**Exploring The Social Dynamics of the Social Virtual Reality (SVR) Platform VRChat**

Kevin Martinez

Department of Communication, Cornell University

COMM 6830: Qualitative Research Methods

Prof. Lee Humphreys

May 20, 2024

**Abstract**

Social virtual reality (SVR) platforms are emergent online spaces that allow users to connect through avatars in virtual worlds using virtual reality (VR) technology. Compared to other networked social media platforms, SVR allows for heightened immersion and presence through avatar embodiment. As a result of the growing popularity of SVR, some scholars have begun to investigate how these affordances of immersion, presence, and embodiment impact social interactions and activities on these platforms. This current study explores the social dynamics of the popular SVR platform VRChat through semi-structured interviews (n=16) with active users. In particular, I investigate 1) what activities and interactions on the platform lead to meaningful experiences and 2) what features or affordances of the platform might be used to foster toxic behavior and interactions, as well as what moderation tools exist to mitigate these. The results suggest that users engage in a variety of activities on the platform, including exploring different worlds (world-hopping) and socializing in front of virtual mirrors (mirror-dwelling). They also suggest that users explore aspects of their identities and find community through both avatars and community-based worlds. Finally, users had mixed opinions on the state of moderation in the game, but all held a consensus that young children (under 13) should not be on the platform.

**Introduction**

New epochs of technological development have introduced new forms of networked communication. Mobile phones transformed where, when, and how we communicate with others (Humphreys, 2005; Ito et al., 2006). Enabled by the advent of the internet, early computing technology introduced online chat-rooms and virtual worlds such as Second Life, providing new opportunities for connection, identity exploration, and community-finding (Boellstorff, 2015; Martey and Consalvo, 2011). More modern networked computing technology such as Skype and FaceTime has introduced video-chatting technology, allowing people to communicate virtually face-to-face, typically through the use of a front-facing camera on a smartphone, tablet, or computer (Casarico, 2013; Merchant, 2016). The COVID-19 pandemic exacerbated the use of these networked technologies due to the risk of communicating face-to-face (Romero-Ivanova et al., 2020; Volmar et al., 2023). One new emerging technology that has promising capabilities for transforming how we communicate is immersive virtual reality (IVR). Compared to smartphones and computers, IVR allows for increased presence, immersion, and embodiment (Hudson et al., 2019; Kilteni et al., 2012; Tham et al., 2018). Collectively, these affordances have the potential to blur the lines between what we perceive to be reality, rather than 3D-rendered computer animations. Additionally, technological advances have made virtual reality (VR) headsets increasingly more affordable and accessible in the past five years. As a result, a swath of applications have and continue to be developed for VR technology including some for educational purposes (Jensen & Konradsen, 2018; van der Meer et al., 2023), cooperative work (Wexelblat, 1993; Bjørn et al., 2021), and socialization (Curtis & Nicholas, 1994; Moustafa & Steed, 2018). The focus of this paper is on the social virtual reality (SVR) platform VRChat, in particular how VRChat's features and affordances shape the social dynamics and user

experiences on the platform. In particular, I am interested in exploring what makes social interactions in SVR meaningful and sustaining for users. Therefore my research questions are as follows:

**RQ1:** *What kinds of activities and social interactions occur on VRChat?*

**RQ2:** *How do users leverage the features and affordances of VRChat to foster meaningful interactions?*

**RQ3:** *What (if any) kinds of features of VRChat do users exploit to foster toxicity and negative interactions and what kinds of moderation tools exist to mitigate these?*

**A Brief History of Virtual Worlds**

Although virtual worlds have been around since the late 1970s, they became more popular during the late 1980s and early 1990s, when personal computers (PCs) were rising in commercial availability. The earliest virtual worlds existed in the form of multi-user dungeons (MUDs), which are 2D text-based computer programs with a simple user interface (UI) that is primarily controlled by a user's keystroke input. Compared to more modern virtual worlds, MUDs are extremely primitive both in terms of graphical fidelity and user interactivity in the world(s). However, they represent the core elements that more modern virtual worlds share. They place the user in a network connected with other users in real time via peer-to-peer (P2P) networking, allowing them to interact through the elements of the program UI. Each user connected to the network represents a player, with their own unique ID visible to other players. In addition, the chat feature that many MUDs included allowed for users to exchange messages from client to client. Despite the intent of the games being for players to compete with each other as they traversed through the game content, many users instead decided to simply leverage the chat feature to socialize with each other in MUDs, ignoring the content of the game altogether

(Ito, 2013)  As a result, MUDs quickly became networked virtual spaces known for socialization much like the AOL chat rooms popular around the same time.

Rapid evolution in computer graphics technology around the late 1990s and early 2000s led to the development of new virtual worlds that were exponentially more advanced in terms of visual fidelity and interactivity, most notably by incorporating 3D rendered graphical models. Perhaps one of the best known virtual worlds to exist is Second Life, which was founded in 2003 by Linden Labs. Second Life was the first virtual world of its kind to introduce user-generated content (Lastowka, 2007), which greatly expanded the possibilities for social connection and cultural production (via world creation and avatar customization) (Boellstorff, 2015). Virtual worlds like Second Life introduced two key features that are essential to all modern virtual worlds: worlds and avatars. While MUDs placed users in a pre-built 2D environment that was not customizable to the user, Second Life enabled users to build a 3D environment from scratch. This level of customization enabled users to envision and create a plethora of different virtual destinations that users could bounce between, such as personal houses and apartments, bars, comedy clubs, and so on. In addition, Second Life also allowed for the customization and personalization of virtual avatars, which is how the user is represented in virtual worlds. Rather than being identified only by a username in a text-based chatbox, users of virtual worlds like Second Life could express aspects of their corporeal identities to others (Schultze & Leahy, 2009). Other popular virtual worlds developed around this time are massively multiplayer online role-playing games (MMORPGs) like World of Warcraft and RuneScape, which offer some customization options but are significantly more limited than virtual worlds designed for social interaction like Second Life.

**What is social virtual reality (SVR)?**

Social virtual reality (SVR) refers to platforms that host virtual worlds accessible via virtual reality (VR)-enabled devices. The most popular VR-enabled devices exist in the form of head-mounted display (HMD) headsets, which typically strap to the user's head placing a screen directly in front of the user's eyes. Some popular VR headsets include the Meta (formerly Oculus) Quest line (e.g., Rift, Quest 2, Quest 3), HTC Vive, and Valve Index. As mentioned earlier, VR technology differs from other media such as 2D computer-screen display primarily through its affordances of immersion, presence, embodiment. When looking through a HMD loaded with a virtual world, a user's field of view (FOV) is completely replaced by the headset display—meaning they can longer see where they are in the physical world. Combined with the tracking sensors that smoothly update the displayed image anywhere from 90-144 times a second (90hz-144hz) according to the user's head and hand movements, VR allows users to experience virtual environments in ways that can 'trick' the brain into thinking they are actually present and embodied in that space. Like traditional virtual worlds, users are virtually represented in virtual environments as avatars—which are often customizable to the user's liking. Compared to 2D-display based virtual worlds, on SVR platforms users view the virtual environment through the first-person perspective (FPP) of their avatar. As a result, user's feel increasingly embodied in their avatar: when they look down they see their body and (sometimes) legs and when they wave using their controllers (which also have built in tracking sensors), they control the arms of their virtual avatar enabling the ability to convey non-verbal communication cues such as gestures. Some more advanced VR headsets include built in face and eye-tracking sensors, which allow users to control the facial features of their avatar through facial expressions and gaze. Together, these unique affordances of VR technology that lead to increased feelings of presence and embodiment are the cornerstone of experiences on SVR platforms compared to less

immersive virtual worlds displayed on a 2D computer screen such as Second Life and World of Warcraft. Some SVR platforms currently accessible to the general public include VRChat, Meta Horizon Worlds, Rec Room, Bigscreen, NeosVR, and ChilloutVR. The focus of this paper is on the platform VRChat, primarily because of its popularity, accessibility (more on this in 'Methods'), and customizability compared to other platforms.

**Existing Scholarship on SVR Platforms**

While there is a substantial body of literature investigating communication in less-immersive virtual worlds such as Second Life, research on SVR platforms remains fairly limited—likely due to the relative novelty and accessibility of these platforms to the general public. However, a handful of studies have been conducted recently (over the past five years) focused on understanding user experiences on SVR platforms. A substantial majority of current scholarship on SVR platforms has emerged from the Gaming and Mediated Experiences Lab at Clemson University (directed by Dr. Guo Freeman). One article in particular: "Falling Asleep Together: What Makes Activities in Social Virtual Reality Meaningful To Users" (Maloney & Freeman, 2020) was particularly inspiring for this current project. This project utilized semi-structured interviews (n=30) with users of SVR platforms such as VRChat, RecRoom, Meta Horizon Worlds, and ChilloutVR and asked participants to reflect on the activities and interactions on SVR platforms that they found particularly meaningful and engaging. One of the primary findings of the study was that users of SVR platforms engage in a variety of mundane, everyday activities in new and creative ways: most notably falling asleep in virtual worlds (called 'sleep worlds'). Participants expressed that these mundane activities, which also included simply chatting with other avatars in public virtual worlds (more on public vs. private worlds in the 'Results' section), were beneficial to their mental health and allowed them to practice social

skills that they otherwise might be too shy or anxious to do in physical, non-mediated and corporeal interactions. Another article, "'We Cried on Each Other's Shoulders': How LGBTQ+ Individuals Experience Social Support in Social Virtual Reality" (Li et al., 2023), investigated how LGBTQ+ identifying users of SVR find community and explore aspects of their identities (e.g., gender, sexuality) through SVR-mediated interactions. The study found that social support for LGBTQ+ identifying users manifested not just in acceptance of user avatars and appearance, but also through information sharing regarding mental and physical health resources and safe spaces/ worlds/ communities to become a part of. Overall, these results suggest that users of SVR platforms are able to find considerable community, are able to explore aspects of their identities through avatars and social networks, and engage in everyday activities in new and exciting ways.

Finally, the article "(Re)discovering the Physical Body Online: Strategies and Challenges to Approach Non-Cisgender Identity in Social Virtual Reality" by Freeman et al. (2022) looked specifically at how users leverage avatars on SVR platforms to explore and express their gender identities. In particular, while they found that avatar embodiment and personalization was significant in helping these users feel more comfortable in their own bodies as well as within their communities and friend groups, they also found that users commonly faced anti-LGBTQ+ rhetoric in various interactions with others. These results suggest that online virtual worlds are subject to the same kind of hateful rhetoric and discourse as other online spaces such as X (formerly Twitter) and FaceBook.

## Methods

### *Interviews*

For this current study, I follow similar methods to those used in the studies mentioned above. In particular, I conducted semi-structured one-on-one interviews (n=16) over the video-conferencing platform Zoom, which lasted on average between thirty minutes and one hour. Interview materials were approved by the university Institutional Review Board (IRB) prior to data collection. All interviews were transcribed using Otter.ai and were coded using the software Atlas.ti. Interviews were the chosen method primarily because of the nature of the research questions. Rather than simply observing behavior on SVR platforms (which might help me understand categories of social activities/ interactions), I wanted to understand what kinds of subjective meanings people attach to these interactions. This kind of affective inquiry, I believe, is best done through semi-structured interviews. As Fontana & Frey (2000) suggest: "...the focus of interviews is moving to encompass the *hows* of people's lives (the constructive work involved in producing order in everyday life) as well as the traditional *whats* (the activities of everyday life)" (p. 646). I specifically chose semi-structured interviews because I did not have any "preestablished categories" or codes (p. 653) that Fontana & Frey (2000) argue is more fitting to a structured interview setting. Instead, unstructured interviews would give participants more autonomy to describe aspects of their experience to the extent to which they feel comfortable, allowing for richer data to emerge "without imposing any a priori categorization that may limit the field of inquiry" (Fontana & Frey, 2000, p. 653). One consideration was whether to conduct interviews with participants in VR. Conducting interviews in a space or "territory" (Hammersley & Atkinson, 2009, p. 115) that the participants feel more comfortable in (such as their favorite virtual world) could certainly help them feel more comfortable and allow them to "organize the context the way they wish" (Hammersly & Atkinson, 2009, p. 116). However, the institutional review board (IRB) discouraged me from conducting interviews directly on SVR platforms for

security and privacy reasons. Despite conducting interviews over Zoom, a few participants were able to find a 'workaround' where they could stream their VR headset display through the 'screen sharing' feature on Zoom—allowing them to talk to me over Zoom while also in a virtual world. This allowed the ability to show me specific features of the platform (e.g., avatars, object interactivity) that I otherwise would have been left to speculate what they looked like and how they worked.

### Sampling & Recruitment

For sampling, I decided to use a purposive sampling method by recruiting participants via the VRChat subreddit ([www.reddit.com/r/VRChat/](www.reddit.com/r/VRChat/)). Specifically, I created a post to the subreddit asking for participants to either leave a comment or direct message (DM) if they were interested in participating in a study about social VR. Inclusion criteria included 1) at least 18 years of age; 2) at least six hours of experience in social VR; and 3) can speak English. While I also tried recruiting participants from other online forums/ communities such as Discord, I ran into difficulty due to the strict posting rules (e.g., no self-promotion) on these platforms. To get around this issue for posting on Reddit, I contacted the moderators of the VRChat subreddit and was given permission to post to recruit participants for an interview. Following Hammersley & Atkinson (2009), these moderators represented 'gatekeepers' to the community of VRChat users on Reddit and Discord, through which I had to negotiate access. One key strategy I used in this negotiation was stressing that my intentions are to learn from users' experiences to help design more equitable and safe social VR platforms for the future. Framing my inquiry in a way that conveyed positive intentions for the community may have helped in this negotiation.

I also considered convenience sampling via directly in public social VR worlds, however the IRB dissuaded me from this sampling strategy due to similar privacy concerns. While I

initially intended to sample participants across a variety of social VR platforms (e.g., VRChat, Meta Horizon Worlds, RecRoom), I did not receive any responses besides one from the Horizon Worlds subreddit ([www.reddit.com/r/HorizonWorlds](www.reddit.com/r/HorizonWorlds)). While I conducted this interview, I decided not to include the data in this paper as the remaining 16 interviews were all conducted with participants from the VRChat subreddit. Therefore, the transferability of these findings are limited, as well as the generalizability to other SVR platforms. In particular, I would argue that these results are generalizable to VRChat players who have a significant investment in terms of time and effort (e.g., avatar & world creation). Table 1 below summarizes the demographic data I was able to collect from participants. It is worth noting that VRChat currently has the largest player base with an average of 25,000 concurrent users ([https://steamcharts.com/app/438100](https://steamcharts.com/app/438100)) on PCVR alone (VRChat is accessible through both PCVR and standalone via the Meta Quest Store). This is substantial compared to other social VR platforms such as NeosVR and ChilloutVR, which each had an all-time peak at only around 1,000 players ([https://steamcharts.com/app/661130](https://steamcharts.com/app/661130); [https://steamcharts.com/app/740250](https://steamcharts.com/app/740250)). While no official statistics are available for the other platforms such as Horizon Worlds and RecRoom, some have estimated they only have around 900 daily users (Wise, 2023).

**Table 1**

*Demographics of participants*

| Age | Gender | Sexual Orientation |
|---|---|---|
| Range: 19-39<br>Average: 26 | Cis male - 8<br>Cis female - 2<br>Trans male - 1<br>Trans female - 1<br>Non-binary - 1<br>N/A - 3 | Straight - 8<br>Gay/ bisexual - 5<br>N/A - 3 |

**Findings**

**Common Activities on VRChat**

Participants expressed engaging in a number of activities on the platform which were primarily based on the virtual world that their avatar loaded into. These worlds ranged from simple 'hang-out' worlds such as bars, night clubs, and comedy clubs, to more activity-based worlds such as escape rooms, story worlds (where users play through a narrative), puzzle worlds, and sleep worlds (worlds where users relax and sleep). Some participants explained that they tend to stick to certain types of worlds depending on their interests and friend group, while others mentioned that they enjoy experiencing a variety of activities via 'world-hopping'.

Besides these world-specific experiences (that are somewhat segmented depending on interest), participants shared two VRChat specific activities/ customs that many users engage in across the platform: 'world-hopping' and 'mirror-dwelling'. These two activities represent larger phenomenological aspects of VRChat that are shared among the user base more so than specific world-based experiences. Therefore, the focus of this first section is on these two platform-specific phenomena.

***'World-Hopping'***

Many participants explained that they spend the majority of time on the platform 'world-hopping' or bouncing between different genres of worlds to experience an array of activities and social interactions on the platform. P4 (32, Non-binary) explained 'world-hopping':

> The focus of everything I do is world-hopping, which is essentially, you know, looking at the worlds list, and seeing what cool things we can find. That can range anywhere from like horror maps to beautiful exploration worlds to abstract things to whatever. So my focus is less so on the social aspect, but more so on, you know, seeing what people have created. And in doing that, I do end up getting into the social aspect of other people who are interested in that, there's a pretty large world-hopping community of people who like to explore.

Another participant, P9 (22, Cis male), explained their experience with world-hopping:

> We like to call it world-hopping, or world exploring, we'll just start hitting random worlds and go explore them…you'll find some really crazy stuff, some weird stuff. That's kind of our bread and butter…We also play a lot of the social games like they have Among Us in VR or murder mystery…'would you rather' or 'never have I ever'...We also spend a lot of time in these 'comfy' worlds, like, you know, a beach full of pillows, and like little fireplace and just chill and chat…

Finally, P8 (27, Cis female) talked about the vast array of worlds to choose from and how their friend group is based around 'world-hopping':

> And now the group that I joined is an adventuring group, where every so often, every week or two, we all get on and we just go explore worlds that not a lot of people have gone to. Ones that are kind of like underground, or ones that don't have a lot of visits, and you never know what you're gonna find there. Everything from like games to just really cool artistic worlds and music worlds. And like there's just so much to do. And I especially like it with Fridays now, I tend to get on a little later. And me and the boys, we go do some puzzle maps, and we just do puzzle maps and go world hopping for a little bit. And that's how we like.. hang out…Like after 3000 hours, I could still go out there and find 60 different worlds tonight that I have never been to.. that I've never experienced.

### *'Mirror-Dwelling'*

'Mirror-dwelling' is another common activity that many users of VRChat regularly engage in across different worlds. Perhaps mirror-dwelling is best defined by P16 (20, Cis male):

> Mirror-dwelling is probably one of the main and most misunderstood facets of VRChat specifically. Basically, what will happen is in every, like I'm talking every single world, you will go and you will find most of the people in front of the mirror while they're talking. And people who don't play the game don't understand it. And by the time you get around to understanding it, you're doing it yourself and you don't know why…So in real life if you're in a group of people, like what do you do when you talk to them? You look at them, and you talk to them or whatever, that's fine. But in VR, you have to take into account that you have this thing strapped to your face, and looking around every time someone talks, you know, is sort of cumbersome. And not even that, but you have to figure out a seating arrangement if you're doing that, you know, like, if everyone's in a circle, that's fine. But a lot of times everyone will be in a line. And it's like, you know, I have to lean forward and back to try to see someone all the way over there who's talking and I can barely hear them correctly. And, you know, I've got this five pound thing strapped on my face that's gonna get slung off every single time. If two people are talking next to me, what the hell am I supposed to do now? So, you know that, what people do is they sit in front of the mirror, so they can see everyone clearly who's talking next to them.

And it's also a good way to see how you look, you know, because in real life, you could just look down and see how you look pretty much, you know, correctly. But in VR, maybe not. Sometimes your controller will lose tracking [and] your hand will be like off in the sky, and you won't notice unless you're looking in the mirror. Especially people with full body [tracking] there's lots of issues with that. So, you know, it's sort of off-putting if you're talking to someone and their leg, just all of a sudden goes behind their back and the person doesn't notice. So it's more so just having tabs on where your virtual body is…it's also just a way to look at yourself and other people while you're talking in a group and it's a lot easier and less cumbersome for people. So that's sort of why I guess we do it. And then the people who don't understand it just call us mirror dwellers…

One participant, P8 (27, Cis female), further explained how some of their fondest memories in

VRChat occurred while socializing of in front of a mirror:

There's something called mirror-dwelling, where you have a lot of furries or people who have put hours and hours and hours into their avatars, and they like to sit in front of the mirror, and they like to talk to people while they're able to like see themselves. And those are some of my most impactful memories… But like sitting in front of a mirror with somebody and just talking about anything.. talking about, like they had a rough day, you know, letting them vent that out, talking about it and like sharing your own experiences with this complete stranger, you're never gonna meet them again. Or maybe you will, maybe you guys become friends. There's just something about that that is unmatched.

Finally, P15 (age & gender N/A) mentioned how people utilize mirrors in VRChat for different

reasons:

Mirrors on VR are like a big thing. A lot of people go in front of [the] mirror for some reason, it depends on the person. Some people go there to check their avatar, that's the main reason I use mirrors when I want to calibrate my full body tracking or check for detail on my avatar and change the outfit. Some people just like to cuddle in front of a mirror so they can see the person like the face of a person and at the same time they can see themselves like talking and see their facial expression because when you move your fingers in VR it can toggle expression, different ones so some people use the mirrors to check and see if they don't make like a weird face because sometimes you can have like an open mouth, for example, imagine it's like a serious conversation and you like have a funny expression that is not like correct. Like me sometimes I use the mirrors to practice my dancing so I can see the movement and I can also with one of my VR application[s] I can have a YouTube video playing and I can practice, for example, choreography and I can just watch a video at the same time.

**Exploring Identity & Finding Community**

The most common themes that emerged from talking with participants were 1) VRChat is

a platform where they are able to explore aspects of their identities (i.e., gender, sexual) and 2) is

a platform where people are able to find community around these identities and their interests.

Identity exploration and community finding were mobilized both through avatar customization

and embodiment, as well as through community-based worlds where like-minded people

congregate and network.

***Through Avatars***

Avatars are critical in allowing users on VRChat to express themselves and explore

aspects of their identities that were previously unexplored. P4 (32, Non-binary) wonderfully

sums up this experience:

> Essentially you can be whoever you want, you can display yourself however you want.
> And for a lot of people that's big on, you know, finding their identity, discovering
> themselves. And the fact that you don't really have to put up walls or present yourself a
> certain way, you just be who you want to be. And I think that leads to more genuine
> interactions with people because you're not necessarily putting up a wall as much as you
> would face to face. You know, you can have someone running around as a toaster next to
> like, a super realistic rave girl next to someone who's an anime character and then like,
> Kermit the Frog walks in, and that's just normal. That's just VRChat…And it makes it
> easier to open up about things and just talk about things and be real with each
> other…Some of my deepest conversations just involved going to a cool world with
> someone that I just met, and then just sitting in a quiet corner and just getting to know
> them. You know, people open up a little bit more when there's no expectation or judgment
> on them and VRChat kind of opens that possibility to a lot of people I feel..

They further express:

> I have known a lot of people who have discovered a lot about themselves by playing
> VRChat…whether that be a gender identity, a sexual identity or something else, just
> because they were able to express themselves in different ways…I myself, I'm non-binary
> born male and all that means to me is just that I don't care, like my approach to is I don't
> have any connection to gender, I'm just me. But I wasn't really able to explore that until I
> was able to just, you know, put on a female avatar, put on a male avatar, put on like a silly
> avatar, like rather than spending money into like cross dressing or makeup or, you know,
> trying out different things like that, you just click a button and see how you feel about it.
> And I feel like it was a big awakening for a lot of people, because there's a very strong
> trans community on VRChat. It was also an identity awakening for a lot of people. I had

friends who didn't realize they were furries until they tried on a furry avatar…You know, rather than spending thousands of dollars on a fursuit, they just try on an avatar that's like a cute fox person. And they're like: 'oh, this is kind of cool'. So it's a big open avenue to just exploring yourself and seeing who you think you might be with an open mind.

P7 (25, Trans female) expressed their personal experience with identity exploration:

In VRChat, you can't really judge people based off looks, can't judge them based on behavior as much as you can IRL (in real life), you have to use their personality and the way they interact…it's an entirely different experience in socialization because looks don't matter so anyone interacts with anyone…I think the reason people gravitate to VR Chat as a whole is because there's no predisposed notions.. *you don't have to be who you are IRL, you can experiment, you can be someone else, you can be who you want to be, or with the huge trans population in the game including me, who you need to be,* it's something's that really significant and it adds a lot of weight to social interactions in VR…By virtue of its expressive nature, it basically forces any bonds you have to develop based on your personality, rather than what you look like which is majorly different than IRL. It changes people's views of who they find attractive… people will find people of the same gender attractive romantically because they have actual legitimate bonds with this person now. And that leads to a lot of questioning of sexuality as well, you can see it with gender identity because you can just change your avatar into anything. So you see a huge trans community here. It completely destroys everything that society tells you about expression, sexuality, who you are and how you can be. [emphasis mine]

P10 (age & gender N/A) also touched on the monetary accessibility aspect of avatars:

They can have their personal character that they can't have in real life because in real life, it's very expensive, you need to pay one thousand or two thousand euro for a suit. And in VRChat, you can have your own and modify it for less than 50 euros, so that's a good place to show themself and express...

Other participants also expressed similar sentiments:

P8 (27, Cis female): You're free to do whatever you want. And that is one of the beautiful things about it because it's just a freedom of expression. And no matter what you are, who you are, you could be, you know, Master Chief, you could be a Star Wars Stormtrooper, you could be a furry, whatever it is, you will find an avatar that fits you as a person.

P13 (19, Cis male): What makes me want to come back is the degree of self expression that you just can't have in real life. You know, you have all these people that are wearing different avatars from different video games or just like custom avatars that truly represent what's in them like what's, what's inside of their heart, their soul.

P16 (20, Cis male): I think one of the best examples of this I could find was transgender people…I've seen so many people in VRChat who have found themselves through trying

out avatars because VRChat is really the only immersive and accessible way that you can try out being in another body. You know, I've seen countless people go through that journey, and it's been great.

P17 (age & gender N/A): It's a wonderful tool for anybody that's having struggles with gender identity or anything, because you can go and see what it's like to be, you can basically customize your body and be who you want to be.

### *Through Community-Based Worlds*

Besides forming via on off-platform localities such as subreddits and Discord servers,

many people find community directly within VRChat public worlds (accessible without a special

invite) focused around specific communities and interests. For example, when asked what brings

them back to the platform, P6 (21, Trans male) said:

I think it's definitely the people primarily. Because like, for me, whenever I first started out, because I was so anxious, I didn't really talk to anybody. And that's kind of why I took breaks is because I wasn't interacting with people, I wasn't having anything that was particularly engaging, because you can't go to a game world and play it by yourself…for the most part they're meant for groups of people…That's the reason that you keep coming back because no one sits there by themselves for like, eight plus hours a day…Just just the fact that you can talk to someone, like I have friends that live in Denmark. I'm on East Coast US and I can talk to people in Denmark basically face to face. That's insane to me. Being able to have those experiences with people that are so different, but also so much the same is definitely something that I think keeps people, including myself, coming back to the game…You can find all different kinds of things, you can, you know, go pretty much anywhere, there's something for everybody. In every community, there's so many different communities, there's always going to be somewhere where you will find people who are like you. Especially since they added the groups feature, you can find anybody, any kind of group that you want to be part of you can be part of. I think it's much less isolating than the majority of social media…

Two other participants had a similar responses:

P8 (27, Cis female) Or if you want to just go and talk to people, there are so many worlds where you just go and talk to people. If you want to go and let's say, meet up with a community and learn sign language, you can do that. I mean, I personally, like, have been really into the ASL Community and have been learning through VR, and like, they have their own VR language for it that matches up pretty well to like the real life thing. And it's been helping me relearn Sign Language again, and it's really nice. But, uh, yeah, just, it's a platform with something for literally everybody.

P11 (26, Cis male) Usually what happens is, it's like a personality type, you know, and

those personalities, perhaps much like in real life, will hang out together. Like, you know, jocks, you know, more people who are in the nerdy stuff, that type of thing. Usually, in VRChat, when they're first coming around, they'll form these really, you know, big groups of people that have different personality types that don't necessarily match together. And then they'll usually disperse into making their own.

P10 (39, Cis gender male) highlighted some of the potential mental health benefits associated

with community finding in VR:

People care how you identify or what you feel like you are, you're accepted. There's no judgment. And I think a lot of people who come into a virtual world like this, especially a social one, are looking for that acceptance. And they might not get it from their local community for whatever reason. And I think that's a huge boon for something like mental health. Because, you know, feeling accepted for who you are is so important. Yeah. And especially if you live somewhere where that's less accepted, or you don't have the means to leave. You know, you can grab a $200 headset and feel that way, and maybe find some friends. You know, that can save lives…

P7 (25, Trans female) also shared their experience with mental-health benefits:

In moderation, it can be such a powerful tool for reframing your own experiences and being able to see them from an external perspective…it helped [one of their coworkers] a lot, they've actually overcome their social anxiety thanks to VR.

P2 (30, Cis male) shared how they turned to social VR after moving to a new location:

I didn't know anyone in my new home, and it's like 'let's get a quest 2 and make friends that way..

Finally, P16 (20, male) argued that VRChat consists of multiple communities which sometimes

interlock:

Trying to pin a single genre or group of people into VRChat is just plain wrong, simply just because I sort of see it as an extension of the internet as a whole. You go on to VRChat, and you'll find, you know, furries having a complete drug induced rave party, and 10 minutes later, you'll be in a Christian VRChat wedding. It's so varied, and I think it's one of the most varied, like, quote unquote, niche because people see VRChat, and they're like, 'oh, that's a community'. It kind of is. But it's also not, it's basically just the internet…but in VR.

**Toxicity and Moderation on VRChat**

The final topic that emerged from the interviews was the topic of moderation, particularly regarding children on the platform. For clarity, there are four moderation tools that are available to users: mute, block, kick, and report. A mute turns another player's sound off (e.g., for playing loud music); A block makes the person invisible completely; And a kick takes them out of the instance/ lobby. Participants held a general consensus that they believe that underage children did not belong on the platform:

> P4 (32, Non-binary): There's too many children playing VR. And I don't mean that in like: 'these kids are ruining the platform' like a lot of people probably say. I mean it so much for their own safety…You know, the TOS says you need to be over thirteen, there's very clearly kids that are like six to eight years old playing this game, which really should not be–unsupervised by parents, you know, there's some adult content in VR, which can be avoided. But when you're thrown into a public lobby of just.. the internet, I feel like you know, a 13 plus year old can handle themselves but someone who's younger than that…

> P8 (27,. Cis female): The whole thing is that because parents aren't watching their kids and what they're doing, kids that are under 13 really should not be—I've seen kids as young as six—like, they really should not be in these worlds that, you know, I hang out in a lot of furry worlds and a lot of worlds that would be really inappropriate for a kid. But these parents don't care. They just want their kids entertained. And it's, it's pretty bad.

However, participants had mixed opinions about moderation tools on VRChat:

> P10 (39. Cis male): The consequences [of violating the rules] are social. Now, a lot of people have a different opinion than myself, where they think VRChat as a company needs to do more to moderate the content. Now, I disagree, in fact I strongly believe that that should not happen. I think that would ultimately stifle creativity, and it would kill the platform. Not the least of which because VR Chat is not a big company, right? They have, like 65 employees…This is all user generated content, like *this is the goal. This is what makes their platform* and they don't have time to go through and moderate everything… [emphasis mine]

> P7 (25, Trans female): I think in-game moderation tools are a bit iffy. This is as someone who comes from a trust and safety background. And it's not that the tools themselves don't work, it's that keeping track of what's done with the tools is extremely difficult. For example, there's no way (even if you are the head of a group) to see who in that group kicked someone from the instance. That's just not possible. You can just see that the person left the instance using your game logs. I think that's a huge issue that needs to be resolved.

P4 (32, Non-binary) There's no way to report [underage children] to VRChat, you can't report 'this person is underage and should not be here'...I feel like there should be more safety procedures in place to protect the younger kids in that kind of situation.

P6 (22, Trans male): Reports basically fall on deaf ears most of the time. You can report someone for like, literal like sexual harassment, and nothing happens to them. It happened to me a couple of times where someone's done something really disgusting. I've reported them, and nothing ever happens. The most you can do is kick them from the world.

**Discussion**

The results suggest that users of VRChat engage in a variety of activities relevant to both their personal interests and that of their personal friend group(s). The vast majority of content on VRChat (i.e., avatars & virtual worlds) is user-generated, allowing for an immense amount of creativity and expression. Two activities in particular, 'world-hopping' and 'mirror-dwelling', are common activities that a large portion of the player base engage in, despite the segmented nature of user interests and engagement (e.g., some use VRChat to explore user-created worlds, others primarily to socialize, others to competitively dance etc..). Mirror-dwelling specifically is a commonly misunderstood phenomenon of VRChat, and the meaning behind the activity itself only begins to make sense once oneself has begun to engage with the platform and other users on it.

Regarding identity and self-presentation, users of VRChat leverage the customizability and personalizability of the in-game avatars to both explore and express aspects of their identities that were previously undiscovered or hidden. In particular, users reported that being able to present oneself as they want through their avatars leads to more genuine social interactions on the platform via less expectations about body image, leading to more personality-forward interactions with others. These findings are consistent with the findings from Maloney & Freeman (2020), Li et al. (2023), and Freeman et al. (2022). In addition, some users reported that exploring identity through avatars in a virtual world is more accessible and affordable than doing

so in real life, as fursuits, make-up, and cross-dressing for example can quickly become

expensive. This opens up the door for users who might not have the means to explore their

identities through different modes of self-presentation to do so. As a result, users mentioned that

there are many communities around both interest and identities (i.e., gender, sexual) that

manifest on the platform, and often network and interact through community-based worlds. This

finding was particularly resonant with the Li et al. (2023) article about LGBTQ+ community

support. When asked what activities and interactions on the platform users find meaningful and

engaging, drawing them back for hours each week, users shared similar experiences. Most

expressed that what draws them back to the platform are the people with shared interests and

identities who they spend their time with. Some shared that through community they were able to

partially overcome their social anxiety. Others shared that, due to a lack of community in their

immediate geographical area, they turned to VRChat to find people with similar interests and

identities.

Finally, while there were mixed opinions on the state of moderation in the game, nearly

all participants expressed that they are worried about children in the game. Rather than

expressing frustration and disdain, most participants explained that they were more worried

about children being exposed to inappropriate adult content and language on the platform. Many

were quick to place the blame on inattentive parents letting their children roam around on the

platform unsupervised. Some participants held strong views about moderation, with one even

arguing that stronger moderation on the platform would "stifle creativity" and potentially kill the

platform (P10), arguing that the goal of VRChat from a development standpoint is a

decentralized platform with grand possibilities for creativity and expression. Another (P7) argued

that the moderation tools can and should be improved to deter children from inappropriate

content and refine the user experience. One participant (P6) shared a personal experience regarding sexual harassment on the platform and their frustration regarding a lack of response regarding the moderation team. While Freeman et al. (2022) reported on some toxic interactions regarding anti-LGBTQ+ rhetoric, more specific experiences like the one P6 shared were not apparent in the work I reviewed, and further research is needed regarding moderation in SVR platforms.

**Conclusion**

Overall, VRChat is an emergent online space that represents both opportunities and challenges for the future of digitally-mediated, networked, and embodied interaction. While it has provided a necessary space for many to explore and express parts of their identities and interests as well as find community, it has also become a space for users with negative intentions to act with less consequences and more anonymity. In addition, the platform has also been inundated with underage children who lack parental supervision. While what the future holds for virtual spaces like VRChat is not clear, it is evident that the creative and expressive possibilities have a positive impact on users in terms of connection, mental health, and education. As social virtual reality becomes more mainstream, future research should investigate how user experiences (including moderation) in VRChat compare to other platforms such as Meta Horizon Worlds, RecRoom, vTime XR, Bigscreen, ChilloutVR, and NeosVR.

**References**

Blasing, M. T. (2010). Second language in Second Life: Exploring interaction, identity and

pedagogical practice in a virtual world. *The Slavic and East European Journal*, 96-117.

Bjørn, P., Wulff, M., Petræus, M. S., & Møller, N. H. (2021). Immersive cooperative work

environments (Cwe): Designing human-building interaction in virtual reality. *Computer

Supported Cooperative Work (CSCW)*, *30*(3), 351–391.

https://doi.org/10.1007/s10606-021-09395-3

Boellstorff, T. (2015). *Coming of age in second life: An anthropologist explores the virtually

human*. Princeton University Press. https://doi.org/10.1515/9781400874101

Casarico, P. (2013). *How Skype and FaceTime have changed the way people communicate

emotionally*. Gonzaga University.

*Chilloutvr—Steam charts*. (n.d.). Retrieved May 17, 2024, from

https://steamcharts.com/app/661130

Curtis, P., & Nichols, D. A. (1994). MUDs grow up: Social virtual reality in the real world.

*Proceedings of COMPCON '94*, 193–200.

https://doi.org/10.1109/CMPCON.1994.282924

Fontana, A., & Frey, J. H. (2000). The interview: From structured questions to negotiated text.

*Handbook of qualitative research*, *2*(6), 645-672.

Freeman, G., Maloney, D., Acena, D., & Barwulor, C. (2022, April). (Re) discovering the

physical body online: Strategies and challenges to approach non-cisgender identity in

social Virtual Reality. In *Proceedings of the 2022 CHI conference on human factors in

computing systems* (pp. 1-15).

Hammersley, M., & Atkinson, P. (2009). Ethnography: Principles in practice. New York: Routledge

Horizon Worlds. (n.d.-a). https://www.reddit.com/r/HorizonWorlds/

Hudson, S., Matson-Barkat, S., Pallamin, N., & Jegou, G. (2019). With or without you? Interaction and immersion in a virtual reality experience. *Journal of Business Research*, *100*, 459–468. https://doi.org/10.1016/j.jbusres.2018.10.062

Humphreys, L. (2005). Cellphones in public: social interactions in a wireless era. *New Media & Society*, *7*(6), 810–833. https://doi.org/10.1177/1461444805058164

Ito, M. (2013). Virtually embodied: The reality of fantasy in a multi-user dungeon. In *Internet culture* (pp. 87-109). Routledge.

Ito, M., Matsuda, M., & Okabe, D. (Eds.). (2006). *Personal, portable, pedestrian: mobile phones in japanese life*. The MIT Press. https://doi.org/10.7551/mitpress/5309.001.0001

Jensen, L., & Konradsen, F. (2018). A review of the use of virtual reality head-mounted displays in education and training. *Education and Information Technologies*, *23*(4), 1515–1529. https://doi.org/10.1007/s10639-017-9676-0

Kilteni, K., Groten, R., & Slater, M. (2012). The sense of embodiment in virtual reality. *Presence: Teleoperators and Virtual Environments*, *21*(4), 373–387. https://doi.org/10.1162/PRES_a_00124

Lastowka, G. (2007). User-generated content and virtual worlds. *Vand. J. Ent. & Tech. L.*, *10*, 893.

Li, L., Freeman, G., Schulenberg, K., & Acena, D. (2023). "We Cried on Each Other's Shoulders": How LGBTQ+ Individuals Experience Social Support in Social Virtual

Reality. *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*, 1–16. https://doi.org/10.1145/3544548.3581530

Maloney, D., & Freeman, G. (2020). Falling Asleep Together: What Makes Activities in Social Virtual Reality Meaningful to Users. *Proceedings of the Annual Symposium on Computer-Human Interaction in Play*, 510–521. https://doi.org/10.1145/3410404.3414266

Martey, R. M., & Consalvo, M. (2011). Performing the looking-glass self: Avatar appearance and group identity in *second life*. *Popular Communication*, *9*(3), 165–180. https://doi.org/10.1080/15405702.2011.583830

Merchant, J. (2016). The use of Skype in analysis and training: A research and literature review. *Journal of Analytical Psychology*, *61*(3), 309–328. https://doi.org/10.1111/1468-5922.12224

Moustafa, F., & Steed, A. (2018). A longitudinal study of small group interaction in social virtual reality. *Proceedings of the 24th ACM Symposium on Virtual Reality Software and Technology*, 1–10. https://doi.org/10.1145/3281505.3281527

*Neos vr—Steam charts*. (n.d.). Retrieved May 17, 2024, from https://steamcharts.com/app/740250

Paige, J. B., & Daley, B. J. (2009). Situated cognition: A learning framework to support and guide high-fidelity simulation. *Clinical Simulation in Nursing*, *5*(3), e97–e103. https://doi.org/10.1016/j.ecns.2009.03.120

Romero-Ivanova, C., Shaughnessy, M., Otto, L., Taylor, E., & Watson, E. (2020). Digital practices & applications in a covid-19 culture. *Higher Education Studies*, *10*(3), 80–87. https://eric.ed.gov/?id=EJ1264741

Schultze, U., & Leahy, M. (2009). The avatar-self relationship: Enacting presence in second life. *ICIS 2009 Proceedings*. https://aisel.aisnet.org/icis2009/12

Taylor, T. L. (2002). Living digitally: Embodiment in virtual worlds. In R. Schroeder (Ed.), *The Social Life of Avatars: Presence and Interaction in Shared Virtual Environments* (pp. 40–62). Springer. https://doi.org/10.1007/978-1-4471-0277-9_3

Tham, J., Duin, A. H., Gee, L., Ernst, N., Abdelqader, B., & McGrath, M. (2018). Understanding virtual reality: Presence, embodiment, and professional practice. *IEEE Transactions on Professional Communication*, *61*(2), 178–195. https://doi.org/10.1109/TPC.2018.2804238

van der Meer, N., van der Werf, V., Brinkman, W.-P., & Specht, M. (2023). Virtual reality and collaborative learning: A systematic literature review. *Frontiers in Virtual Reality*, *4*, 1159905. https://doi.org/10.3389/frvir.2023.1159905

Volmar, A., Kindervater, C., Randerath, S., & Mniestri, A. (2023). Mainstreaming zoom: Covid-19, social distancing, and the rise of video-mediated remote cooperation. In C. Eisenmann, K. Englert, C. Schubert, & E. Voss (Eds.), *Varieties of Cooperation: Mutually Making the Conditions of Mutual Making* (pp. 99–133). Springer Fachmedien. https://doi.org/10.1007/978-3-658-39037-2_6

*Vrchat—Steam charts*. (n.d.). Retrieved May 17, 2024, from https://steamcharts.com/app/438100

VRChat: The setting is virtual, the experience and friendships are real. (n.d.). https://www.reddit.com/r/VRchat/

Wexelblat, A. (1993). The reality of cooperation: Virtual reality and cscw. In *Virtual Reality* (pp. 23–44). Elsevier. https://doi.org/10.1016/B978-0-12-745045-2.50010-6

Wise, A. (2023, August 17). YouTuber finds only 900 daily users in Horizon Worlds—Meta's

$36B metaverse. *Protos*.

https://protos.com/youtuber-finds-only-900-daily-users-in-horizon-worlds-metas-36b-met

averse/