

## The Ambivalences of Virtual Love: Conversational, Embodied, and Hyperreal Intimacy in the Social VR Platform VRChat

JINDONG LEO-LIU

The Education University of Hong Kong, Hong Kong SAR

The advent of new technologies is constantly reshaping the virtual landscape of intimacy. This study focuses on social virtual reality (VR) platforms, a novel form of social media that prioritizes immersive verbal and visual communication. To understand the various forms of virtual intimacy individual users may experience in social VR and how these experiences can reflect and reconstruct the ambivalences between virtuality and reality, I conducted a two-year digital ethnography and in-depth interviews on a popular social VR platform named *VRChat*. Three forms of intimacy are identified: (1) conversational intimacy that reflects the ambivalences of escaping and engaging; (2) embodied intimacy that reflects the ambivalences of being unreal and more real than real; and (3) hyperreal intimacy that reflects the ambivalences of light and deep communication. Hyperreal intimacy can function as an effective concept in understanding the potential achievement of virtuality-reality harmony through more in-depth, soul-to-soul, and authentic interpersonal connections in today's emerging virtual environments.

*Keywords: intimacy, Virtual Reality, social media, social VR, Metaverse, VRChat, hyperreality, empathy, harmony*

Nowadays, individuals' intimacy has been increasingly mediated by digital technologies (Attwood, Hakim, & Winch, 2017; Chan, 2021). Nevertheless, the ambivalence of intimate interactions through social media and digital technologies has intensified. As Turkle (2011) argues, "These days, insecure in our relationships and anxious about intimacy, we look to technology for ways to be in relationships and protect ourselves from them at the same time" (p. 8). A promised controllability from technology seemed to reduce people's insecurity and anxiety in intimacy. This mindset also yields the social phenomenon Turkle (2011) called "Alone Together," where people use smartphones to manage online social connections separately and silently, rather than engaging in face-to-face conversations, potentially diminishing empathy towards other individuals, especially among children and teenagers (Turkle, 2016). Thus, Turkle (2016) attempts to reclaim the power of conversation in the digital age, suggesting the creation of digital platforms designed to promote more meaningful and deep conversations instead of short and distracted interactions.

Following this line of thinking, this study pays attention to social virtual reality (VR) platforms, a novel form of social media that prioritize immersive verbal and visual communication, in contrast to

---

Jindong Leo-Liu: ljindong@eduhk.hk

Date submitted: 2024-10-22

Copyright © 2025 (Jindong Leo-Liu). Licensed under the Creative Commons Attribution Non-commercial No Derivatives (by-nc-nd). Available at <https://ijoc.org>.

algorithmically woven content and interactions in today's social media and short video platforms (Wang, Qu, & Leo-Liu, 2023). In this study, I will explore a popular social VR platform named *VRChat*, which provides global access in most countries, supports an open system where users can upload their own avatars and virtual world models, and allows real-time voice-based conversations prior to messaging. This platform advances users' experiences of virtual intimacy, further intensifying the tension between virtuality and reality. Thus, this study focuses on two research questions:

*RQ1: What different forms of virtual intimacy may individual users experience in social VR?*

*RQ2: How can these experiences reflect and reconstruct the ambivalence between virtuality and reality?*

To answer these two questions, I conducted a two-year digital ethnography and 78 in-depth interviews with key informants to learn about their intimate experiences in *VRChat*. Next, I will first conceptualize virtual intimacy in the context of social VR, contextualize *VRChat* as a theoretically vital case, and review the relevant literature before presenting the method and research findings based on my ethnography and interviews.

### **Conceptualizing Virtual Intimacy**

Intimacy as an English word can be ambiguous, polysemic, and contextual, which describes not only romantic and sexual relationships, but also a broad sense of closeness with friends, families, pets, and even certain evocative objects such as dolls and robots (Attwood et al., 2017; Turkle, 2011). Over the last three decades, intimacy has attracted scholars' interests following the affective turn in social sciences, which highlights the role of affect, emotions, and love in the modern capitalist social structure, and refutes the superiority of rational thinking in human social, political, and economic activities (Ahmed, 2004; Giddens, 1992; Illouz, 2007). Compared to emotions or affect observable on multiple levels, intimacy is tied to specific interpersonal activities and the development of relationships, reflected in more micro-level, mundane individual experiences. With the social penetration of digital media technologies, from personal computers to smartphones, from the World Wide Web to mobile apps, and from online forums to algorithm-based platforms, people's intimate interactions and relationships are increasingly mediated, digitalized, and networked. Accordingly, the relevant new concepts developed in the social sciences and humanities involve various terms, such as *mediated intimacy* (Attwood et al., 2017), *digital intimacy* (Dobson, Robards, & Carah, 2018), *virtual intimacy* (Sadowski & Lomanowska, 2018), *mobile intimacy* (Hjorth & Arnold, 2013), *networked intimacy* (Chan, 2018), and so forth. These concepts are similar to each other, but they also have different emphases. For example, networked intimacy differentiated itself by highlighting its networking potential and the ambivalences between users' profiles and their actual intimate interactions (Chan, 2018). Mobile intimacy emphasizes the technical features of mobility in smartphones and relevant devices (Hjorth & Arnold, 2013). With our focus on virtual reality technology and virtual experiences, this study concentrates on the notion of virtual intimacy. Although Sadowski and Lomanowska (2018) loosely conceptualize this term to refer to intimate behaviors in any multi-user virtual world, this study applies virtual intimacy to the tension between virtuality and reality. Through the lens of virtual intimacy, it revisits the constant debates about the ambivalence between the two.

### Revisiting the Ambivalence of Virtuality and Reality in Social VR

From early Web 1.0 to social media, artificial intelligence, and virtual reality (VR), the virtuality-reality dichotomy has persisted. Although Turkle (2011) originally questioned this dichotomy, her famous phrase “alone together,” from her study on how modern digital technologies reshape intimacy, remains haunted by it. Here, “together” refers to people’s physical presence in social gathering occasions such as restaurants, parties, and events, while “alone” is portrayed by people’s social absence due to their attention on smartphones. Nevertheless, in social VR, “alone together” may take on an opposite configuration: “alone” is portrayed by people’s physical presence in an isolated environment, while “together” refers to their efforts to be socially engaged in the mediated interactions afforded by VR. Clearly, this mindset might be nothing new. This has been captured by previous studies on cyber romance, online dating, and networked intimacy (e.g., Lenton-Brym, Santiago, Fredborg, & Antony, 2021). However, thanks to the advancement of telecommunication infrastructure, game engines, and VR devices, the degree of verbal, visual, and even sensual immersiveness has reached a new level in today’s social VR practices. Thus, it is worthwhile to explore whether these immersive experiences afforded by the latest further intensify or reconstruct new ambivalences for virtual intimacy.

Although the creation of the first VR device can be traced back to 1968 (Druck, 2006), VR has been further developed and popularized in recent years with the progress of visual technologies and the gaming industry (Muñoz-Saavedra, Miró-Amarante, & Domínguez-Morales, 2020). By affording different modalities of information transmission and user interactions compared to smartphones and computers, VR is expected to reshape the mediation of virtual intimacy. Some early practices related to so-called VR intimacy concentrate mainly on VR pornography or VR romance games (Dekker, Wenzlaff, Biedermann, Briken, & Fuss, 2021). Nevertheless, in recent years, thanks to the constant improvement of telecommunication infrastructure (e.g., 5G, WiFi 6), more real-time interpersonal communications have been enabled by VR, which paves the way for a new form of social media, namely social VR. Virtual intimacy mediated by social VR has been a popular theme in science fiction and popular culture. A famous example is Steven Spielberg’s 2018 Hollywood Blockbuster *Ready Player One*, which sparked public interest and imagination around Social VR (Spielberg, 2018). In the famous scene of a futuristic floating dancing pool, the two protagonists engage in romantic interactions and physical touch, which are transformed into haptic signals transmitted to the male protagonist’s VR full-body sensory tracking suit, depicting a reduced gap between virtual visual-audial intimacy and physical intimacy. With the popularization of social VR applications, these science fiction scenes are coming to life, providing a new opportunity for researchers to revisit virtuality-reality ambivalences.

These ongoing debates and questions echo Boellstorff’s (2015) previous famous ethnography of Second Life users who were addicted to the virtual world compared to real life. However, instead of criticizing, pathologizing, and even dehumanizing these “addicted” individuals, Boellstorff (2015) argues that virtual worlds have the potential to make individuals even more human than before. Rejecting the idea of the posthuman, which he interpreted as the end of humans through technologies that transcend human limits, he coins the term “virtually human,” which means that “it is in being virtual that we are human” (Boellstorff, 2015, p. 29), stressing the belief that the human condition is always, to some extent, constituted through virtuality. However, what does “more human” mean? What is the “human condition”?

Boellstorff does not elaborate on this conceptualization, which leaves a research gap. Thus, this study aims to continue this inquiry and explore it in the context of *VRChat*.

### **VRChat as a Vital Case: A Vibrant User Community**

Released in 2016 on Steam and several VR platforms, *VRChat* has earned fame in the industry for its vibrant user community (Saffo, Yildirim, Di Bartolomeo, & Dunne, 2020; Wang, 2020; Watercutter, 2021). In 2024, the number of total users on this platform reached about 8.2 million worldwide (MMO Stats, 2024). The vibrancy of the platform could be attributed to its global accessibility and technically open environment for user-uploaded content. Cheng, Wu, Chen, and Han (2022) summarized several existing social VR platforms and found that *VRChat* affords the highest level of user customization, as it allows users to upload their own avatars, worlds, and games from third-party software. These two conditions nourished diverse popular cultures and transcultural phenomena (Brett, 2019; Krell & Wettmann, 2023), such as the prevalence of Japanese anime avatars, furry avatars, and various fantasy avatars that were tailored by users themselves. There were also many built-in games, creative virtual worlds, VR dance events, and a new norm of VR interpersonal intimacy and sex known as erotic roleplay (ERP). Thus, the technocultural vibrancy of *VRChat* is reflected in its large user community and the high level of user-generated virtual content.

These characteristics highlight a significant distinction between *VRChat* and other big-name platforms. Here, I use the "legacy" virtual world *Second Life* (Linden Research, 2025) and Meta's *Meta Horizon* (Meta, 2025) as references for comparison. Based on my walkthrough observations of all three platforms, I found differences among them. For *Second Life* and *VRChat*, differences concentrated on three properties: content creation system, communication mechanism, and interface, which influence people's intimate experiences on the visual, aural, and sensual levels. Finally, although both platforms encourage user-generated content, *VRChat* has fewer restrictions and rules than *Second Life*. Moreover, although both platforms support both text and voice communication, *VRChat* prioritizes voice, while *Second Life* retains a text-based communicative culture to a large extent. Finally, as a virtual world built with more advanced engines, *VRChat* provides higher visual quality and social presence than *Second Life*, featuring first-person perspective visual display, unobtrusive interfaces, and minimalist UI design, enabling certain VR-headset users to experience the so-called phantom sense during intimate interactions (Nem & Bredikhina, 2023).

The differences between *VRChat* and *Meta Horizon* mainly reside in two dimensions: the degree of technical openness and accessibility. Compared to *VRChat* and even *Second Life*, *Meta Horizon* offers limited technical openness for user-generated content. While users can customize their avatars and create certain items within the platform, they are restricted to the templates and tools offered by Meta. Thus, the overall styles of avatars and items are not as diversified and creative as *VRChat*, since *VRChat* allows users to upload from other third-party software. Moreover, by late 2023, *Meta Horizon* was available only in North America and a few European countries, while *VRChat* remained accessible in most regions, including mainland China, despite its Great Firewall, which blocks international platforms, such as Facebook, Twitter, and Google, and underpins China's separate ecosystem. Whereas, as Chinese users' access to *VRChat* is allowed, it theoretically becomes one of the most globally accessible social platforms in Internet history. Thus, *VRChat* offers a valuable environment for conducting research fieldwork for the study question.

The existing in-depth studies on *VRChat* are expanding but still limited, with a focus on avatar embodiment, gender norms, social disorder, and so forth (e.g., Bredikhina, 2022; Krell & Wettmann, 2023; Zamanifard & Robb, 2023; Zhang, 2023). One comprehensive research report comes from the *Social VR Lifestyle Survey 2023* conducted by Nem and Bredikhina (2023), a Japanese virtual influencer and a European PhD candidate. Based on their survey of users from Japan, the United States, and several other countries, they found that 43% of their informants had ever fallen in love with *VRChat*, and 37% had engaged in virtual sex (Nem & Bredikhina, 2023). This study contributes to the existing *VRChat* study by offering a theoretical focus on virtual intimacy.

### **Method: Ethnography and Interviews in *VRChat***

Following Boellstorff's (2015) ethnography in the virtual world for his study on *Second Life*, I conducted ethnography and interviews directly in *VRChat* to investigate my research question. Compared to text-based social media and websites, Boellstorff (2015) highlighted that the forms of data collection are more diverse, varying from conversations with informants to observations and inquiries about their avatars, world scenes, virtual activities, and many visual and verbal cues. My ethnography lasted from March 2022 to June 2024. My informants came from three sources: first, random encounters with strangers in the public virtual world; second, the recruitment messages I sent in social media groups related to *VRChat* (e.g., Tencent QQ); and third, the snowballing recommendation of other friends from the informants recruited through the previous two sources. The "friend status" feature allowed me to develop long-term relationships by enabling direct and regular visits to others' virtual worlds, where I often encountered their friends or friends' friends, who may become my potential informants through mutual conversations.

My initial casual chats with these people often comprised informal and unstructured individual or group interviews. For an interview-like casual chat, I followed the advice of Hermanowicz (2002): after disclosing my position, I asked some easy-to-answer questions for a "warm-up," such as "How long have you used *VRChat*?", "what are your reasons for joining *VRChat*?" and "what do you usually do in *VRChat*?" If an informant offered some clues that they would potentially have an in-depth conversation or cover some sensitive topics (e.g., sexual issues) that were not suitable to be discussed publicly, I invited them for a private conversation and conducted one-on-one, in-depth follow-up interviews, which are usually semi-structured by several theory-based questions. A reward (e-commerce gift card of US\$10 or CN¥50) was offered as a token of appreciation for the invited interviews. This research study was supervised by the local university research ethics committee. The consent of the participants for the interviews and screen recordings was confirmed.

To develop rapport with my informants and become unobtrusive in *VRChat*, I had a strategic selection of my avatar: an anime-style, small-size, gender-ambiguous, and species-ambiguous yellow furry avatar with black hair and glasses. Given my positionality as a Mandarin native speaker from mainland China and the nature of ethnography that requires developing long-term rapport with informants, I naturally built more connections with Chinese users in *VRChat*. Nevertheless, this does not mean that I focused on Chinese users only. Instead, I have also had numerous informants from Chile, Cuba, Indonesia, Japan, Korea, Malaysia, New Zealand, Russia, Switzerland, Vietnam, and the United States.

The interview screen-recording data was processed in three steps. Given the large size of interview data collected during the ethnography, I conducted a flexible coding approach for the data size reduction through raw data reading, indexing, and memo making (Deterding & Waters, 2021), and then transcribed the selected screen recording videos into texts for further qualitative coding and thematic analysis in the dialogue with theories and concepts from literature reviews (Saldaña, 2021). Overall, among the overall interview pool ( $N = 78$ ), 30 interviews were highly related to the topic of intimacy. The length of each interview varied from 30 minutes to 240 minutes. To clarify, since *VRChat* supports access from both personal computers and VR headsets, many users experience social VR in a hybrid form. Even heavy users of VR headsets and full-body trackers sometimes also access *VRChat* via personal computer (PC) due to its ease and flexibility for multi-tasking. Thus, this study does not differentiate users based on VR and PC access, since they are important components of the overall social environment and community in *VRChat*.

Next, I present the research results based on the comprehensive ethnographic data. Given the explorative and grounded nature of ethnography, some literature reviews were conducted after certain themes and insights emerged. Following an abductive approach (Timmermans & Tavory, 2012), I was in the loop of revisiting the literature and theories and, in turn, revising the directions of my inquiry in ethnography and interviews. Based on both ethnographic data and literature, three forms of intimacy contextualized and conceptualized in social VR are identified: (1) conversational intimacy, (2) embodied intimacy, and (3) hyperreal intimacy. Each form of intimacy will be unpacked with detailed ethnographic data, followed by a more theoretical analysis from the perspective of ambivalences between virtuality and reality. In particular, conversational intimacy reflects the ambivalences of escaping and engaging; embodied intimacy reflects the ambivalences of being unreal and more real than real; and hyperreal intimacy reflects the ambivalences of light chat and deep communication.

### **Ethnographic Findings**

#### ***Conversational Intimacy***

First, I found a strong ambivalence in my informants' intimate experiences strongly associated with conversations in *VRChat*. Tim, a 23-year-old student, shared his experience with me when I asked him about his initial motivation for using *VRChat*,

During the COVID-19, I lived alone abroad in Tokyo, without any real friends surrounding me. I usually live an otaku lifestyle, but one day I found I could not stand it anymore. I need more social life. I need to talk with other people, not just text. Talking and texting are very different . . . that's why I started to use *VRChat*. It worked as a very ideal middle stage for me. You can speak to other people, and meanwhile, you remain virtual and anonymous by using avatars. They were good practice for me. Later on, I found my social skills have improved in *VRChat* and I am able to talk more smoothly with other people in offline settings.

Eureka, a 21-year-old Chinese male-trans-female (MtF) college student, also saw this unique condition of *VRChat* as a medium of “transition status” between traditional social media and real-life social settings.

In my early time in *VRChat*, I was often muted. Gradually I started to talk and make more friends, and then found it was not as difficult as I thought. I found I actually have a good social capability. It also enhanced my confidence in my real-life work, such as my winter internship and my participation in the student organization. In year two of university, I was directly elected to be the head of the table game club based on my capability of planning, good personality, and reading people’s feelings and judging people’s intentions. It was a huge step for me.

Mia, a 19-year-old Chinese girl who suffered from depression and pressure from her parents and studies, also told me that *VRChat* helped her gain the courage to interact with other people. “Maybe you think I am talking normally to you right now, but a while ago I was actually very depressed and introverted.” Frank, Kane, and Felix also found that voices bring more rationality and genuineness to the discussion of controversial topics. In parallel with other voice-based social media, such as Clubhouse, voices are perceived as advantageous in boosting interactivity, intimacy, mutual respect, and more genuine communication among users (Jung, Park, Kim, & Lee, 2022). As Frank claimed, also echoing Eureka’s opinion of seeing *VRChat* as a medium of “transition status”:

When you only type texts, you may be fearless and express yourself in the most aggressive way. But when you are face-to-face, you may need to be very careful and control your words. *VRChat* is in between text-based online comments and face-to-face communication. You speak to a virtual avatar.

#### *Theoretical Analysis: The Ambivalence of Escaping and Engaging*

Admittedly, the technological affordances for computer-mediated real-time interpersonal dialogue were achieved a long time ago, from video conference software Skype and Zoom to voice-focused social media such as Discord and Clubhouse, not to mention numerous multiplayer online games requiring vocal communication for team collaboration. Nevertheless, they were limited to their own scenarios and occasions (e.g., conferences, games), instead of creating an environment for more general, banal, and mundane conversational interaction.

The conversations in *VRChat* led them to reconsider the dichotomy between virtuality and reality. Although this dichotomy remains highly criticized and debated in academia (e.g., De Souza E Silva, 2006; Turkle, 2005; Ward, 1999), most of my informants in *VRChat* still use such binary languages and discourses (e.g., online/offline, virtual/physical, game/life) without concerns. Many of them are honest in claiming their intention to escape from real life due to social difficulties, such as social phobia, family conflicts, school bullying, and discrimination (especially among sexual minority groups, such as gay and transgender). Many described themselves as *Zhai*, a form of personality adapted from the Japanese term *Otaku*, which means people who stay at home, signifying individuals who have an inactive social life and devote most time to

anime, manga, and games (Azuma, 2009). Before coming to *VRChat*, they had many online social connections through other social media (e.g., Discord and QQ) and multiplayer online games. Nevertheless, their growing demand for deeper social engagement could gradually be satisfied, motivating them to adopt a new form of online social engagement in *VRChat* based on verbal communication through avatars.

This ambivalence between escapism and social engagement through conversational intimacy in *VRChat* manifests the mindset behind Turkle's (2017) "alone together." People, vulnerable and anxious about social intimacy in real life, often seek alternative forms of intimacy (echoing with the findings from the study by Zamanifard and Robb [2023]) and another version of alone together discussed above, turning to virtual reality platforms for a higher degree of control and safety. In fact, hate speech and discrimination were also common in *VRChat*. "But one different thing is that you can escape easily by blocking one user or directly logging out. There are many ways to protect yourself when you speak to other people here compared to real life," suggested Eureka, who had a strong concern about being discriminated against for her transgender identity in the offline setting. However, conversational intimacy could not fully explain why people had such a strong sense of belonging to the *VRChat* community, leading to the second theme: embodied intimacy.

### ***Embodied Intimacy***

As stated above, one unique feature of *VRChat* compared to Second Life and other social VR developed by Silicon Valley giants is the technical openness that allows users to upload their own avatars and worlds from third-party modeling software, such as Unity and Blender, which enables diverse, high-quality, and widespread user-generated content on avatars and virtual worlds on the platform. Among them, Japanese anime-style avatars have been a dominant visual culture in *VRChat*, widely by not only Asian but also American and European users. These avatars were designed in either cute or sexualized ways. These fantasy avatars offered strong, intimate experiences for *VRChat* users and paved the way for various intimate experiences, such as erotic role-playing (ERP), phantom sense, and same-sex intimacy.

ERP is a very frequent slang one may hear in *VRChat*, especially among those who identify themselves as "experienced old users." One of my informants told me, "The very end of *VRChat* is always ERP." ERP became an alternative word for having sex in *VRChat*. Two individuals engage in virtual intimacy using sexually suggestive avatars within a private virtual environment. *VRChat* allows access from both VR headsets and PC screens. For ERP users, a VR headset is almost necessary for immersive sexual experiences, where phantom sensations often emerge. Not all people experience a phantom sense. According to Nem and Bredikhina (2023), phantom sense can be defined as "experiencing pseudo sensations during a VR experience that should only be audiovisual" (p. 71). According to their survey, 45% of VR users reported experiencing tactile phantom sensations. For many, these sensations occur not only during ERP but also in daily interactions, such as cuddling or fondling one's head. However, Felix and Eureka agreed that visually intense social and intimate stimuli, such as kissing or sex, were more likely to trigger phantom sensations.

The same-sex intimacy in *VRChat* is bizarre and somewhat different from conventional queer discourse. First, there is a large queer community in *VRChat*, especially the furry avatar community. There have been several studies denoting the link between gay people and furry fandom in American contexts.

The highly customized avatars enable furry lovers to embody themselves in these fantasy humanoid animals. Second, there is also a large group of cisgender people, especially cisgender males, who are willing to have intimate interactions with other males, the condition of using beautiful feminine avatars. Bredikhina (2022) and Zhang (2023) denote a discourse of sugar (*osatō*) relationship in *VRChat*, which highlights the lightness of sweet, cute, and soothing intimate interactions and relationships beyond “real gender.” Bredikhina (2022) suggests that such ambiguous discourse aims to provisionally hack hegemonic expectations without completely subverting the dominant ideology in the real world.

My long-term informant, Rex, a young Chinese man who loved to use “loli” (childish anime girl) avatars, shared his summary of such mindset and logic with me:

In the beginning, you just liked those cute girl avatars. You loved to interact with them. Later, you found that the user of that cute girl avatar was actually male. But, you have already fallen in love with it. Then, you didn’t care anymore. Finally, you became a gay.

They are real-life examples of “Striking Vipers” (Chrifi Alaoui, 2023), one episode from the British/American science fiction series *Black Mirror*, which depicted how two black straight men gained stronger sexual gratification than real life through virtual sex in sensual VR. In the virtual environment, they were embodied in a White woman and an Asian man fighting game characters, respectively.

#### *Theoretical Analysis: The Ambivalences of Being Unreal and More Real than Real*

Based on the above ethnographic data and revisited literature, I conceptualized these experiences under the theme of “embodied intimacy.” Intimacy is not only mediated by our languages but also largely mediated by our bodies. According to Maclaren (2014), “intimacy is conditioned by our bodily being in the world, since it is by virtue of our embodied perceptions of embodied others that we are able to be with others, to be drawn virtually into inhabiting their intentionality” (p. 62). The embodiment provides a crucial perspective for understanding ontological intimacy shaped by the body, existence, and environments.

In social VR, similar to most role-playing games, an individual user’s bodies are represented by the virtual body of a particular avatar. Compared to 2D screens, the immersive 3D experiences enabled by VR headsets further intensified these embodied intimate experiences. Based on the spatial and social presence of avatars through visuo-motor synchrony and the complexity of avatar design, VR users may experience not only stronger body ownership illusions but also a stronger sense of agency, that is, the capability of self-awareness and self-determination (Mottelson, Muresan, Hornbæk, & Makransky, 2023). Avatar embodiment has been widely studied in media and game studies, human-computer interactions, and psychology, with a focus on the changes in people’s self-representations and online/offline behaviors through alternative digital bodies (e.g., Yee & Bailenson, 2007). However, their studies have not yet explored the affective side of avatar embodiment.

By embodied intimacy here, I mean a form of intimate interaction between users through the virtual avatar embodiment, but also the intimate interactions between users and the virtual bodies of

avatars per se. As intimacy can involve both human actors and non-human actors, including fictional characters, social robots, and virtual agents through parasocial interactions (e.g., Leo-Liu & Wu-Ouyang, 2024), avatars are also not only a static media representation of the bodies that can only be viewed by audience-like users in a way equivalent to film or anime characters but also the real-time simulations of the bodies that can be performed and operated by individuals, which further complicates the nature of embodied intimacy.

Compared to conversational intimacy, which stresses the simulation of face-to-face conversations, embodied intimacy based on these fantasy avatars stresses what Baudrillard (1994) may call "simulacra" and "hyperreality." He suggests that simulacra are copies or simulations that do not or no longer have the original and become their own reality, and hyperreality is the condition where these simulations or simulacra become more real or authentic than the reality they were supposed to represent. For Baudrillard (1994), VR is a milestone technology for the proliferation of simulacra and hyperreality, which may lead to the transformation of lifeways itself and terminate the illusion that a real world exists.

Avatars and the virtual world scenery play key roles in constructing intimate experiences and fostering relationships. When I shared my view of *VRChat* as Baudrillard's (1994) hyperreality with another Chinese couple who formed their relationship in *VRChat*, they strongly agreed, and the first example she offered was about the virtual world scenery. "You can visit all those beautiful and magical places that couldn't exist in real life." When I invited Eureka for an interview, she invited me to a private world called "Star Reverie Island," a chill seaside at night with soothing moonlight and background melody (see Figure 1). She told me she often had one-on-one conversations with her close friends, including her ex-boyfriend. Such an environment helped her develop deeper, soulmate-like conversations with others. Here, conversational and embodied intimacy converge to underpin the immersive development of intimate relationships between users. Nevertheless, the different preferences for conversational and embodied intimacies also create another layer of ambivalence in intimate relationship development surrounding the depth of communication.



**Figure 1. My interview with Eureka in the virtual world named "Star Reverie Island."**

### ***Hyperreal Intimacy***

The first section reveals that people want the genuineness and authenticity of reality through conversational intimacy, while the second section discloses people's desire for escapism and fantasy through intimacy embodied in anime avatars, which is unreal but also more real than real. This section will extend the discussion of hyperreality and examine individual users' desires and struggles with long-term intimate relationships in *VRChat*. This leads to the discussion of what I call hyperreal intimacy; that is, the intimate relationship that was developed through both the simulation of being real and the simulacra of being more real than real. Hyperreal intimacy combines the authenticity of conversational intimacy and the fantasy of embodied intimacy, leading to a further complex image of such ambivalent love in *VRChat*.

Unlike today's dating apps, which rely heavily on matching algorithms and location-based technologies, the platform plays a minimal role in facilitating these connections. Much like in the physical world, people meet other people purely *by chance*. Nevertheless, a common social pattern emerged among most of the informants. New users usually visit some popular worlds, where they may encounter other relatively new users and form connections. Later, they no longer only stay in popular worlds but directly join their friends' virtual locations or invite each other, exploring different and more niche virtual worlds, where strangers and new users are fewer, but friends' friends are many. Similar to my snowballing strategy for interview recruitment, they are also later expanding their networks mainly through friends' friends.

In this process, some people fell in love. Maria came from China, and Henry came from Vietnam. Their relationships started in a very simple way. They met each other through mutual friends in *VRChat*.

They found each other attractive and felt comfortable having a playful chat. Later, they started to cuddle, flirt, and share their life stories, eventually confirming their relationship after one week. Although they lived in different countries and could not meet for now, Maria cherished Henry's company. She shared her story of the birthday surprise she had just received from him last week (see Figures 2 and 3):

After graduation, I came to another city to work. I am all alone here, no friends, no relatives, just myself. I don't know anyone in this city. It's kind of hard for me. I didn't even celebrate my birthday because my parents were not with me, my friends were not with me. They did send some gifts, and no one stayed with me. And then, he bought me a birthday cake and we just did silly things like calling each other, right? (looking at him) And then we had a funny thing. I got a birthday cake, I got a candle, but I don't have the lighter to make the fire. But it's okay, we just sang the birthday song in the call together like silly. We just pretend that I have fire on my candle. It's silly, but it's fun. After that, we logged in *VRChat*, he said he would take me to meet his friends and he invited me to this world. And then, all of my *VRChat* good friends were here! They just stood there, and everyone said happy birthday to me, and a very big birthday cake was in front of me. He made a world where our photos are all around. I literally cried after seeing all of these.



**Figure 2.** The birthday party picture shared by Maria.



**Figure 3. The birthday party picture shared by Maria.**

She was touched by her boyfriend's effort to build this exclusive fantasy virtual world for her and secretly invited all her friends for the surprise. Without knowing Chinese, Henry had to use translation software to communicate with her Chinese friends. This cross-border relationship could hardly have been formed without *VRChat*. For her, the emotions and experiences felt as real as a birthday party in reality. Moreover, the gigantic party house and magnificent decorations—difficult and expensive to replicate in real life—had been a hyperreal intimate experience for her.

They discussed the possibility of meeting face-to-face in China. Maria spoke highly of her social and intimate experiences in *VRChat*, contrasting them with "exhausting" real-life social experiences: "All avatars are super beautiful here. You don't need to make up, go outside, and spend money. You can even play when you are lying on the bed. After getting tired, you can directly go to sleep." I also discussed her view of Metaverse. Her imagination of Metaverse was exactly the virtual world depicted in *Ready Player One* (Spielberg, 2018): "Because reality is awful, so people wish to escape and hide in the game to have a rest. You can spend less money to be a high-class person, especially for girls."

Nevertheless, this convenience also made intimate relationships less serious. Similar to traditional cyber romance, many people in *VRChat* only seek short-term intimate relationships or flirt and have ERP or other sexual interactions without ever confirming relationships. Maria claimed that many of her friends have had multiple relationships in a short period of time in *VRChat*, especially those from Western societies. In addition, the ephemerality of such relationships can also be attributed to *VRChat* users' self-recognized mental problems. Maria, Maria's friends, and almost all of my informants with previous intimate experiences in *VRChat* shared that their partners or their friends' partners often struggled with depression, family

conflicts, or unstable tempers. Thus, many of my informants expressed concern about this form of intimate relationship and distanced themselves from it. They continued to downplay the authenticity of *VRChat*, emphasizing its virtual nature. "Afterall, it's just a game. Relationships formed here cannot last for long. You should never take it seriously."

Three months after the interview, I met Maria again and learned the news of her break-up. She said she found that he had many different values, had ambiguous relationships with her other female friends, and often broke his promises. They broke up, and they made up after he begged her, but they broke up again after he often broke his promise of keeping his distance from other girls. They finally did not meet with each other. After that, she claimed that she would never engage in serious relationships. She still dated boys in *VRChat*, but never confirmed the relationships. Currently, she mainly hangs out with Western male users as they are more open about relationships.

*Theoretical Analysis: The Ambivalences of Light Chat and Deep Communication*

In short, Maria's story demonstrates how people experience the "unreal" fantasy of embodied intimacy through hyper-exquisite avatars and the realness of emotions: the happiness at the moment of engaging with people in *VRChat* is real. Positive affection legitimizes a new form of authenticity born from fantasy, which constructs the fundamental logic of hyperreality: *VRChat* functions as a super affordable, easier-to-access, and everyday fantasy space (equivalent to "Disneyland" if described by Baudrillard, 1994) for Maria. Meanwhile, Maria's story manifested a common pattern of intimate relationships based on this fantastic and vivid delight in *VRChat*: ephemeral, fragile, and unstable. Maria tried to build more commitment in her relationship with Henry, but she failed, which led her to believe only in unserious sugar relationships. According to Bredikhina (2022), the term "sugar relationship" ("osato" in Japanese, "sha tang"/ 砂糖 in Chinese) originated in the Japanese *VRChat* community and describes light, casual relationships, often marked by an ironic or playful attitude towards intimacy, or viewed as an "artificial sweetener" (Bredikhina, 2022, p. 56). As a way of self-protection, most people like Maria accept light intimacy in the name of a sugar relationship. Commitment is a bridge between virtuality and reality, which can be difficult for most people to make.

On the other hand, serious relationships do exist when people are not only seeking light relationships for lively chat, good-looking avatars and sceneries, and immediate sexual and intimate gratification from ERP and phantom senses, but also those who can listen to them carefully and patiently for hours, disclose more inner side of oneself, and reflect on oneself and others. Eureka, who has also experienced discrimination against her transgender identity, verbal violence from her *VRChat* ex-boyfriend, and strong depressive sentiment, returned to *VRChat* after quitting for a long period of time. She regained all the emotional support from her *VRChat* friends and motivation to go for a better life here, not only through light intimacy, which she called "fast food love," but more importantly, through those "conversations that can touch upon one's soul." She shared her philosophy of social life:

I really like to have a continuous conversation with friends about considerable topics in a considerable amount of time, because it really has the sense to touch one's soul, really bringing out those essential things for exchange. Actually, everyone has their own story.

Like those fine shops with rich details, every soul has its own exquisite shape and details. So I enjoy chatting in this way, and I think it is the most meaningful thing, my life goal is to let everyone feel better a bit, especially young people. I know this goal is too high and unreachable, so I start with people around me. I wish to help them through conversation, listening to their struggles, and providing my comfort and help. Maybe there is little I can change. But just like those brave soldiers. Their sacrifice may be pointless, but it does not stop coming to the battlefield. I wanted to be a cute silly cat, just like my avatar, who can always deliver positive feelings to everyone, and make everyone happy.

Her story reminds us of the substantial gap between chat and conversation. As Turkle (2016) cited Samuel Johnson's quote, "We had talk enough, but no conversation" (p. 1), chat and conversation are very different. Turkle (2016) defines conversation as,

Fully present to one another, we learn to listen. It's where we develop the capacity for empathy. It's where we experience the joy of being heard, of being understood. And conversation advances self-reflection, the conversations with ourselves that are the cornerstone of early development and continue throughout life. (p. 2)

Virtual reality has long been conceived as an ultimate machine of empathy through the transmission of first-person experiences (Hassan, 2020). In the digital age of algorithm-manipulated social media platforms that are fragmenting our attention, distracting us from deep conversation, and eventually undermining our empathy (Turkle, 2011; 2016), alternative forms of social platforms like *VRChat* may provide new possibilities to address the problem. We need *VRChat*, but what we need more is VR conversation. We need not only party houses, dancing clubs, and gaming arenas, but also a beautiful Walden pond in social VR, where we can sit down with strangers, opening up our mouths, minds, and souls.

### Discussion

This study revisits the changing tension between virtuality and reality in the technocultural context of social VR. A lesson from hyperreal intimacy enabled by *VRChat* is the necessity to constantly consider and reconsider the legitimacy of virtuality compared to reality. My research findings shared the same stance as Boellstorff (2015) on the recognition of uncompromised individual agency, as users are exercising their creativity, intentions, and self-determination in an immersive social platform without blindly following any tasks or game routines compared to ordinary games. Moreover, the research findings of this study further understanding of Boellstorff's (2015) ambiguous notion of "virtually human," which did not specify the meanings of "human condition" (p. 29).

In this study, the human condition is crystallized in the form of human empathy. Empathy is rooted in different forms of virtual intimacy identified in the context of social VR: the genuineness of everyday conversational intimacy, the fantasy heterotopia that accommodates a different form of embodied intimacy, and the hyperreal intimacy that integrates these two. My informant, the transgender Chinese girl Eureka, called this experience "soul-to-soul communication." The idea of the soul provides a vital cue for revisiting the virtuality-reality dichotomy. On the one hand, the narrative of the soul is another form of recognizing

the weight of the virtual compared to reality from a Cartesian binary perspective, highlighting the spirit as the human essence beyond the limitations of the physical body. On the other hand, soul, in the Chinese or Asian context, may incorporate not only the confrontation between virtuality and reality but a harmonious coordination between the two. Soul, “Ling Hun” in Chinese, resonates with another uncommon Chinese translation of virtual reality proposed by the famous Chinese scientist Xuesen Qian, who called VR “Ling Jing,” literally a spiritual realm (Shen, 2022). However, the spiritual is not exactly virtual and disembodied, and not even human-centric in the classic Chinese beliefs. Instead, it is embedded in the greater nature of being—an “all-enfolding harmony of impersonal cosmic function” that integrates the spirit and matter into one unified being (Tu, 1998, p. 110). Thus, following the trajectories of this soul-to-soul communication, the construction of hyperreal reality does not point to the debate of which is more superior or an enforced dissolution of the virtuality-reality dichotomy, but an organic virtuality-reality harmony, in which individuals explore, question, and negotiate the essence of human beings, and develop the resonance of humans as collectives through both individual intimate experience and collective empathy.

### Conclusion

This study aims to understand the different forms of virtual intimacy that individual users may experience in social VR and how they contribute to the understanding of ambivalences between virtuality and reality. Through a two-year digital ethnography and in-depth interviews in *VRChat*, I identified three forms of virtual intimacy: (1) conversational intimacy, (2) embodied intimacy, and (3) hyperreal intimacy. Conversational intimacy reflects the ambivalences of escaping and engaging; embodied intimacy reflects the ambivalences of unreal and more real than real; and hyperreal intimacy reflects the ambivalences of light chat and deep communication. By integrating and leveraging both conversational and embodied intimacy, hyperreal intimacy can function as an effective concept in understanding the potential achievement of virtuality-reality harmony through more in-depth, soul-to-soul, and authentic interpersonal connections in today’s emerging virtual environments.

The current study is limited in several aspects due to the researcher’s positionality and accessibility to certain resources. First, this study did not include underage users in in-depth interviews, despite their significant presence in *VRChat*. I have encountered several teenagers, but I have not yet approached them for systematic investigations due to ethical concerns. Second, another ethical concern applies to my investigation of the phenomenon of erotic role-playing, although it is a vital intimate behavior. It is always controversial for ethnographers to engage in sexual activities during field trips (Irwin, 2006). Thus, to avoid any disputes, I asked the informants to share their experiences instead of participating in any form of activity by myself. Third, although I have included some cases, this study remains insufficient to study sexual minorities in relation to the furry community in *VRChat*. Moreover, as a cisgender and heterosexual male scholar who belongs to a socially privileged group, I realize my own limitations of positionality in reflecting and interpreting their life experiences. In the future study, I will invite scholars from the queer community to investigate the relevant phenomena with me together. Fourth, given my sociocultural background as a Chinese, I was strategically inclined to have more Chinese informants because I could establish a stronger rapport with them. Although I also have a number of informants from other Asian countries, Europe, North America, and South America, I have relatively less strong and short-term connections with them, which call for future studies and intercultural collaborations. Lastly, beyond the *VRChat* platform, it is always important

to keep a radar for technocultural vibrancy in other social VR platforms as well as how social VR is integrated with other non-VR platforms (e.g., Discord, Twitter, QQ, WeChat). In the future, more multiplatform comparative research should be conducted.

### References

- Ahmed, S. (2004). Affective economies. *Social Text*, 22(2), 117–139. Retrieved from <https://muse.jhu.edu/pub/4/article/55780>
- Attwood, F., Hakim, J., & Winch, A. (2017). Mediated intimacies: Bodies, technologies and relationships. *Journal of Gender Studies*, 26(3), 249–253. doi:10.1080/09589236.2017.1297888
- Azuma, H. (2009). *Otaku: Japan's database animals*. Minneapolis: University of Minnesota Press.
- Baudrillard, J. (1994). *Simulacra and simulation*. Ann Arbor: University of Michigan Press.
- Boellstorff, T. (2015). *Coming of age in Second Life: An anthropologist explores the virtually human*. Princeton, NJ: Princeton University Press.
- Bredikhina, L. (2022). Virtual “sweet relationships” in Japan: Navigating affection through technology. Communal practices, behaviors, and latent socio-cultural meaning. *Comunifé*, 22(XXII), 53–62. doi:10.33539/comunife.2022.n22.2684
- Brett, N. (2022). Why do we only get anime girl avatars? Collective white heteronormative avatar design in live streams. *Television & New Media*, 23(5), 451–461. doi:10.1177/15274764221080956
- Chan, L. S. (2018). Ambivalence in networked intimacy: Observations from gay men using mobile dating apps. *New Media & Society*, 20(7), 2566–2581. doi:10.1177/1461444817727156
- Chan, L. S. (2021). *The politics of dating apps: Gender, sexuality, and emergent publics in urban China*. Cambridge, MA: MIT Press.
- Cheng, R., Wu, N., Chen, S., & Han, B. (2022). Will Metaverse be nextG Internet? Vision, hype, and reality. *IEEE Network*, 36(5), 197–204. doi:10.48550/ARXIV.2201.12894
- Chrfi Alaoui, F. Z. (2023). “You know it’s different in the game, man”: Technodesiring, technorelating, and technoblackness as analytical modes of queer worldmaking in Black Mirror’s Striking Vipers. *Journal of Homosexuality*, 70(1), 192–209. doi:10.1080/00918369.2022.2103876
- Dekker, A., Wenzlaff, F., Biedermann, S. V., Briken, P., & Fuss, J. (2021). VR porn as “empathy machine”? Perception of self and others in virtual reality pornography. *The Journal of Sex Research*, 58(3), 273–278. doi:10.1080/00224499.2020.1856316

- De Souza E Silva, A. (2006). From cyber to hybrid: Mobile technologies as interfaces of hybrid spaces. *From cyber to hybrid: Mobile technologies as interfaces of hybrid spaces. Space and Culture, 9*(3), 261–278. doi:10.1177/1206331206289022
- Deterding, N. M., & Waters, M. C. (2021). Flexible coding of in-depth interviews: A twenty-first-century approach. *Sociological Methods & Research, 50*(2), 708–739. doi:10.1177/0049124118799377
- Dobson, A. S., Carah, N., & Robards, B. (2018). Digital intimate publics and social media: Towards theorising public lives on private platforms. In A. S. Dobson, B. Robards, & N. Carah (Eds.), *Digital intimate publics and social media* (pp. 3–27). London, UK: Palgrave Macmillan.
- Druck, A. (2006). *When will virtual reality become a reality*. TechCast. Retrieved from <https://www.techcast.org/Upload/PDFs/061026231112TC%20%20Aaron.pdf>
- Giddens, A. (1992). *The transformation of intimacy: Sexuality, love, and eroticism in modern societies*. Stanford, CA: Stanford University Press.
- Hassan, R. (2020). Digitality, virtual reality and the “empathy machine.” *Digital Journalism, 8*(2), 195–212. doi:10.1080/21670811.2018.1517604
- Hermanowicz, J. C. (2002). The great interview: 25 strategies for studying people in bed. *Qualitative Sociology, 25*, 479–499. doi:10.1023/A:1021062932081
- Hjorth, L., & Arnold, M. (2013). *Online@AsiaPacific: Mobile, social and locative media in the Asia-Pacific*. London, UK: Routledge.
- Illouz, E. (2007). *Cold intimacies: The making of emotional capitalism*. London, UK: Polity.
- Irwin, K. (2006). Into the dark heart of ethnography: The lived ethics and inequality of intimate field relationships. *Qualitative Sociology, 29*(2), 155–175. doi:10.1007/s11133-006-9011-3
- Jung, K., Park, Y., Kim, H., & Lee, J. (2022, April). Let’s talk@ Clubhouse: Exploring voice-centered social media platform and its opportunities, challenges, and design guidelines. *CHI Conference on Human Factors in Computing Systems, 450*, 1–6. doi:10.1145/3491101.3519774
- Krell, F., & Wettmann, N. (2023). Corporeal interactions in vrchat: Situational intensity and body synchronization. *Symbolic Interaction, 46*(2), 159–181. doi:10.1002/symb.629
- Lenton-Brym, A. P., Santiago, V. A., Fredborg, B. K., & Antony, M. M. (2021). Associations between social anxiety, depression, and use of mobile dating applications. *Cyberpsychology, Behavior, and Social Networking, 24*(2), 86–93. doi:10.1089/cyber.2019.0561

- Leo-Liu, J., & Wu-Ouyang, B. (2024). A "soul" emerges when AI, AR, and anime converge: A case study on users of the new anime-stylized hologram social robot "Hupo". *New Media & Society*, 26(7), 3810–3832. doi:10.1177/14614448221106030
- Linden Research. (2025). *Second life*. Retrieved from <https://secondlife.com/>
- Maclaren, K. (2014). Intimacy and embodiment: An introduction. *Emotion, Space and Society*, 13, 55–64. doi:10.1016/j.emospa.2014.09.002
- Meta. (2025). *Meta horizon*. Retrieved from <https://horizon.meta.com/>
- MMO Stats. (2024, March 18). *VRChat active player count & population*. Retrieved from <https://web.archive.org/web/20240318164630/https://mmostats.com/game/vrchat>
- Mottelson, A., Muresan, A., Hornbæk, K., & Makransky, G. (2023). A systematic review and meta-analysis of the effectiveness of body ownership illusions in virtual reality. *ACM Transactions on Computer-Human Interaction*, 30(5), 1–42. doi:10.1145/3590767
- Muñoz-Saavedra, L., Miró-Amarante, L., & Domínguez-Morales, M. (2020). Augmented and virtual reality evolution and future tendency. *Applied sciences*, 10(1), 322. doi:10.3390/app10010322
- Nem, V. G., & Bredikhina, L. (2023, November 13). Social VR lifestyle survey 2023. *Medium*. Retrieved from [https://medium.com/@nemchan\\_nel/social-vr-lifestyle-survey-2023-a61d1c4cae33](https://medium.com/@nemchan_nel/social-vr-lifestyle-survey-2023-a61d1c4cae33)
- Sadowski, A. S., & Lomanowska, A. M. (2018). Virtual intimacy: Propensity for physical contact between avatars in an online virtual environment. *Computers in Human Behavior*, 78, 1–9. doi:10.1016/j.chb.2017.09.011
- Saffo, D., Yildirim, C., Di Bartolomeo, S., & Dunne, C. (2020, April). Crowdsourcing virtual reality experiments using VRChat. *CHI Conference on Human Factors in Computing Systems*, 1–8. doi:10.1145/3334480.3382829
- Saldaña, J. (2021). *The coding manual for qualitative researchers*. London, UK: Sage Publications.
- Shen, X. (2022). Metaverse: The latest sign of human existence. *Metaverse*, 3(1), 1–10. doi:10.54517/met.v3i1.1794
- Spielberg, S. (2018, March 30). *Ready player one* [Film]. Burbank, CA: Warner Bros.
- Timmermans, S., & Tavory, I. (2012). Theory construction in qualitative research: From grounded theory to abductive analysis. *Sociological Theory*, 30(3), 167–186. doi:10.1177/0735275112457914

- Tu, W. M. (1998). The continuity of being: Chinese visions of nature. In M. E. Tucker & J. Berthrong (Eds.), *Confucianism and ecology* (pp. 105–121). Cambridge, MA: Harvard University Press.
- Turkle, S. (2005). *The second self, twentieth anniversary edition: Computers and the human spirit*. Cambridge, MA: MIT Press.
- Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other*. London, UK: Hachette UK.
- Turkle, S. (2016). *Reclaiming conversation: The power of talk in a digital age*. New York, NY: Penguin.
- Wang, J., Qu, J. G., & Leo-Liu, J. (2023). An algorithmically woven community: Disclosing mental illness and connecting with similar others on an algorithm-mediated platform in China. *Social Media + Society*, 9(4), 1–13. doi:10.1177/20563051231205596
- Wang, M. (2020, April). Social VR: A new form of social communication in the future or a beautiful illusion. *Journal of Physics: Conference Series*, 1518(1), 012032. doi:10.1088/1742-6596/1518/1/012032
- Ward, K. (1999). The emergence of the hybrid community: Re-thinking the physical/virtual dichotomy. *Space and Culture*, 2(4–5), 71–86. doi:10.1177/120633120000100405
- Watercutter, A. (2021, Jan 28). We met in virtual reality is the best film from the Metaverse. *Wired*. Retrieved from <https://www.wired.com/story/we-met-in-virtual-reality-metaverse/>
- Yee, N., & Bailenson, J. (2007). The proteus effect: The effect of transformed self-representation on behavior. *Human Communication Research*, 33(3), 271–290. doi:10.1111/j.1468-2958.2007.00299.x
- Zamanifard, S., & Robb, A. (2023, April). Social virtual reality is my therapist: Overcoming social anxiety disorder through using social virtual reality. *CHI Conference on Human Factors in Computing Systems*, 252, 1–6. doi:10.1145/3544549.3585888
- Zhang, J. (2023). *Exploring gender expression and identity in virtual reality: The interplay of avatars, role-adoption, and social interaction in VRChat* (Master's thesis, Uppsala Universitet, Uppsala, Sweden). Retrieved from <https://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-504082>