Platform Design, User Creativity, and Aesthetic Governance in Social VR

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Introduction

While the term "metaverse" is often employed to gesticulate towards a larger paradigm of digitized sociality, immersive applications of virtual reality technology (VR)[1], commonly represented as humanoid figures communing in 3D-generated landscapes, are central to its vision. Currently, it is so-called Social VR (SVR) platforms that most approximate this vision socially and aesthetically and therefore allow for an evaluation of current practices and possible trajectories of digital embodiment as a basis of "metaversed" online cultures. The following text is not a thorough empirical investigation of existing SVR platform culture, but an exemplary sketch of parts of the landscape delineating the conditions and possible effects of aesthetic governance in VR.

The purpose of this overview is to close a gap in the discussion about SVR and future "metaverse" spaces at large. In terms of structural and aesthetic design choices, the main focus of inquiry has been on usability and safety – the latter arguably because of extensive bad experience with and public discourse on forms of digital(ized) violence in online virtual spaces. Less attention has been given to the powerful interplay of emerging SVR platforms' reliance on user creativity and their control over the conditions and limits of this creative labor. Thinking of this only in terms of "content creation" analog to the current social media platform paradigm risks missing an important factor: Other than in non-VR virtual social spaces, where users produce social meaning by co-creating and co-consuming the media environment they then come to metaphorically inhabit, in VR physically experienced habitation is a central issue right from the start. The "content" SVR communities produce is first and foremost the virtual bodies their

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1 In this text, the term "VR" denotes technologically mediated immersive digital 3D environments, while the word "virtual" may in a wider sense also refer to other non-physical/online spaces, communities, practices, or phenomena.

members are present through and present themselves as, and the virtual spaces they sensually experience these bodies in. Controlling what such bodies and spaces can do and look like also means profoundly controlling the scope of users' embodied experience. The emergence of digital aesthetic governance over embodiment is what this text is meant to draw attention to.

Since the development and deployment of the *Oculus Rift* started the consumer VR mainstreaming phase around 2013, numerous social worlds and platforms centering the technology have been created. From weblogger Ryan Schultz's more than 160 entries long list of VR-capable social virtual worlds (Schultz, 2024), only a few have garnered a 4-or-more-digit user count, however. The two most prominent ones as of 2024 are *Rec Room* and *VRChat*. A comparison of these two protagonists helps understand how different concepts of aesthetic worldbuilding and user creation can influence community development in terms of culture and politics – which is crucial when thinking about what "immersive democracy" might mean or come to be.

This text is divided into several parts. After a general introduction to Social VR, I will give an overview of the genesis and characteristics of the two chosen platforms. This overview is followed by a rough description of the communities that have formed on each platform during the past years. The concluding part will discuss aesthetic governance as a process of negotiation between design paradigms and community culture(s). For my descriptions, I largely rely on observations during unstructured preliminary field research on various SVR platforms 2020–2022. Full-fledged ethnographic research through participatory observation on Social VR is still lacking, but I have taken into account some literature using qualitative methods like interviews (Freeman et al., 2020; McVeigh-Schultz et al., 2019; Shriram & Schwartz, 2017), guided group walkthroughs (Liu & Steed, 2021) or social media discourse analysis (Zheng et al., 2022), as well as primary and secondary online sources.

Social VR

Social VR platforms are "immersive systems that prioritize and focus on the in-environment communication" (Liu & Steed, 2021). In earlier decades, such systems have been discussed as "collaborative social environments"

(CVEs), but the arrival of mass consumer VR hardware has shifted terminology (Jonas et al., 2019). SVR practice can be described as embodied social role-playing within a system of connected and confined virtual spaces inhabited by avatars[2] tethered[3] to human users. The terms "space", "room", "world" or sometimes "map" are often used interchangeably when talking about places inside SVR. In this text, I follow that mode of usage and reserve the term "platform" for speaking about the whole system of spaces, the infrastructure of which is most often run and owned by one company. While in a general sense, socializing in virtual networked environments has been a foundational element in digital culture for decades, it is the possibility of first-person embodiment through VR technology that makes Social VR distinct, introducing the bodily effects of place illusion and presence (Slater, 2009; Slater et al., 2009) into digital socialization.

Most, though not all, SVR platforms focus on meeting and connecting with strangers and have implemented functions to build user networks, like friends lists or groups. Users communicate verbally via microphone and/or non-verbally with their avatar bodies, be it via live VR body tracking or through prerecorded movements. Other established means of social online communication like emojis and written chat are common as well, though less central to the experience. Almost all SVR platforms allow usage without a dedicated head-mounted device (HMD) to lower entrance barriers and enable user growth – in fact, the majority of people using the bigger SVR platforms currently are non-VR users, because VR hardware is still relatively pricey, quick to become technically obsolete, and of limited everyday utility. Nevertheless, since immersive VR usage is core to the platforms' appeal and affordances, most insight can be gained from concentrating on this part of the user experience.

Due to technical limitations, a single room on an SVR platform can currently usually host no more than about 50 people simultaneously, which structurally encourages the dynamic creation and dissolving of social groups. Virtual rooms can be instanced multiple times in different social states: public, private, open only for friends, through invitation, or only for people using a specific link or token. Since digital assets can be copied, uniqueness in virtual environments is a rare good. Consequently, it has –

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2 For a closer look at avatars within SVR see Kolesnichenko et al. (2019).

3 Turkle (2006) discusses the psycho-social implications of such "tethering" with respect to mobile phones in a way that might be even more relevant for virtual and mixed reality.

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like presence – become decoupled from (virtual) materiality to mainly exist as a transient psycho-social fact: as an experience. But before discussing this, I will first delineate the properties of the two platforms examined here.

Rec Room

History and Availability

In the spring of 2016, a group of six men – partly *Microsoft* employees who had formerly worked on the mixed reality device *HoloLens* – founded the company *Against Gravity* to release *Rec Room*. The application was marketed as a "virtual reality social club where you play active games against competitors from all around the world"[4] and featured different virtual spaces for users to play and socialize in. *Rec Room*'s name refers to its central social metaphor, which is also the source of its unified aesthetics: "a prototypical rec[reation] center from the year 1987" (McVeigh-Schultz et al., 2019). Most of the provided games were and are indeed competitive, but over the years simulations of typical physical sports games like dodgeball were surpassed in popularity by more martial ones like laser tag, embedding the common "first-person shooter" experience of online gaming into the social sandbox.

Rec Room was initially released to meet the market entry of the new *HTC Vive* HMD, while also being available for the *Oculus Rift* and expanding availability to *Playstation 4*'s VR system in late 2016. Since then, the platform has become accessible to a fairly large number[5] of devices and operating systems: *Windows* PC desktops (either as a downloadable standalone application or via the digital distribution platform *Steam)*, *SteamVR* compatible as well as *Oculus Rift* and (*Meta*) *Quest* HMDs[6], mobile *iOS*

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4   Cited from the original press release accompanying the application's launch, archived under https://web.archive.org/web/20160620140618/http://www.againstgrav.com/press [accessed 2024, September 23].

5   "Fairly large" should be understood in comparison to other SVR apps. While technically, browser-based platforms like the recently discontinued *Mozilla Hubs* are accessible from any device with a compatible browser and thus have the lowest threshold for entry and widest possible adoption, in practice companies controlling access to VR applications via their stores have been reluctant to include and sometimes actively excluded WebXR compatible browsers, to the effect of restricting access to non-proprietary platforms.

6   Support for *Quest* 1 devices was discontinued in the first half of 2023 when *Meta* deprecated the relevant SDK.

and *Android* devices, *Xbox* and *PlayStation*. Like most SVR applications, the platform so far does not support *Linux* and *macOS* desktop devices.

Economy and Adoption

Likely due to its founders already being well-connected in the industry, *Against Gravity* started with substantial seed funding from multi-billion-dollar venture capital firm *Sequoia Capital* in 2016 and was able to raise investments to almost $300 million until late 2021 – the bulk of which poured into the firm during the Covid-19 pandemic[7]. The company has since changed its name to *Rec Room Inc.* Like almost all current SVR platforms (and most social media platforms more generally), *Rec Room* is free to use, with some advanced features only accessible to paying customers. An in-game economy of tokens to spend on virtual items and clothing was included from the start, and custom creations of users made with the platform tools can be traded via those tokens inside the app's ecosystem. In 2020, the ability to purchase tokens with "real" money for an exchange rate set by the company was added, as well as a monthly subscription feature called "Rec Room Plus" that allows creators of in-game assets to cash out their earnings after reaching a threshold of 250,000 tokens (currently converting to $100). On the virtualization side of economics, room creators can also create their own sub-currencies, which may then be traded against *Rec Room* tokens[8], allowing for a potentially unlimited number of virtual micro-economies. The company calls its meta economy "Community Commerce" – a term that has gained popularity in recent years with TikTok's growing success – and promotes it to users as a potential way of "making a sustainable income"[9].

On its website, *Rec Room* boasts more than 100 million lifetime users. While an impressive figure, this amount does not reflect the number of people actually using the platform, since it includes abandoned, multiple, and otherwise inactive accounts. Occasionally, the company publishes numbers of its monthly active user count (MAU) at peak times. In 2022, this number was reported as 3 million accounts that had logged into the

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7 Numbers cited from https://www.crunchbase.com/organization/against-gravity/comp anyfinancials [accessed 2023, December 5].
8 See https://recroom.com/roomcurrencies [accessed 2024, September 23].
9 Cited from https://blog.recroom.com/posts/2021/10/12/community-commerce-report [accessed 2024, September 23].

platform at any given time over the course of a month (Au, 2022b). Meant to demonstrate growing adoption, this number still does not convey much information about the amount of time people spend on the platform and what they actually do there. Independent numbers are not available and would be hard to obtain from the outside without access to a usage data API, because users are spread over thousands of rooms at any given time.

Aesthetic Concept

Rec Room's visual concept is a virtual youth nostalgia – not only regarding the choice of its metaphorical location but also in the sense that most of its users are too young to have any personal memories of a US college or university recreation center in 1987. The virtual spaces provided by the platform itself, called "Rec Room Originals", are dominated by warm colors and rounded shapes creating a family-friendly[10] nostalgic vibe. Simple materials and "low-poly"[11] 3D objects ensure fluid rendering and interoperability across different devices and add to the overall retro aesthetics[12].

Fluid playability on mobile devices is also a major reason for the stylized humanoid user avatars on the platform, which for the longest time did not feature any legs[13]. Platform users are represented through torsos floating above ground, with aligned but unconnected hands and heads. These avatars, called "floating beans", can be customized individually inside the app with regard to their facial features, hairstyle, skin color, gender

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10 For these and the following descriptions, compare McVeigh-Schultz et al. (2019), who have interviewed *Rec Room* designers about their aesthetic and functional decisions.

11 The number of simple geometric polygons a 3D object consists of correlates with the computational power needed for its visual rendering. Since technological advancement in graphics computation is accompanied by a drive for higher fidelity 3D realism, simpler "low poly[gon]" aesthetics have become associated with a nostalgic vibe.

12 YouTuber Retr0's video "The Evolution of Rec Room (Release, 2016 and 2017)" gives an impression of the aesthetic development, but also consistency over the years ([Retr0], 2021).

13 Most consumer VR hardware only provides movement tracking of three points – head and hands. Leg movement and positioning usually have to be inferred computationally. The company describes the rationale of the original avatar design in a blog post as follows: "We avoided showing untracked legs and arms because it could break the feeling of presence; we kept facial features cute and minimal to avoid the uncanny valley effect; and we chose simplicity over visual detail so the game ran smoothly" (https://blog.recroom.com/posts/avatars) [accessed 2024, September 23].

attributes, clothing, and accessories. Stylized mouths with animations synchronized to the user's microphone input make social interactions feel more "alive" and have been designed to predominantly convey friendly facial expressions. This design decision is a form of aesthetic nudging towards a more "positive" social atmosphere where, as one *Rec Room* developer put it, "everyone looks happy all the time" (McVeigh-Schultz et al., 2019).

Besides the "Rec Room Original" spaces/games developed by the company itself, users can build their own rooms from an assortment of basic 3D elements and materials, as well as design custom avatar "costumes" and thereby body shapes. This is done with an in-game tool called "Maker Pen" – a stylized hot-glue pistol – and a visual scripting system called "Circuits" for interactive functionalities like buttons, dynamic architecture, collision detection, or scoring systems. In 2023, an additional development kit called "Rec Room Studio" was rolled out in beta state and made accessible to a small portion of the user base. The kit allows the import of environments and elements created with the game engine *Unity3D*, thereby significantly expanding the 3D design options. If widely adopted, this is likely to break up the fairly unified aesthetics of Rec Room in the future. *Rec Room Studio* is on the one hand targeting companies that want to be present on the platform with their corporate visual designs[14]. On the other hand, it can also be understood as a reaction to the success of *Rec Room*'s direct competitor *VRChat*, which follows a different logic of aesthetic creation and has spawned a culturally much more influential creator community.

VRChat

History and Availability

VRChat was released by software engineer Graham Gaylor for the then-new *Oculus Rift* HMD in early 2014. Alongside the later discontinued platform *Riftmax*, the app quickly assembled a small community of VR enthusiasts using it for socializing, exploration, development, and discussion in the early years of consumer VR. At the point of release, *VRChat* was in a very basic state, and it has retained the status of being an "early access" product in development until now. Its core functionality was, and still is,

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14   A paragraph on the feature webpage addresses readers that "are a company or brand" (https://recroom.com/studio) [accessed 2024, September 23].

the hosting and mediating of networked virtual co-presence through 3D avatars, leaving most everything else to its users. Contrary to *Rec Room*, *VRChat* never had a unified aesthetic design concept: user-created content is hugely important to the platform and has been the main reason for its popularity.

Like most SVR platforms, *VRChat* does not limit accessibility exclusively to users with VR hardware. Desktop clients for *Windows* and *macOS* were deployed early, though the latter was discontinued in the first half of 2016 when support for the newly released *HTC Vive* HMD via *SteamVR* was added. Direct client downloads from the *VRChat* homepage were phased out in the following years in favor of distribution through the different app stores tied to the disjunct and competing VR hardware device ecosystems. Most importantly, a combined PC desktop and VR version accessible via the *Steam* software platform's early access program in mid-2017 drew in a lot of users who approached the application from a video-gaming perspective. There is no native support for *Linux* or *macOS*. The beta version of a mobile app for *Android* was released in December 2023 but has so far found less adoption than the mobile versions of direct competitors like *Rec Room* or *Roblox*.

Economy and Adoption

Since its inception, the initial two-person LLC (Gaylor teamed up with programmer and game designer Jesse Joudrey shortly after the initial release to launch the company) has evolved into a business with several dozen reported full-time employees. *VRChat Inc.* has been financed through several funding rounds with about $95 million[15]. To the author's knowledge, the company has never disclosed revenue or valuation figures or even a business model. The application is largely free to use, with a subscription service called "VRChat Plus" offering exclusive or early access to select features, but the revenue from subscriptions is unlikely to support a significant part of the cost of infrastructure, support, and development. The latest – and by far largest – funding round in 2021, providing the company with an $80 million backing led by US venture investment firm *Anthos Capital,* was linked in a company blog post on behalf of the "VRChat Team & Investors"

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15 Numbers from https://www.crunchbase.com/organization/vrchat/company_financi als [accessed 2023, December 5].

to the ambition of further growing the user base and implementing a "creator-driven economy" ([Tupper], 2021b), i.e. mechanisms allowing users to pay each other inside the platform. Such a payment infrastructure similar to the *Rec Room* "Community Commerce" would enable the company to profit off transaction fees that have so far been taken in by external platforms like *Booth*, *Gumroad*, or *Patreon*, which have become hosts to the community's lively informal content market economy (Au, 2021).

Similarly to *Rec Room Inc.*, the company is not interested in making its adoption and usage data fully transparent. Instead, it occasionally publishes new record highs of concurrent users, i.e. the maximum number of accounts logged in simultaneously at a select moment. Those were reported to be about 40,000 on New Year's Eve 2020 ([Tupper], 2021a) and more than twice that number one year later (Au, 2022a). There is, though, a community-driven documentation of *VRChat*'s API that runs a comprehensive usage dashboard allowing continuous insight[16]. Generally, *VRChat*'s total user base is often assumed to be lower than that of *Rec Room* but with a higher percentage of actual VR hardware users due to its advanced motion tracking support. *Steam* usage statistics of PC desktop and VR users usually rank *VRChat* significantly higher than *Rec Room*[17], but do not represent mobile or any other users not connecting via the service, the former being a significant part of *Rec Room* users according to the company[18].

On the technological side, *VRChat* supports more advanced VR hardware technology than most of its competitors, like up to 11-point full-body tracking[19], and features a generous scripting API. Despite prominent claims that "legs are hard"[20] in VR, *VRChat* avatars have long been able to accommodate not only legs with inverse kinematics and tracking but also

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16 See https://metrics.vrchat.community [accessed 2024, September 23].

17 For at least the last year, the *Steam* user count for *VRChat* has been roughly 20 times the one of *Rec Room* as per https://steamdb.info/charts/?category=53&select=1&compare =438100%2C471710 [accessed 2024, September 23].

18 A *Rec Room* representative reported in 2022 that "at this point VR is a pretty low percentage of our monthly players" and then referred to the bulk of users coming from various ecosystems not represented on *Steam* (Lang, 2022).

19 Tracking accuracy of a user's physical body can be increased by adding more capture points at the feet or between key joints like hips, knees, or elbows. *VRChat* supports tracking devices that interface with *Valve*'s optical "lighthouse" system but can also be expanded by solutions compatible with *SteamVR*'s protocols. See https://docs.vrchat. com/docs/full-body-tracking [accessed 2023, December 5] and compare FN 13.

20 "Seriously, legs are hard" was famously proclaimed by *Meta*'s Mark Zuckerberg at the "Meta Connect VR" conference in 2022 when announcing full-body avatars for

dynamically moving tails/hair/costume parts, advanced custom shaders, prerecorded movement animations and a wide range of avatar sizes. This has led to the platform garnering a power-user base of people willing and able to invest in VR hardware allowing for higher degrees of embodiment. Consequently, users with VR hardware and "deskie" users without it can have very different experiences when using the platform, which sometimes leads to differing social behavior and contributes to cultural stratification along hardware ownership lines.

Aesthetic Concept

VRChat's significant informal community content market, with users selling, trading, and commissioning avatars and virtual rooms among each other, is a result of its aesthetic production paradigm. The platform has encouraged and relied on user-created content pretty much from the start by providing a software development kit (SDK) plugging into the free-to-use *Unity3D* game engine. Early on, *VRChat* founder Graham Gaylor expressed his belief that custom content creation was key to evolving metaverse applications, as it had been for social web platforms[21] – virtual environments and avatars being the equivalent of user-generated text and image content on "web 2.0" social media. Like with these previous platforms, Social VR's appeal and worth would come to depend on its users' creative labor.

The "look and feel" as well as the social dynamics on *VRChat* today are a direct consequence of the decision to have almost all content generated[22] by users. The first *VRChat* application had been quickly assembled in *Unity3D* by Gaylor, using a scene from the *Unity Asset Store* and a simple humanoid (male) avatar as readymades for testing the functionality of networked VR[23]. Since there were no aesthetic guidelines but only technical limitations, interested users soon began experimenting with possibilities and lim-

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Horizon Worlds, followed by the erroneous statement "[…] which is why other virtual reality systems don't have them either" (Hern, 2022).

21 See Thompson (2014) at minutes 17:22 & 48:56.

22 "Generated" may at the most basic not mean much more than "uploaded" – "stealing"/copying content from other creators is not uncommon, although frowned upon in the community if it is outside the scope of fan art. See e.g. the sentiment expressed by one interviewee of Quent and Vogl (2025) in this book.

23 An impression can be gained from the release thread on Reddit and links to the first run's documentation in the comments: https://www.reddit.com/r/oculus/comments/1vcbwk/vrchat_v01_released/ [accessed 2024, October 19].

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itations for creating avatars and spaces. An influx of "very online" users in the following years brought recreations of video games, pop-culture figures, and memes. Since the knowledge threshold and learning curve for user creation in 3D spaces is significantly higher than on "classical" social media, with a wider gap between content production and social practice, avatars in particular have become a desirable commodity on *VRChat* – a kind of social trading good in the community, sometimes spreading very fast and creating memetic phenomena spilling into the wider online culture. Over time, *VRChat* users thus developed a deliberate aesthetic eclecticism that made the platform increasingly attractive for content creators on video and streaming platforms like YouTube and Twitch, who became part of the developing informal cultural economy.

Virtual Communities

VRChat's eclecticism and avatar affordances have become a breeding ground for distinctive and overlapping communities around identities and practices with a high emphasis on embodied aesthetics. It is beyond the scope of this text to describe these communities in detail. They notably include

- a long-standing club/party scene as well as a dedicated dance community holding competitions supported by full-body tracking gear, both mainly focused on, but not limited to, e-girl & e-boy avatar styles,
- a transgender community using the affordances of virtual morphological freedom[24] and sharing advice on gendered body movement and voice training through socializing as well as workshops and community events,
- a virtual furry community enjoying the low entry threshold of VR avatars as opposed to the high prices of physical fursuits, with the last

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24 "Morphological Freedom" is an idea from transhumanist enhancement discourse. In the present context, compare founder of the *VRChat* "Trans Academy" Tizzy in an interview with VTuber Phia: "In 2016, when I was looking to have facial feminization surgery, I brought a screenshot of my second life avatar because it was the person that I felt the most comfortable and happy as. That might seem a little bit taboo now but I think that as Social VR and the metaverse become more of an integral part of our society in the future, we're going to see a lot more people prototyping their identity in these spaces and embracing the idea of having morphological freedom" (Bollinger, 2023).

convention on the platform according to the organizers having had more than 21,000 participants[25],

- a diverse role-playing community with different game worlds and stories as well as meta-role-playing troupes with high mobility on the platform like the "Loli Police Department",
- and a meme community that strongly influenced the platform's public image because of its attractiveness to live streamers.

The latter's appeal to underage users and people close to online trolling and "shitposting" culture and their often dominating and abrasive behavior in public *VRChat* rooms has driven other local communities to largely avoid public worlds and rely on non-public rooms and invitation mechanics, operating their own events and social spaces somewhat shielded from the platform's wider ecosystem. This dynamic has begun to create something akin to a *VRChat* society, where interest groups negotiate their sometimes aligned, sometimes conflicting interests through different channels and carve out virtual space for themselves.

VRChat is also frequently referred to as having been instrumental in developing distinct virtual socio-physical practices and conventions: "head-patting" as a gesture of affection, silent rooms where users can doze or sleep while wearing their HMDs, and a growing number of users engaging in erotic role-play (ERP) in VR. The latter has been met with concern by longer-term users because it amplifies or contributes to a growing sexu-alization of avatars[26] and exacerbates existing disputes about the status of minors on the platform.

All these practices and their exemplary sub-communities share a strong connection with corporeality, at least and foremost for users of dedicated VR hardware. They are about negotiating and transforming the relationship of physical bodies, self-images, and forms of expressive movement on the one hand to the possibilities of virtual bodies, self-images, and mediated relationships on the other – tethering and expanding embodiment. Thanks to its advanced body tracking support *VRChat* has become one of few plat-

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25 https://furality.org/ [accessed 2024, September 23].

26 Arguably, sexualization is part of the complex intercultural history of anime aesthetics at large, so this tendency was prevalent in a community relying heavily on those aesthetics for their avatars and virtual cross-dressing practices pretty much from the start. It only seems to have become problematic for this community when combined and thus increasingly identified with publicly performed socio-sexual practices – an example of the differential value judgments at play in communities forming around visual representations of bodies, identities, and desire.

forms that can accommodate the aesthetic realization of this relationship with and desire for virtual embodiment, where "physical bodies [are] the immediate and sole interface between [users] and their avatars" (Freeman et al., 2020).

The relatively large degree of technical freedom in the creation especially of avatars has also given *VRChat* a long history of hacks and so-called "crashers" – code-based modifications that can be employed as a weapon to freeze or kick other users out of the game, sometimes in quite elaborate and aesthetically overwhelming ways. Especially crashers weaponizing shader code combine the affective experience of being forcefully ejected from a (virtual) social reality with an intense aesthetic overload likely to provoke strong physical reactions in HMD users: they not only crash the software, but they also attack the sensory system of its corporeal users, forcing them to embody the severance of their own tethering.

Like avatars in general, such crashers have long been traded among *VRChat* users, be it for offensive or defensive purposes. The technical affordances allowing for such virtual weapons as well as the comparably weak content moderation on the platform have made many community members somewhat resilient to attacks, insults, flaming, etc., making them regard harassment as an annoying, yet not truly avoidable social phenomenon at least in public worlds. The danger of being attacked or insulted is seen as a trade-off for the power of forming, defining, and developing community and community aesthetics "from the ground up". The aesthetic sandbox is a social sandbox as well, where too many preventive restrictions are undesired even by users experiencing harassment, "as they might prevent the open dialogues that drew users to the technology in the first place" (Shriram & Schwartz, 2017).

Contrastingly, *Rec Room* communities, with their limitations in avatar design, have developed less around virtual corporeality and more around competitive playful practices. Many users are heavily invested in the games the platform offers – not least because especially the "Rec Room Original" PvP games like paintball or laser tag work well from a vsports[27] perspective. But there is also a creative community focused on building worlds and costumes or painting in *Rec Room,* as well as sub-communities based on such aesthetic creation, like for (military) role-playing or pop-cultural fan-

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27 While the term "vsports" seems to be not in use yet, it makes a lot of sense to distinguish virtual sports activities with their emphasis on whole body movement from egaming/esports that require more isolated hand-eye coordination.

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doms. For creators, being confined by the narrower aesthetic limits of the platform is a creative challenge balanced by the entanglement of attention and token economy. Lastly, like in *VRChat*, there are also identity-centered communities/servers for LGBTQ or furry users on *Rec Room*, although they appear to be less prominent. Generally, most users seem to follow the central metaphor and conceptual idea of *Rec Room* as a "social club" around sports activities, and also partake in the regular special events the company designs around tasks and token/item collection, which also try to build and develop a narrative around the fictional platform universe.

When, in 2023, *Rec Room* announced the upcoming integration of full-body avatars (i.e. bodies with legs) and single-finger movement, a significant portion of users seemed rather wary of such changes[28]. Especially longer-time users seem to identify with the stylized aesthetics of the platform and take a rather conservative stance towards changing the simplified look. When discussing such changes, users regularly invoke *VRChat* as the aesthetic negative to their appreciation of *Rec Room,* emphatically describing the dread they feel when confronted with *VRChat*'s radical aesthetic inconsistency of avatars and worlds. In contrast, it seems they specifically value the stable and defined aesthetic normality across the *Rec Room* universe, for it allows them to concentrate on the core activities of gaming and socializing. In response, the company places a lot of emphasis on explaining upcoming changes in terms of aesthetic consistency. A recent developer blog post on the full-body avatar feature, while praising the aesthetic change of "adding noses, eyebrows, fingers, arms, legs, and feet" as "more ways for all of us to make money", ended with a section titled "Our Commitment to the Floating Bean Avatars"[29].

Governance

As the introduction already made clear, I assume a connection between aesthetic and social regulation of Social VR platforms. If that connection existed as a correlation – however complicated by the fuzziness of cultural processes –, then we would assume spending time in *Rec Room* to be

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28 For an exemplary discussion among *Rec Room* users that focuses on the aesthetics of single fingers, see https://www.reddit.com/r/RecRoom/comments/143hytj/what_are_your_opinions_on_rec_room_having_hand/ [accessed 2024, September 23].

29 https://blog.recroom.com/posts/avatardeepdive [accessed 2024, September 23].

an experience significantly less likely to be disruptive or stressful. Indeed, the platform is not only aesthetically and economically more coherent, it also has more developed moderation/policing features than *VRChat*. A system of appointing and rewarding community moderators, a third-party algorithm constantly surveilling users' speech for forbidden words[30], and features like an embodied gesture for quickly blocking other users in threatening situations speak of user safety being considered on a variety of levels. It is no wonder then that in the academic literature on Social VR, *Rec Room* is being discussed more prominently and also more positively than *VRChat* when it comes to questions of safety and harassment[31], with the latter platform usually being characterized as a form of "wild west" (McVeigh-Schultz et al., 2019) "known for non-normative social interactions" (Zheng et al., 2022).

While this is intuitively plausible, there might also be some bias at play. Academic research on Social VR, when more than pure literature review, has so far concentrated on design features, and on harassment as a potential design problem. Skimming through papers and their methodologies shows that researchers spend surprisingly little time actively using the platforms they write about[32]. There is a serious lack of ethnographies about and on SVR that would enable outsiders to learn how those platforms' users make sense of and navigate the social space(s) they inhabit and, for the most part, create. Harassment is one part of this social space and users respond to it within the frame of the general community politics, explicit policies, and tacit rules of their specific platform – their response is part of the "attendant literacies, interaction conventions, and common practices that exist in a feedback loop between the (top-down) designed affordances of various online social platforms and the (bottom-up) practices of virtually embodied players seeking to communicate" (Tanenbaum et al., 2020).

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30 See company blog posts at https://recroom.zendesk.com/hc/en-us/articles/44199026 50135-Applying-for-Moderator-Volunteer-Mod and https://blog.recroom.com/posts/ voice-moderation-updates [accessed 2024, September 23].

31 One literature review conspicuously lists *VRChat* as "known for harassment and unpredictable social encounters" in a long table of otherwise neutral or even advertisement-like descriptions of different platforms' functionalities/USPs (Handley et al., 2022).

32 In addition, *Rec Room* company staff seem to be much more accessible for interviews with researchers, which also leads to a certain representational bias.

In fact, hate speech is as much a problem in both *Rec Room* and *VRChat* as bullying of certain user groups like e.g. furries[33] is – despite the different grades of moderation and implementation of safety features. On both platforms, it does not take long to encounter nazi roleplaying or discriminatory talk. On both platforms, sexual harassment is a problem evolving from its already prevalent and well-described occurrences in virtual social spaces in the wider sense into the new embodiment and immersion affordances of VR technology – a problem made even more pressing by the significant presence of minors. Additionally, underage users themselves form, on both platforms, a group that many older members see more as annoying than as vulnerable, denigrating them as "squeakers" for especially younger boys' high-pitched frequent yelling.

As has often been established for all sorts of virtual environments, such social problems will keep appearing and shape-shifting in online spaces as long as they exist in the so-called "real world". While design-<u>relevant</u>, they are not design-<u>solvable</u> problems. "[I]ntensified old concerns in the new world" (Zheng et al., 2022), they now appear in a context with new conditions and possible complications. This new context is on the one hand defined by the intensified bodily experience of interactions in virtual reality, which as a "social" medium paradoxically also bears the characteristics of disembodied online interactions – with the consequence of "less boundaries [...] that can rule and determine what are reasonable, psychologically safe and permissible ways for other people to behave around self and how self will respond when someone steps outside those limits" (Zheng et al., 2022). But this context on the other hand also carries the vectors and effects of the platforms' differing creative/aesthetic paradigms. How can those paradigms be described when thinking about governance in these new and ambiguous spaces of virtual embodiment and embodied virtuality?

Of the two example platforms regarded in this text, *Rec Room* seems to fit the top-down model of a benevolent ruler. "Rooms are behavior", as one of its developers put it in an interview (McVeigh-Schultz et al., 2019), and the company retains relatively much control over the social cues they allow virtual spaces to give users on their platform. Communitization takes place around competitive playful activities, mediated by a ubiquitous gamified economy and within a unifying aesthetic atmosphere

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33 Searching for "furries rec room" on YouTube yields plenty of videos with titles like "trolling furries on rec room", "Killing furries in Rec Room", "Making furries cry in Rec Room", "Infiltrating Furry Rec Room Servers" etc.

regulating the expressions users are able and allowed to perform. It is, in short, a virtual model of happy capitalism. On a platform of thousands of parallel and synchronous bounded virtual rooms, centralized control over the conditions of social experience within these rooms hedges boundary testing experiments as much as violations of the social contract. In that, *Rec Room* policy follows Blackwell et al.'s recommendation that "designers could directly influence the norms of individual communities and groups through design ‚nudges'" (Blackwell et al., 2019) – a socio-aesthetic technology of governance that has implications far beyond the scope of dealing with harassment. This is ever more true because *Rec Room's* vision of "democratization" has from its inception been linked closely to monetization through community commerce[34]: it is at its core an economic experiment. In consequence, community politics "on the ground" appear to develop between the poles of an aesthetic conservatism shying from "too much" diversity and a growing consciousness about the stratification effects and exploits of the platform's token economy[35].

In contrast, *VRChat's* focus on embodiment effects and a very liberal user-driven asset production ecology have given birth to a multiplicity of partly overlapping, partly averse sub-communities that have made the platform something like the *Reddit* of VR. In an equally liberal low-moderation environment, many members of those communities have developed platform-specific resilience against equally platform-specific threats. The lively and sometimes unhinged creativity of community members has influenced the pop-cultural image of Social VR more than existing research has acknowledged, and *VRChat* communities politicize mainly around the conditions for this appeal – especially when they find them endangered. The company was forced to acknowledge this in mid-2022 when users became enraged about a new anti-cheat function that was meant to prevent tampering with the client software but effectively barred an entire modding

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34 *Rec Room's* General Partner at main investor *Sequoia Capital* describes the platform's vision of building community around games "both for fun and to earn money" in a blog post like this: "Rec Room's vision is to democratize access for anyone to create [...]. The team is also excited to launch P2P monetization to enable creators to monetize their own creations — enabling the new side hustle for kids" (Zhan, 2020).

35 Community Vtuber BVR proposed a system of upper, middle, and lower classes depending on users' token wealth in a video titled "Why is Everything SO EXPENSIVE in Rec Room?" ([BVR], 2022), assigning content creators to the wealthiest class. *Road to VR* editor Scott Hayden pointed to the risk of "gambling, money laundering, and other illicit behavior" within *Rec Room* in 2020 already (Hayden, 2020).

community that had also taken responsibility for providing users with impaired eyesight or hearing access to the platform; a rage that manifested in large scale review bombing[36] and numerous active and creative users leaving for smaller competitors like *Neos VR* or *Chillout VR.*

While methodically robust ethnographic research is yet to be desired, it seems plausible that the less safe and less regulated environment of *VR-Chat* has led to a higher degree and valuation of self-governance amongst most of the platform's multiple communities[37]. This form of community self-governance aims at protecting the peer group against the dangers of the platform's evolving social ecosystem. As a consequence, it tends to produce entry barriers and exclusion mechanics around sub-communities. There is a "dark social" VR space on the platform consisting of disparate systems of non-public rooms only accessible through invitations from community members who control the health and safety of their virtual social spaces. If this tendency becomes too strong, neglect of the open social space between sub-communities – the "metaverse" equivalent to the democratic concept of public space – might become a problem for social reproduction as well as for user and company growth at large, because it is those liminal communal rooms where onboarding of new users commonly happens but which can only sustain the platform's appeal when they are lively social spaces themselves.

Both differing platform cultures and models of governance thus provide starting points for thinking about how democratic structures might develop and be stabilized in virtual worlds employing VR technology. While the two platforms' development trajectories seem to converge – *Rec Room* opening up aesthetically with a new *Unity3D* SDK, *VRChat* working towards integrated community commerce –, it remains to be seen what role their different community cultures will play in said conversion. This is of interest especially because whatever social technologies are developed in Social VR in the strict sense, they will have wider implications for an increasingly virtualized social reality at large as envisioned by "metaverse" evangelists: If

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36 Thousands of furious reviews by users temporarily lowered *VRChat*'s *Steam* rating to "mostly negative", prompting gaming and technology magazines to conjure apocalyptic imagery of the platform "being absolutely nuked into the ground" (Taylor, 2022).

37 Common theory about the effects of VR technology, like place/plausibility illusion (Slater, 2009) and body ownership illusion (Slater et al., 2010), indicates higher vulnerability of immersed players, but this seems to be balanced at least for highly invested users by the desire to experience those very effects and thus accept higher social risk.

VR technology finds more users, SVR ecology will likely become the model of further digital community politics to come.

New forms of governing through design have been conceptualized for urban planning (Ghertner, 2015) or (social) media studies (A. Elias et al., 2017) before, but they become even more relevant when and where the virtual production of space, bodies, and sociality merge. Reflecting on the structural role of possibilities and limits of aesthetic creation in VR, of how it forms the basis for making sense of, representing and sensually experiencing bodies and worlds, of its entanglement with economic flows and the production of social order acknowledges the intuition that "the affordances that designers and other practitioners deem important will inevitably shape an extensive portion of human social interactions today and in the future" (Kolesnichenko et al., 2019). Design decisions for social worlds are always political decisions, and aesthetic governance is an important part of intersectional affective biopolitics in a mediatized world.

If we regard the current two largest SVR platforms as for how their different paradigms of worldbuilding and aesthetic creation relate to democratic culture, we cannot ignore the fact that both platforms are proprietary infrastructures run by competing private companies – spawning and harboring social communities is their mode of redeeming the venture capital invested in them. It is the economic allure of the "metaverse" that redesigning and virtualizing the social might allow increased extraction of value from the very basic human need of being with others. Both platforms are examples of possible pathways towards the likely conflictual realization of this goal, while also affording new ways of relating to and mediating the complexities of corporeal existence. These pathways differ from the start – one beginning as an integrated business concept with thoughtful planning, the other as an experiment growing out of a VR tech enthusiast community trying and often struggling to keep up with its own development –, but whether they also lead to different outcomes depends on the politics negotiated between the respective companies and their users. Even more and most importantly, it depends on whether this provider-client relationship can evolve into something resembling democratic citizenship, instead of just being the virtual model for the ongoing real-world transformation of citizens into customers.

Paradoxically, while *Rec Room* takes on the "classical" role of a governing state much more than *VRChat* – setting and enforcing social policies, controlling the economic infrastructure, regulating the possible and impossible relations of what is "normal" and what is not, ensuring fairly equal access

for different (hardware) populations –, its users seem to regard it more as a regular online game provider than those of *VRChat* treat "their" platform. This might for one be because the libertarian plurality of *VRChat* indeed resembles the current image of a neoliberal (post)democracy more than the "all fun and games" uniformity of *Rec Room* does, from its unregulated laissez-faire economy and identity-based cultures down to the rituals of partaking in mass demonstrations (like the review bombing mentioned earlier) or performing the disgruntled citizen alienated from "the powers that be". The more powerful element charging this relationship, though, might be the higher grade of embodiment afforded by the platform, tethering its core user base much more intensely to the experience of having a second body living a second social life in a second reality. Many invested *VRChat* users choose the platform not primarily for leisure or monetary gain, but because it allows them to realize themselves – to <u>become</u>, and to become with others. If the claim to diversity and plurality of current (liberal) democracies is to be taken seriously, then this indicates that these concepts will need to mean more in SVR than just choosing the skin color and gender attributes of an otherwise standardized 3D comic character or even embodying a "realistic" 3D scanned copy of ones own physical body: it rather means the ability and possibility to access the "morphological freedom" the technology promises in the first place.

On another note, the economic aspects of this freedom have only begun being tested. Who controls the infrastructures facilitating the production and trade of virtual bodies? What does body ownership in VR mean not as a psychological effect, but as a social question stretching between the communicative practice of fast-swapping dozens of freely copyable avatars during a single conversation on the one hand and identifying with a unique virtual body, demanding structural protection of its integrity and uniqueness, on the other hand? Who will profit off the existence of virtual bodies to start with? Will certain ways of looking be valued and prized higher than others, as is true for much of the physical world, or will beauty and its valorization become subject to a radical re-negotiation amongst bodies-as-humans, bodies-as-animals, bodies-as-objects, bodies-as-rooms and other yet unimaginable forms of being or being-experienced?

Companies invested in building a "metaverse" extending or even supplanting the "real world" as the primary realm of the social[38] are quick to acknowledge that platforms that "enable anybody to create and share their own social virtual worlds [...] shouldn't be built privately, but rather alongside a passionate community who can help shape the future"[39]. While it stands to reason that platforms are eager to enlist their users' labor for building their virtual realities – especially when they do not have to pay for them for their work –, it is yet another question who will <u>own</u> these realities. The more the actual fabric of a platform consists of the results of its users' creative labor, the more contested this question will and should be. Asking for the distribution and implementation of aesthetic governance can give us hints on how it could or should be answered.

References

Au, W. J. (2021, September 22). Inside VRChat's Informal Economy: An Estimated 350+ People Make Real Money from that Metaverse—Many Likely Earning a Full-Time Income! UPDATE: More Like Over 1000 [Weblog]. *New World Notes*. https://nwn.blogs.com/nwn/2021/09/vrchat-community-economy-gumroad-patreon-youtube-1.html

Au, W. J. (2022a, January 4). VRChat User Concurrency Hit Nearly 90,000 Last New Year's Eve! [Weblog]. *New World Notes*. https://nwn.blogs.com/nwn/2022/01/vrchat-concurrency-2021.html

Au, W. J. (2022b, April 13). BREAKING: Rec Room Has Over 3 Million Monthly Active VR Users, Most on Meta's Quest 2; That's 10x More Users Than Meta's Horizon Worlds & Venues! [Weblog]. *New World Notes*. https://nwn.blogs.com/nwn/2022/04/rec-room-vr-mau-2022-install-base.html

Blackwell, L., Ellison, N., Elliott-Deflo, N., & Schwartz, R. (2019). Harassment in Social Virtual Reality: Challenges for Platform Governance. *Proceedings of the ACM on Human-Computer Interaction*, *3*(CSCW), 1–25. https://doi.org/10.1145/3359202

Bollinger, S. (2023, November 4). *Why are there SO many Trans people in VRChat? Gender, Identity, and Self Discovery.* [Video]. YouTube. https://www.youtube.com/watch?v=Mh3HTTa5NFU

[BVR]. (2022, September 29). *Why is Everything SO EXPENSIVE in Rec Room?* [Video]. YouTube. https://www.youtube.com/watch?v=dnkq0m2lEeA

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38 *Rec Room* cofounder Nick Fajt's vision as relayed by their main provider of investment capital: "[W]hereas the the [sic!] last era of social centered on sharing real world experiences online, the next era of social would be centered on both creating and sharing these moments online" (Zhan, 2020).

39 Quoted from the developer statement about *VRChat*'s "early access" status on *Steam*: https://store.steampowered.com/app/438100/VRChat/ [accessed 2023, December 5].

Elias, A., Gill, R., & Scharff, C. (2017). Aesthetic Labour: Beauty Politics in Neoliberalism. In A. S. Elias, R. Gill, & C. Scharff (Hrsg.), *Aesthetic Labour* (S. 3–49). Palgrave Macmillan UK. https://doi.org/10.1057/978-1-137-47765-1_1

Freeman, G., Zamanifard, S., Maloney, D., & Adkins, A. (2020). My Body, My Avatar: How People Perceive Their Avatars in Social Virtual Reality. *Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems*, 1–8. https://doi.org/10.1145/3334480.3382923

Ghertner, D. A. (2015). *Rule by aesthetics: World-class city making in Delhi*. Oxford University Press.

Handley, R., Guerra, B., Goli, R., & Zytko, D. (2022). *Designing Social VR: A Collection of Design Choices Across Commercial and Research Applications*. https://doi.org/10.48550/ARXIV.2201.02253

Hayden, S. (2020, December 1). 'Rec Room' Now Lets Premium Users Sell Creations for In-game Currency [Weblog]. *Road to VR*. https://www.roadtovr.com/rec-room-sell-items-tokens-economy/

Hern, A. (2022, October 12). Meta's virtual reality project will finally have legs – literally. *The Guardian*. https://www.theguardian.com/technology/2022/oct/12/meta-virtual-reality-legs-mark-zuckerberg-facebook

Jonas, M., Said, S., Yu, D., Aiello, C., Furlo, N., & Zytko, D. (2019). Towards a Taxonomy of Social VR Application Design. *Extended Abstracts of the Annual Symposium on Computer-Human Interaction in Play Companion Extended Abstracts*, 437–444. https://doi.org/10.1145/3341215.3356271

Kolesnichenko, A., McVeigh-Schultz, J., & Isbister, K. (2019). Understanding Emerging Design Practices for Avatar Systems in the Commercial Social VR Ecology. *Proceedings of the 2019 on Designing Interactive Systems Conference*, 241–252. https://doi.org/10.1145/3322276.3322352

Lang, B. (2022, April 13). Virtual Social Platform 'Rec Room' Hits 3 Million Monthly Active VR Users [Weblog]. *Road to VR*. https://www.roadtovr.com/rec-room-monthly-active-vr-users-3-million-peak/

Liu, Q., & Steed, A. (2021). Social Virtual Reality Platform Comparison and Evaluation Using a Guided Group Walkthrough Method. *Frontiers in Virtual Reality*, *2*, 668181. https://doi.org/10.3389/frvir.2021.668181

McVeigh-Schultz, J., Kolesnichenko, A., & Isbister, K. (2019). Shaping Pro-Social Interaction in VR: An Emerging Design Framework. *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*, 1–12. https://doi.org/10.1145/3290605.3300794

Quent, M., Vogl, S. L. (2025). Identity and Safety in Social VR: Findings from an Experimental Avatar-Based Interview Study. Interdisciplinary Perspectives on the Potentials and Perils of Democratic Culture in the Metaverse, 167–179. Nomos.

[Retr0]. (2021, March 28). *The Evolution of Rec Room (Release, 2016 and 2017)* [Video]. YouTube. https://www.youtube.com/watch?v=PH7Wsa2V1Nk

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Schultz, R. (2024, April 29). Welcome to the Metaverse: A Comprehensive List of Social VR/AR Platforms and Virtual Worlds (Including a List of Blockchain Metaverse Platforms) [Weblog]. *News and Views on Social VR, Virtual Worlds, and the Metaverse*. https://ryanschultz.com/list-of-social-vr-virtual-worlds/

Shriram, K., & Schwartz, R. (2017). All are welcome: Using VR ethnography to explore harassment behavior in immersive social virtual reality. *2017 IEEE Virtual Reality (VR)*, 225–226. https://doi.org/10.1109/VR.2017.7892258

Slater, M. (2009). Place illusion and plausibility can lead to realistic behaviour in immersive virtual environments. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *364*(1535), 3549–3557. https://doi.org/10.1098/rstb.2009.0138

Slater, M., Lotto, B., Arnold, M. M., & Sanchez-Vives, M. V. (2009). How we experience immersive virtual environments: The concept of presence and its measurement. *Anuario de Psicología*, *40*.

Slater, M., Spanlang, B., Sanchez-Vives, M. V., & Blanke, O. (2010). First Person Experience of Body Transfer in Virtual Reality. *PLoS ONE*, *5*(5), e10564. https://doi.org/10.1371/journal.pone.0010564

Tanenbaum, T. J., Hartoonian, N., & Bryan, J. (2020). „How do I make this thing smile?": An Inventory of Expressive Nonverbal Communication in Commercial Social Virtual Reality Platforms. *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*, 1–13. https://doi.org/10.1145/3313831.3376606

Taylor, M. (2022, July 26). VRChat is being review bombed to hell and back after anti-cheat announcement. *PC Gamer*. https://www.pcgamer.com/vrchat-is-being-review-bombed-to-hell-and-back-after-anti-cheat-announcement/

Thompson, G. S. (2014, May 19). *Virtually Incorrect with Gunter—Episode #5* [Video]. YouTube. https://www.youtube.com/watch?v=jxQRzOckQu0

[Tupper]. (2021a, January 5). *VRChat's New Years 2021—Or, what the $%@& was that?* [Weblog]. https://medium.com/vrchat/vrchats-new-years-2021-or-what-the-was-that-d84334789f77

[Tupper]. (2021b, June 25). *VRChat Partners with Anthos Capital to Close $80M Series D* [Weblog]. https://medium.com/vrchat/vrchat-partners-with-anthos-capital-to-close-80m-series-d-d706a1ab481b

Turkle, S. (2006). Tethering. In C. A. Jones & B. Arning (Hrsg.), *Sensorium: Embodied experience, technology, and contemporary art* (1st MIT Press ed, S. 220–226). MIT Press : The MIT List Visual Arts Center.

Zhan, S. (2020, December 18). *RecRoom: A digital third place for kids at heart* [Weblog]. https://medium.com/sequoia-capital/a-digital-third-place-for-kids-at-heart-2646dfd55e00

Zheng, Q., Wang, L., Do, T. N., & Huang, Y. (2022). *Facing the Illusion and Reality of Safety in Social VR*. CHI Conference on Human Factors in Computing Systems (CHI '22), April 29-May 5, 2022, New Orleans, LA, USA, New York, NY, USA. https://doi.org/10.48550/arXiv.2204.07121