future. On one side you have powerful mega-corporations and private security forces, and on the other you have the dark and gritty underworld of illegal trade, gangs, drugs, and vice. In between all of this is politics, corruption, and social upheaval (Neon Dystopia, 2018). Cyberpunk is also a culture with an attitude and a distinct style. Anti-authoritarian, brand-averse, tech-literate; these are just some of the qualities you may find in a cyberpunk. Earlier in this text, William Gibson and Neil Stephenson can be seen as pioneers of these. We can break down a basic definition of cyberpunk by dissecting the word itself. Cyber refers to technology, and is most often associated with cyberspace (this word was originally coined by William Gibson himself), and cybernetic enhancements to the body. But this can also refer to other technologies such as biotechnology and nanotechnology for instance. Punk, on the other hand, refers to the people and the attitude that cyberpunk has. Protagonists in cyberpunk tend to be outsiders, anti-heros, outcasts, criminals, visionaries, dissenters, and misfits. The underlying aspect that applies to all of these groups is their subversive nature. An interesting game that boomed last year was Cyberpunk 2077.³⁶

Club and rave identity: Who's at a rave?

If we look at the difference between club and rave identity, there are several similarities and differences that can be noted regarding the virtual rave scene in VRC. Club culture identity is related to people who regularly go clubbing. Clubs are fixed places one can return. They are more predictable than ravers, in the sense that club events and practices are authorized and cannot get interrupted easily. Venues can be returned to later and can have a comforting recognizability. Clubbers may prefer this certainty. Another feature might be the surroundings. Clubs are almost always indoors, raves are mostly outdoors. Clubs also connect to mainstream

³⁶ Cyberpunk 2077: <https://www.cyberpunk.net/be/en/>

culture. There are proper places to sit and drink. Clubs are commercial, capitalistic, neoliberal and often organized by big companies and industries: club entrance can be pricey and often VIP tickets are offered as well. This means clubbers often plan more beforehand, because tickets can sell out fast. Often there are specific styles of clothing people need to wear for certain kind of clubs (dress code). The styles are often more 'chic' than ravers. It is conformistic and a form of socially approved and authorized partying normally not associated with extreme drugs use or sex. Therefore club identity is seen as more moderate and less extreme than the rave scene. Often other kinds of music genres are being played that are often less experimental. It is often less about the music and more about social status and prestige.

In the virtual rave scene one can see similar patterns between club and rave culture. However, In VRC the distinction is not that big, because the platform already has an underground vibe, based and generated by users and communities. In VR you have big club productions that are more commercial, mainstream, generic and centralized for the bigg mass public of VR. Aside from this you have the niche of virtual clubbing, namely virtual raving. Often the identities connecties to this are more lowkey, niche and underground. One will not easily find people under eighteen in a virtual rave scene. This is because communities are regulated and most clubs or venues are only for. Underaged kids or teens are not welcome for the reason that it cannot prevent adult topics such as ERP'ing or drugs. Often rave venues do not allow ERP'ing directly, meaning people have to go to another world. I don't know of any case where underaged people got into parties. Regarding drugs I have not witnessed any direct policies. There are people who only play intoxicated and have a high drug use during virtual raves. Popular drugs are 'party drugs' such as amphetamines (cocaine, ketamine, XTC, MDMA...). In the rave scene you find a lot of people who don't have a lot of experience in VRC or the virtual rave scene. Another part of users are veterans, who have been there since the start and have been following the rave scene almost daily. They have spent thousands of hours in VRC.

CONCLUSION:

Are virtual rave(r)s here to stay?

This text studied virtual rave culture on the basis of three questions relating to where, what and why. In chapter one this text showed how raves can be accessed. This focus lay on hardware, software and wetware. material and technological preconditions, the workings of VRC and Discord, as well as virtual reality (internet, cyberspace, hyperreality and metaverse). It became clear we had to focus on the digital communities in Discord and the social settings of VRC. Important for virtual raves, especially in VRC, is that all worlds, venues and avatars are self-made and self-regulated. In chapter two this text showed what virtual raves are and how they are experienced. First a short development of VR and VRC was presented. In a second part virtual raves were studied in a comparative semiotic analysis. Thirdly, this text presented my experiences of a virtual rave and the experience of other people in the virtual rave scene. In chapter three this text looked at the cultural meaning of virtual raves from the perspective of embodiment and identity formation. This way this text has focused on embodiment, identity formation and community building in the virtual rave scene of VRC. Hopefully this paper was able to give a glimpse of virtual rave culture in VRC.

Of course research does not stop here and many questions are left unanswered. There are many possibilities for further research this text has not discussed such as detailed workings of specific Discord communities, extended workings and avatar modifications for VRC, and specific activities and people during virtual raves, cases of identity theft, virtual rape, virtual influencers, furries, animegirls... . Another thing this text has not spoken about is the dark side of VR, VRC, Discord and the virtual rave scene. A lot of under the radar activities are happening in exclusive clubs. Here one could refer to the ‘deep’ or ‘dark’ web as well. In this text we also have not discussed virtual rave culture outside of VRC and Discord. The future of virtual music industries, and maybe music industries in general, is rapidly changing. There has been a shift to an experience economy, rise of major digital turns, boom of gaming industries, explosion of e-porn and expansion of the metaverse. We see a neverending convergence between the real and the virtual. In an intermedial and remediated world, does one become posthuman?

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Virtual clubs, festivals and communities

Altspace: <https://altvr.com/>

Axie Infinity: <https://axieinfinity.com/>

Club Loner: loneronline.com

Club Poseidon: <https://discord.gg/XBB822xyAV>

Club Rizumu: <https://www.rizumu.club/>

Club Shelter: <https://sheltervr.club/>

Cyberpunk 2077: <https://www.cyberpunk.net/be/en/>

DanceDanceVR: <https://ddvr.club/>

Decentraland: <https://decentraland.org/>

Fortnite: <https://www.epicgames.com/fortnite/en-US/home>

Ghost Club: <https://xn--pckjp4dudxftf.xn--tckwe/>

Lost Horizon: <https://www.losthorizonfestival.com/>

Minecraft: <https://www.minecraft.net/en-us>

Muzzfest: <https://www.slyfest.com/copy-of-home>

Nvidia Omniverse: <https://developer.nvidia.com/nvidia-omniverse-platform>

Open Sea: <https://opensea.io/>

Partyhub: <https://discord.gg/S8BXSdq7tg>

Porter Robinson Secret Sky Festival: <https://secondskyfest.com/>

Pussy Squad HQ: <https://discord.gg/pshq>

Rec Room: <https://recroom.com/>

Roblox: <https://www.roblox.com/>

Sandbox: <https://sandboxvr.com/>

Second Life: <https://secondlife.com/>

Slyfest: <https://www.slyfest.com/>

Space Safari: <https://space-safari.com/>

Tomorrowland: <https://www.tomorrowland.com/home/>

Virtual Relics, <https://discord.gg/virtualrelics>

Voxels: <https://www voxels.com/>

VRCC: <https://vrcc.events/>

WaveXR: <https://wavexr.com/>

Zenit MMO: <https://zenithmmo.com/>

Interviews

Anonymous, *Long interview*, taken on 25/05/2022, in VRChat [See attachment].

Anonymous, *Medium interview*, taken on 15/04/2022, in VRChat [See attachment].

Anonymous, *short interview*, taken on 16/03/2022, in VRChat [See attachment].