

PROJECT IMMERSIVE DEMOCRACY

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Social VR Platform Design, User Creativity and Aesthetic Governance

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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 partly or wholly 3D generated landscapes, are center to its vision. Social VR platforms most fully realize this vision socially and aesthetically at the moment and therefore allow for the most immediate evaluation of current practices and possible development of digital embodiment as a basis of “metaversed” online cultures. The following text is not a thorough empirical investigation of existing social VR platform culture, but an exemplary sketch of the landscape trying to delineate the conditions for and possible effects of aesthetic governance in 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). Social VR as a practice can be described as embodied social roleplaying within a system of connected

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.

and confined virtual 3D spaces² inhabited by avatars³ tethered to human users. Due to technical limitations, a single room on a social VR platform can currently usually host no more than about 50 people at the same time, which structurally encourages the dynamic creation and dissolving of social groups as well as their localization. Virtual rooms can be instanced multiple times in different social states: public, private, only open for friends or for people in possession of a link or token. Since digital assets can be copied, uniqueness in virtual environments is a rare good and consequently has – like presence – become decoupled from (virtual) materiality to mainly exist as a transient psycho-social fact: as an experience.

Most, though not all, social VR platforms focus on meeting and connecting with strangers and have thus implemented functions to build user networks, like friends or groups lists. Communication between users happens mostly verbal via microphone and through the expressiveness of avatar bodies via live VR body tracking or prerecorded movements, though other established media of social online communication like emojis and written chat are common as well. Almost all social VR platforms allow usage without a dedicated head mounted device (HMD) in order to lower entrance barriers and enable user growth – in fact the majority of people using the bigger social VR platforms currently are non VR users, because VR hardware is still relatively pricey and of limited everyday utility.

Since the development and deployment of the Oculus Rift HMD around 2013 started the consumer VR mainstreaming phase, numerous social worlds and platforms supporting and/or centering around the technology have been created. From weblogger Ryan Schultz’s more than 160 entries long list of VR capable social virtual worlds, only few have garnered a 4 or more digit user count though (Schultz, 2023). The two most prominent ones as of 2023 are *Rec Room* and *VRChat*. A comparison of these two protagonists can yield an understanding of how different concepts of aesthetic worldbuilding and user creation may influence community development in terms of culture and politics – which is crucial when thinking about what “immersive democracy” might mean or come to be.

The two following chapters will therefore give an overview over the genesis and characteristics of those two platforms. This overview is then followed by a rough description of the communities that have formed on each platform during the last years. The concluding chapter will discuss aesthetic governance as a process developing between design paradigms and community culture(s). The author largely relies on his own observations during unstructured preliminary field research on various social VR platforms in the years 2020-2022. In this research, significantly more time was spent on *VRChat* than on other platforms, which leads to an imbalance of experience that will become apparent later in the text. Full-fledged ethnographic research through participatory observation on social VR is still lacking, but 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) has been taken into account, as well as primary and secondary online sources.

Rec Room

HISTORY AND AVAILABILITY

In spring 2016, a group of six men – partly Microsoft employees that had formerly been working on the development of 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 a number of different virtual spaces for users to play and socialize in. Most games were and are competitive in nature, and over the years simulations of typical physical sports games like dodgeball were surpassed in popularity by more martial ones like laser tag that

² The terms “space”, “room”, “world” or sometimes “map” are often used interchangeably when talking about places inside social VR. 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. I leave open source self hosted systems like Mozilla Hubs aside because they so far have not generated the community effects I am interested in.

³ For a closer look on avatars within social VR see Kolesnichenko et al. (2019).

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>.

embed the common “first-person shooter” experience of online gaming into the social sandbox. *Rec Rooms* name refers to its central social metaphor, which is also the source of its unified aesthetics: “a prototypical rec center from the year 1987” (McVeigh-Schultz et al., 2019).

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 soon expanding availability to *Playstation 4s* VR system in late 2016. Since then, the software has become accessible for a fairly large number⁵ 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* HMDs⁶, mobile *iOS* and *Android* devices, *Xbox* and *PlayStation*. *Linux* and *macOS* desktop devices are not supported.

ECONOMY AND ADOPTION

Likely due to its founders already being well-connected in the industry, *Against Gravity* started off with a 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 pandemic⁷. The company has since changed its name to *Rec Room Inc.* Like virtually all social VR platforms at the moment (and the bulk of social media platforms more generally), *Rec Room* is free to use, with a few advanced features only accessible to paying customers. An in-game economy with tokens to spend on items and clothing was included from the start, and custom creations of users made with the platform tools can be traded via those tokens on the platform. 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 when they have reached 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 tokens⁸. The company calls their whole meta economy “Community Commerce” – a term for digital social commerce that has been gaining popularity in recent years especially with TikToks growing success – and promotes it to its users as a potential way to “making a sustainable income”⁹.

On the platform’s website, *Rec Room* boasts more than 60 million users in 2022. While an impressive figure, this amount of existing accounts is unlikely to reflect the number of real people actually using the platform, since it supposedly includes abandoned, multiple and otherwise inactive accounts. Occasionally, the company publishes numbers of their monthly active user count (MAU) at peak times to demonstrate its growth. In 2022, this peak was at a reported 3 million accounts having logged into the platform at any given time over the course of a month (Au, 2022b). Meant to demonstrate growing adoption, this number still does not give 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, because users spread over thousands of single rooms.

AESTHETIC CONCEPT

Rec Room’s visual concept is a virtual youth nostalgia – not only with regards to the choice of its metaphorical location, but also in the sense that its founders are too young to have any memories of a US college or university recreation center in 1987 of their own. The virtual spaces provided by the platform itself, called “Rec Room Originals”, are dominated by warm colors and rounded shapes creating a family

⁵ “Fairly large” should be understood in comparison to other social VR apps. While technically, browser based platforms like *Mozilla Hubs* would be 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 in order to limit non-proprietary platforms.

⁶ Support for *Quest1* devices was discontinued in the first half of 2023 when *Meta* deprecated the relevant SDK.

⁷ Numbers cited from https://www.crunchbase.com/organization/against-gravity/company_financials [accessed 2023, December 5].

⁸ See <https://recroom.com/roomcurrencies> [accessed 2023, December 5].

⁹ Cited from <https://blog.recroom.com/posts/2021/10/12/community-commerce-report>.

friendly¹⁰ nostalgic vibe. Simple materials and low-poly¹¹ 3D objects ensure fluid rendering and interoperability across different devices and operating systems and also add to the overall retro aesthetics¹².

Fluid playability on mobile devices is also a major reason for the stylized humanoid user avatars on the platform not featuring any legs¹³. Platform users are represented through torsos floating above ground, with aligned but unconnected hands and head. These avatars can be customized individually inside the app with regard to their facial features, hairstyle, skin color, gender 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 a friendly expression. 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 out of 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" has been rolled out in a beta state. The kit allows for the import of environments and elements created inside 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 own corporate visual designs¹⁴, on the other hand it also can be understood as a reaction to the success of *Rec Room's* direct competitor *VRChat*, which follows a different logic of aesthetic creation.

VRChat

HISTORY AND AVAILABILITY

VRChat was first 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 its status of being an "early access" product being in development until now. Its core functionality was, and still is, the hosting and mediating of networked virtual co-presence through 3D avatars, leaving most of 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.

Similar to most social VR platforms, *VRChat* is not limiting accessibility exclusively to users with VR hardware. Desktop clients for *Windows* and *macOS* were deployed early, with the latter being discontinued in the first half of 2016, when support for the newly released *HTC Vive* HMD via *SteamVR* was added. Client

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

¹¹ 3D objects are usually built out of simple polygons. The number of polygons an object consists of limits its geometric complexity and correlates with the computational power needed for its visual rendering. Since technological development in graphics computation power is accompanied with a drive for higher fidelity 3D realism, simpler "low poly" aesthetics themselves have become associated with a nostalgic look.

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 Since consumer VR hardware commonly only provides movement tracking of three points – head and hands –, leg movement and positioning usually has 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>).

¹⁴ There is a dedicated paragraph on the feature webpage addressing readers that "are a company or brand" (<https://recroom.com/studio>).

downloads directly from the *VRChat* homepage were phased out in the following years in favor of larger app stores tied to the different disjunct and competing VR device ecosystems. A combined PC desktop and VR version accessible via the *Steam* software platform's early access program in mid 2017 subsequently led to drawing in more users who approached the application from a video-gaming perspective. There is no native support for *Linux* or *macOS* currently, but the alpha version of a mobile app for *Android* has been released in August 2023¹⁵.

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 to a business with several dozen reported full-time employees. *VRChat Inc.* has been financed through several funding rounds with about \$95 million¹⁶. To the author's knowledge, the company has so far not 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*¹⁷, was linked in a company blog post to the ambition of further growing the user base and implementing a "creator-driven economy"¹⁸, i.e. mechanisms allowing for 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).

There is no comprehensive public data on *VRChat's* monthly active users. Similarly to *Rec Room Inc.*, the company is not interested in making its adoption and usage data 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 Years Eve 2020 (Tupper, 2021a) and more than twice that number one year later (Au, 2022a). There appears to be a silent agreement between the two competing platforms, while each publishing peaking user numbers in order to represent their successful growth and adoption, to choose those numbers in a way that prevents direct comparison. In combination with the hard-to-measure structure of a plethora of instanced virtual rooms on a platform, this makes it impossible to more than guess the sizes of actual user counts. Generally, *VRChat's* total user base is often (but without transparent figures to back it up) assumed to be lower than that of its direct competitor, though with a higher percentage of actual VR hardware users due to its advanced motion tracking support. *Steam* usage statistics indicating PC desktop and VR users usually rank *VRChat* significantly higher than *Rec Room*¹⁹, but do not represent mobile or any other users not connecting via the service, with the former being a significant part of *Rec Room* users according to the company²⁰.

On the technological side, *VRChat* supports more advanced VR hardware technology than most of its competitors, like up to 11-point full body tracking²¹, and features a generous scripting API. Despite

¹⁵ Announced at <https://ask.vrchat.com/t/developer-update-17-august-2023/19495>.

¹⁶ Numbers from https://www.crunchbase.com/organization/vrchat/company_financials [accessed 2023, December 5].

¹⁷ See previous footnote.

¹⁸ This was laid out in a blog post by VRChat "Head of Community" Tupper on behalf of "The VRChat Team & Investors" here: ([Tupper], 2021b).

¹⁹ At the time of writing, the *Steam* user count for *VRChat* is roughly 20 times the one of *Rec Room* as per <https://steamdb.info/charts/?category=53&select=1&compare=438100%2C471710> [accessed 2023, December 5].

²⁰ 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).

²¹ In VR, a user's position, posture and body movement is usually tracked at at least three points: the head via the HMD, one or two hands via the controllers or visual hand tracking systems. All other limbs are inferred through a plausibility system called inverse kinematics. Tracking accuracy can be increased by adding more 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 that are compatible with *SteamVR's* protocols. See: <https://docs.vrchat.com/docs/full-body-tracking> [accessed 2023, December 5].

prominent claims that “legs are hard”²² in VR, *VRChat* avatars have long been able to accommodate not only legs with inverse kinematics and/or tracking, but also 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 “screen” 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 sometimes 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, like it had been for social web platforms²³ – virtual environments and avatars being the equivalent to 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 labor²⁴.

The “look and feel” as well as the social dynamics on *VRChat* today are a direct consequence of this decision to have almost all content be generated²⁵ by users. The first *VRChat* application itself had been quickly assembled in *Unity3D* by Gaylor, using free-to-use scenes from the *Unity Asset Store* as environments and a simple humanoid avatar in T pose as readymades for testing out the functionality of networked VR. Since there were no aesthetic parameters but only technical limitations, interested users soon began experimenting intensely with possibilities and limitations for imagining and creating avatars and spaces, using the provided SDK. With a growing influx of “very online” users in the following years came recreations of popular games, pop culture figures and memes. Especially avatars became a kind of social trading good in the community, sometimes spreading very fast and creating memetic phenomena spilling into wider online culture. Over time, *VRChat* users developed a deliberate aesthetic eclecticism that also made the platform increasingly attractive for content creators on video and streaming platforms like YouTube and Twitch, who thus became another 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, like

- a long-standing clubbing/partying scene as well as a dedicated dancing community focused on e-girl & e-boy styles,
- a transgender community using the affordances of virtual “morphological freedom”²⁶ and sharing advice on gendered body movement and voice training,

²² “Seriously, legs are hard” was proclaimed by *Meta's* Mark Zuckerberg on the “Meta Connect VR” conference in 2022 when announcing full body avatars, followed by the erroneous statement “[...] which is why other virtual reality systems don't have them either” (Hern, 2022).

²³ See Thompson (2014) at minutes 17:22 & 48:56.

²⁴ The knowledge threshold for user creation in 3D spaces still is significantly higher than on “classical” social media though, with a wider gap between content creation and social practice. This has led to e.g. unique avatars becoming a sought for commodity on *VRChat*.

²⁵ “Generated” may at the most basic not mean much more than uploaded by users – “stealing”/copying/recreating content from games, movies or single creators and other forms of copyright infringement are not uncommon, much like in other online spaces with liberal content politics, where enforcement of IP legislation is at odds with a business' intrinsic in growth through cultural adoption.

²⁶ Founder of the *VRChat* “Trans Academy” Tizzy in an interview with VTuber Phia: “[...]n 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).

- a virtual furry community enjoying the low entry threshold of VR avatars as opposed to the high prices of physical fursuits, with the last convention of this community on the platform according to the organizers having more than 15.000 participants,
- a diverse roleplaying community with different game worlds and stories as well as meta-roleplaying troupes with a 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 for live streamers.

The latter’s appeal for underage users and people close to online trolling and “shitposting” culture and their presence 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 within 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.

VRChat is also frequently referred to as having been instrumental in developing distinct virtual socio-physical practices and conventions: “headpatting” 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 roleplay (ERP) in VR. The latter has been met with concern by some longer-term platform users because it amplifies or contributes to a growing sexualization of avatars on the platform²⁷.

All of these practices as well as their exemplary sub-communities share a strong connection with corporeality. Thanks to its advanced tracking support *VRChat* has become one of few platforms that can accommodate the aesthetic realization of this relationship with and desire for 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 operating with shader programming 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, they go for the sensory system of its users, too.

Like avatars in general, such crashers have long been traded among *VRChat* users, be it for offensive trolling or for self defense 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 playful practices. Many users are heavily invested in the games the platform is offering – also because especially the “Rec Room Original” pvp games like paintball or laser tag work really well from a vsports²⁸ perspective. Generally, 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, sometimes building narrative around the fictional platform universe. But there is also a creative community focused on building worlds, costumes or painting in *Rec Room*, as well as sub-communities based on aesthetic creation, like (military)

²⁷ 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 pretty much from the start. It only seems to have become problematic for this community though when combined and thus increasingly identified with actual socio-sexual practices – a process that in itself would make an interesting case for exploring the differential value judgments at play in communities forming around visual representations of bodies, identities and desire.

²⁸ 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 gaming/esports that require more isolated hand-eye-coordination.

roleplaying or popcultural fandom. 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, although they appear to be less prominent.

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 changes²⁹. 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, users regularly invoke *VRChat* as the aesthetic negative to their own appreciation of *Rec Room*, emphatically describing the dread they feel when confronted with *VRChat's* radical aesthetic inconsistency of avatars and worlds. In contrast, they 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.

GOVERNANCE

For the purpose of this text, I assume a correlation between aesthetic and social regulation of social VR platforms as a working hypothesis. If such a correlation, however complicated by the fuzziness of cultural processes, existed, then we would assume spending time in *Rec Room* an experience significantly less likely to be socially disrupted or stressful. Indeed, the platform is not only more coherent, it also has more developed moderation/policing features than *VRChat*: there is a system of appointing and rewarding community moderators, a third party algorithm is actively surveilling users' speech for forbidden words³⁰ 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 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 harassment³¹, with the latter usually being characterized as a "wild west" (McVeigh-Schultz et al., 2019) "known for non-normative social interactions" (Zheng et al., 2022).

While intuitively plausible, there might also be some bias at play here. Academic research on social VR, when more than pure literature review, has so far concentrated on design features and harassment as a potential design problem. Skimming through a number of papers and their methodologies shows that researchers spend surprisingly little time on the platforms they are writing about. There is a serious lack of ethnographies about and on social VR platforms that would enable to learn how those platforms' users make sense of and navigate the social space(s) they inhabit and, for the most part, create³². Harassment is one part of this social space and users respond to it within the frame of the more 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 (topdown) designed affordances of various online social platforms and the (bottom-up) practices of virtually embodied players seeking to communicate" (Tanenbaum et al., 2020).

In reality, hate speech is a problem on both *Rec Room* and *VRChat* as much as bullying of certain user groups like e.g. furies³³ 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 affordances of embodiment and immersion of VR technology – a problem that is made even more pressing by the significant presence of

²⁹ For an exemplary discussion among *Rec Room* users that mostly 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/

³⁰ See company blog posts at <https://recroom.zendesk.com/hc/en-us/articles/4419902650135-Applying-for-Moderator-Volunteer-Mod> and <https://blog.recroom.com/posts/2021/11/19/ensuring-be-excellent-to-each-other>.

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

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

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

minors. Additionally, underage users themselves form, on both platforms, a group that many older members see more as annoying (“squeakers”) than as vulnerable, which can lead to social tension as well.

As has often been established for all sorts of virtual environments in the wider sense, 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 relevant, they are not design solvable 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 more intense bodily experience of interactions in virtual reality as a medium 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 also carries the vectors and effects of the platforms’ differing creative/aesthetic paradigms. How can these paradigms be described when thinking about governance?

Of the two examples regarded in this text, *Rec Room* seems to fit the top down model of a benevolent ruler. “Rooms are behavior”, as one developer 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 regulating the expressions users are able and allowed to make. While following a platform structure of thousands of parallel and synchronous bounded virtual rooms, the centralization of important conditions of social experience within these rooms hedges boundary testing experiments as well as unwanted 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 commerce³⁴: 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 economy³⁵.

In contrast, *VRChat*’s focus on embodiment effects and a very liberal user generated asset production has sprung 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, members of those communities often 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 had 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 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 bombing³⁶ and a number of 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 a plausible hypothesis that the less safe and less regulated environment of *VRChat* has led to a higher degree and valuation of self

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 celebrating the Series D funding round like this: “Rec Room’s vision is to democratize access for anyone to create with the most sophisticated yet simple-to-use creator tools (no coding required!). 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).

³⁶ Thousands of furious reviews by users temporarily lowered *VRChat*’s *Steam* rating to “mostly negative”, prompting coverage in the gaming press and beyond to conjure apocalyptic imagery like of the platform “being absolutely nuked into the ground” (Taylor, 2022).

governance in most of the platform's communities³⁷. The vector of this form of community self governance is protection of the peer group and the self against the dangers of the platform's evolving social ecosystem: it tends to produce entry barriers and exclusion mechanics around the community itself. If this tendency becomes too strong, neglect of the social space between communities – an equivalent to the democratic concept of public space on a metaverse platform – might become a problem for social revitalization of communities as well as for user and company growth at large, because it is these liminal communal rooms where onboarding of new users commonly happens.

Both differing platform cultures and models of governance provide starting points for thinking about how democratic structures might develop and be stabilized in virtual worlds employing VR technology. While their structural trajectories seem to partially converge – Rec Room opening up aesthetically with a new Unity SDK, VRChat working towards integrated community commerce –, it is yet to be seen what role their different community cultures will play in said conversion. This is of interest also because what happens in the space of VR social technology adoption has wider implications for an increasingly virtualized social reality as envisioned by “metaverse” evangelists: If VR technology finds more users, social VR ecology will likely have been a large scale model of further digital community politics to come.

Reflecting on the structural role of possibilities and limits of aesthetic creation in VR, of how it forms the basis for making sense of and representing 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 mediated world. It has been conceptualized for urban planning (Ghertner, 2015) or (social) media studies (A. Elias et al., 2017) and becomes even more relevant where the virtual production of space, bodies and sociality merge.

If we regard the current two largest social VR 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. With the economical allure of the “metaverse” being the redesigning and virtualizing of the social for an increased extraction of value, both platforms serve as examples of possible pathways towards the likely conflictual realization of this goal. These pathways differ right from 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.

Paradoxically, while *Rec Room* thus 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 due to the fact that the libertarian plurality of *VRChat* indeed resembles the current image of a neoliberalized democracy more than the “all fun and games” uniformity of *Rec Room* does, down to the rituals of partaking in mass demonstrations (like in the recent 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. In short, they choose the platform not for their leisure or for monetary gain, but because it allows them to realize themselves on multiple levels – to become. If the claim to diversity and plurality of current (liberal) democracies is to be taken seriously, then this indicates that these concepts will mean more in social VR than choosing the skin color and gender attributes of an otherwise standardized 3D comic character or even embodying a “realistic” 3D scanned

³⁷ It would be interesting to find out which role the comparatively higher degree of embodiment plays in this development, because common theory about the effects of VR technology, like place/plausibility illusion (Slater, 2009) and body ownership illusion (Slater et al., 2010), would indicate higher vulnerability of immersed players – which seems to be balanced by their desire to experience those effects and thus accept higher social risk.

copy of ones own physical body: it rather means the ability and opportunity 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 negotiated between fast-swapping dozens of freely copyable avatars as a communicative practice 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 being able to have a body in VR 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 as of yet other unimaginable forms of being or being-experienced?

Companies invested in building a “metaverse” fully replacing the “real world” as the primary realm of the social³⁸ 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, it is yet another question who will actually own them. The more the actual fabric of a platform consists of results of its users’ creative labor, the more contested this question will be. Asking for the distribution and implementation of aesthetic governance can give us hints on how it could or should be answered.

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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].

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