

“Mirror Dwellers”: Social VR, Identity and Internet Culture

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ABSTRACT

VRChat is a popular social virtual reality (VR) application with a strong user base and countless virtual worlds to explore and avatars to “wear”. The breadth and popularity of this social VR game, and the forms of interaction that it allows, makes it a fascinating case study for investigating the effects of VR experiences in the creation and communication of online identities. In this study, we focus on a specific phenomenon that enshrines several nodal points in the evolution of VR experiences: virtual mirrors. Fiery debates between players reveal polarised responses to playful uses of virtual mirrors. We use a body of discussions from the VRChat Reddit community to look into such discourses, practices, and positions. Due to the rhetoric adopted we chose to contextualise our findings within Internet Culture, highlighting how the novelty of the medium explodes some of the contradictions of this media ideology and challenging and reshaping online identity.

Keywords

Virtual reality, VRChat, Social VR, Internet culture, Media ideology

1. INTRODUCTION

”It’s so rare that we get anyone actually nice or respectful, and I’m sure it’s because of this weird stigma about the ‘mirror crowd’.”

- Reddit user *ZostorInqo*

Increasing importance of social elements and practices in gameful immersive virtual reality (VR) applications is possibly one of the main areas of interests in serious applications in VR, but also as a gateway for exploring how publicly available social VR applications can be used by individuals (Rzeszewski and Evans 2020). While online media are often

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described with spatial metaphors (Volli 2003), social VR games go beyond the metaphor and offer virtual spaces that can be roamed and explored, hosting all sort of activities and, most importantly, where it is possible to meet and interact with other players in a multitude of ways.

VRChat, or VRC (VRChat Inc. 2017), is one of the first as well as most prominent examples of gameful social VR. With countless virtual worlds to explore and avatars to "wear" either in VR or on a computer screen, it has amassed a substantial community of players. Its user base has been consistently on the rise, with an average number of concurrent players during year 2021 counting over 14.000 and peaking at 26.000¹. The VRChat Internet community is also considerable: the application's Discord server hosts over 180.000 members and the VRChat subreddit gathers approximately 80.000 users.

The game's success can arguably be due to its free and decentralised nature – the main premise is that every player can create their own worlds and avatars or chose among those created by the community. It is also probable that social distancing measures caused by the COVID-19 pandemic have substantially contributed to the success of a game that allows gathering and socialising in virtual worlds. Indeed, while studies on VRChat are still scarce, some of the existing ones investigated exactly how its spaces and affordances have been used during quarantine (Rzeszewski and Evans 2020).

Despite the novelty of the VR as a game medium, many studies investigate it adopting concepts and tools created to understand and analyse on-screen virtual worlds. However, an exploration of the phenomena, social interactions, discourses, and cultural entails that are unique to immersive and highly customisable gameful virtual worlds is still missing. In an attempt to fill this gap as part of a wider research effort on gameful social VR, we monitored online discussions between VRChat players. We approached this task in an exploratory way: we did not look for specific keywords or approached these discussions with a hypothesis, but instead scanned the discussions looking for emerging trends or unexpected themes.

Interestingly, a unique and highly prominent topic stood out from the VRChat community's Reddit and Steam discussions: that of *virtual mirrors*. The high frequency of this topic in player discussions and the strong polarisation around it picked our curiosity as it indicated a vibrant phenomenon and seemed deserving further investigation with a more systematic and in-depth approach. Conversations and disputes around the presence and uses of mirrors in VRChat touched upon a variety of topics, ranging from usability of VR avatars and feelings brought on by embodying a VR avatar, to the appropriateness of practices related to mirrors and the forms of trolling sometimes used to punish "mirror dwellers" - one of the recurring expressions used on Reddit to indicate VRChat players spending their time interacting with mirrors.

From the conversations, it emerged that players would interact with and around mirrors in several ways, testing and adjusting their own avatars, using them as social gathering points and exploiting them to mimic physical interactions with other avatars. These activities, however, and especially so when engaged in public "worlds", have been regarded with diffidence or even with ferocious hostility by other players, resulting in harassment and derision.

1. Source: <https://steamcharts.com/app/438100>)

We therefore proceeded to a more rigorous approach and overview of this phenomenon, which quickly revealed a fascinating node of ideologies, discourses and modes of interaction with virtual spaces and other users warranting for separate studies focusing on different aspects emerged from the phenomenon.

This study, the first of a planned series, takes a bottom-up approach and proposes a mapping of discourses around gameful social VR experiences – and particularly related to the use of mirrors in VRChat – based on a thematic analysis of community discussions on motivations, practices, and attitudes. The analysis is informed and contextualised within Internet culture and the media ideologies connected to it. Anchoring the research to mirrors-related data provides a manageable and reproducible structure, albeit not exhaustive, with the aim of identifying and opening up possible research directions for games and gamification studies, internet, social media and cultural studies, and human-technology interaction.

1.1 Mirrors

Mirrors occupy an important role in human cultures, as witnessed by their many representation in myth, art and literature. From Narcissus drowning in its own reflection to Lewis Carroll's works, the mirror is represented as an object that tells the truth, the doorway for an upside-down world, or a device of illusion. The strong presence of cultural representations of mirrors is not accidental but likely due to the peculiar role that reflections play in human development.

Notably, Lacan (Lacan 1975) introduced the idea of a "mirror stage" as a part of child's development between 6 and 8 months of age. Lacan articulated the progression of the phenomenon in three steps. First, the child sees the image in the mirror and believes it to be real. Second, the child starts to recognise that the image is, in fact, only an image. Finally, the child recognized that it is indeed an image and, in particular, an image of *themselves*. In this stage, children mentally reconstruct their fragmented body and thus acquire a symbolic mastery on themselves. Identifying one's own reflection is a key step to recognising one's own individuality. The mirror, then, is a structural crossroad between the "specular self" (the optic and catoptric phenomenon that is perceived by the eyes of the child) and a "social self" (the understanding of how others can perceive our subjectivity "from the outside").

The importance of these two fundamental levels, the bodily one and the social one, does not preclude mirrors to acquire, in superiors phases of symbolic development, new meanings and functions, as described by Eco (Eco 2018). Eco defines mirrors as *neutral prosthesis* which allows to capture visual stimuli where the eye could not reach (in front of your body, around a corner, in a cavity) without loosing in strength and evidence. The particularity of mirrors is that they are a peculiar kind of prosthesis, which doesn't only allow us to look at the world in a better way, but also to look at ourselves as others see us: it is a unique and powerful experience, which explains the many cultural representations of the mirror as a device.

From this very simple overview on the specificity of mirrors, we can see three main levels emerging: a bodily level, a social level and a cultural level. They are linked with optical perception, perception of the self, and representation, respectively. These three levels are not specific to analogue mirrors, but are applicable to digital mirrors as well and therefore

applicable to the analysis of discourses around VR experiences involving them. In particular, when looking at discourses around the use of mirrors in VR we will see how all levels are engaged from different perspectives, starting from the feeling of body ownership (bodily level), the different interactions that the use of mirrors might afford or hinder (social level) and issues around how such practices influence identity economies and media ideologies (cultural level).

Moreover, in VR specifically, mirrors play an important and powerful role as they are used as one of the devices for inducing the body ownership illusion (Spanlang et al. 2014; Maselli and Slater 2013). Synchronous motor actions between the physical and corresponding virtual parts of the body alter one's body schema by augmenting it with the avatar representation in immersive embodied VR. This phenomenon is based on the seminal work from over two decades ago - the so-called rubber-hand experiment, which demonstrated how under certain conditions our phenomenological bodies are not limited to our physical ones (Botvinick and Cohen 1998). Through VR technologies, and experiences, we extend this effect from the "hand" to our entire bodies, changing our cognitive processes along with our understanding of ourselves. Notably, some of the serious applications of using VR mirrors and virtual embodiment are in the treatment of body image disorders, such as anorexia (Porrás-García et al. 2020), and body schema ones, such as phantom limb pain (Tong et al. 2020). Body ownership in VR has also been shown to deeply affect, for example, our perception (Kiltner et al. 2013) and implicit biases (Slater 2017).

It is not surprising then that gameful VR applications are being used to explore, embody, and perform various avatars and identities. Sometimes, they are used for the sake of playfulness and fluidity, but at other times for individual serious aims, such as emotional regulation and identity exploration (Freeman et al. 2020). Even though this area with a plethora of possible implications is still severely under-researched, we do understand today that using virtual mirrors for strengthening VR embodiment is one of the crucial and unique topics in gameful VR. The potential sensitivity or even controversy around some of these effects such as gender-bending, coupled with the increasingly popular use of social VR applications, directs us to believe that the communities' discussions will provide a wealth of research data that contextualizes the intrinsically VR phenomena in the wider Internet culture.

1.2 Internet Culture

The Web is a rich semiotic space in which many different subcultures originated and reproduced responding in different ways to the medium, the contents, and communities it hosts. "Internet culture" is an expression generally used to indicate a specific subculture, or set of subcultures, whose origins can be traced back to the community of practice (Lave and Wenger 1991) of professionals and IT students operating in usenet, newsgroups, and bulletin boards which subsequently moved into the World Wide Web. As any cultural phenomenon, Internet culture has evolved with time and along with the development of the medium it is related to, both in relation of connection speed (that allowed moving from text-based to picture and video-based communication), devices (in particular becoming mobile), and infrastructure (with the profound changes in social media of the last two decades). As all cultural forms, it is a varied and nuanced reality. Internet Culture has been studied as early as 1997 (Porter 1997), and different studies have focused on the textualities it produces (Shifman 2014), its political dimension (Atton 2006), and its cultural characteristics

(Auerbach 2012). The latter have been identified as being articulated around four aspects: velocity, irony, self-documentation, and elitism. The latter could further be operationalised as organised in three different *elitist economies*: of suspicion, offense, and unreality (Ibid.).

Unreality is a particularly relevant concept, stemming from the idea that the Web is – and *has to be* – separate from reality. An early conceptualisations of this media ideology can be found in a 1994 interview of Paul Virilio by Louise Wilson (Virilio and Wilson 1994). In the interview the French Philosopher argues that media rather than “simulating” reality would gradually become a substitute to reality. While talking mostly about television, Virilio already envisions a future where several different media-generated realities would exist in parallel. While much of the contemporary Web is organised around a quite different media ideology, or one that portrays social media as a seamless and transparent continuation of reality, the idea of a separation between online and offline life is still strong in Internet Culture (Thibault 2017). This separation can support forms of escapism, but it is also often at the base of the lack of empathy and dehumanisation involved in several forms of trolling (Auerbach 2012).

Another central aspect to understand Internet Culture is the importance of *anonymity*. The irreducible opacity of the medium has given birth to a strong media ideology, then embodied in online collective identities (4chan’s “Anons”), hacktivist movements (notably, Anonymous), textual productions (memes, whose authors are generally unknown) and many practices related to maintenance and discipline (Thibault 2017). Anonymity – and hence lack of accountability – can also explain many of the carnivalesque (Bakhtin 1984) features of Internet Culture including its playful tones, taste for disguise, trolling, and the famous “Rule 20” of the Internet: “nothing is to be taken seriously”.

Unreality and anonymity concur in the making of identity as one central nodal point in Internet Culture. Interestingly, they are also cardinal in VR, as the latter does indeed propose a new sensory reality and can offer avatars for users to embody more strongly than those on-screen.

Social VR, then, as many virtual worlds before it (Veerapen 2013; Bainbridge 2012), is under the influence of Internet Culture. This goes beyond the heavy use of memes and the carnivalesque feel that social VR applications can have and includes an attempt of colonisation by its media ideology, often crystallising around matters of identity. Collective avatars have been used in similar ways in 4chan and in VRChat alike, both for the construction of a common identity and for trolling activities that – often – acquire aggressive and racist undertones (Devries 2021).

Nevertheless, attempts to maintain an unaltered the media ideology in VR are destined to fail: the intrinsic features of the medium afford a very different balance between identity and anonymity and involve necessarily some form of self-disclosure, for example by giving up bio-metric data to use the system better (Maloney et al. 2020). Moreover, the strong relationship that VR has with the body of users coupled with the possibility of assuming new forms and identities has made social VR popular with the LGBTQ+ community, which constructs safe spaces withing it (Acena and Freeman 2021) and sometimes uses it to alleviate gender dysphoria (Schwind et al. 2017).

VRChat, hence, is a particularly interesting case study, as it is a contested territory. To an extent it persists in resisting Internet Culture thanks to how the specificity of the medium influences the constructions of online identities. Mirrors can be the fulcrum of such a conflict, capable of exploding the contradictions between affordances and ideology.

2. METHOD

Due to the novelty of the context and VR phenomena, the nature of this study is largely exploratory. Rather than attempting to be fully exhaustive and comprehensively define the themes and sub-themes, we aim to present the area as broadly as possible and provide inspiring and fruitful avenues for future more detailed analyses. Representation of themes related to the use of mirrors is structured around categories derived from some of the key concepts of Internet studies. An adaptation of Lacan's observation about the mirror stages also offers a useful lens to look at the different discursive levels emerging from our corpus.

Moreover, the focus on discussions around mirrors in fact affords for different perspectives and foci of investigation. Indeed, this paper is a part of a larger research effort on VRChat mirrors. While here we focus on the world outside and around the application, another work examines motivations, practices, and attitudes of players inside the application. It is our hope that these studies will draw the wider DiGRA communities' attention to the relevance, breadth, and depth of gameful social VR phenomena.

According to the guidelines issued by the Finnish National Board on Research Integrity this study did not require an ethics board approval.

2.1 Data search, selection, and retrieval

The data analysed in this study was collected from Reddit, *r/VRChat*, in March 2021. Reddit, one of the most popular discussion sites online, has a strong relationship with Internet Culture (Chandrasekharan et al. 2018). Marketed as "the front page of the internet", Reddit hosts several online communities in its "subreddits" that have strong ties with both online cultures and game culture. (Bergstrom and Poor 2021). Due to these links, Reddit presents an ideal space to engage in the reconstruction of the discourses and controversies that surround a digital game or that are connected with Internet Culture, making it a primary source for this research approach. Moreover, VRChat has a dedicated subreddit (*r/VRchat*), that, together with Discord channels and Steam forums, is the main source to investigate the public "off-game" discourses about the app.

While choosing to base our research solely on Reddit discussions, we were well aware that the users of the site are not representative of the gamer base population of VRChat, and that the ties that the website has with Internet Culture operate a selection in its users. This study, however, is not an ethnographic account of what occurs *in* VRChat, but an analysis of the public discourses *about* it and experiences and events inside it. We deemed Reddit to be the suitable space to look at for such discourses.

Our data search was performed using the search word "mirror" and including not safe for work (NSFW) results. The search revealed a total of 215 threads which were then manually checked for relevance. Considering the creative nature of the game and the participatory role of the community in building the application, it is unsurprising that a vast portion of the

results referred to technical and development troubleshooting. These discussions were excluded as not relevant to our study. The second most frequently excluded type of discussion were threads revolving around recommendations for worlds in which to play, mentioning mirrors only in passing.

Threads were included in the final sample at the condition that they focused on players' motivations, in-game practices, and/or attitudes towards mirrors in VRChat. Finally, 27 full threads were included in the analysis, containing a total of 729 individual posts, or comments².

2.2 Analyses

As a bottom-up and fundamentally inductive study, the main aim of this analysis was to map the discussion themes and offer some possible keys of interpretations of the discourses and practices that emerge. The analysis was conducted following an adapted coding procedure for thematic analysis (Mayring 2004) and using Excel spreadsheets with the data scraped from the included *Reddit* threads in combination with pen-and-paper. The analysis was organised in four stages.

First, both authors familiarised themselves with the content and discussed possible approaches to coding and constructing themes. Although the themes individuated have no aspiration of being in any way universal, the different academic backgrounds, nationalities, and genders of the authors provided some degree of inclusiveness. The first author acted as the "master coder" and conducted a detailed analysis and coding of the data, as well as forming and reinforcing the themes in an iterative manner. Minor disagreements regarding the coding were discussed and resolved among the authors. The accepted structure was comprised of four major themes agreed upon by both authors.

The number of analysed threads was limited (27), but the quantity of messages (729) proved itself adequate: we were able to identify several discursive isotopies and experience a high degree of saturation during the analysis, where additional threads did not require addition of new themes, but fell into our pre-established categories.

3. RESULTS

The connections between VRChat and Internet Culture strongly emerged early in the analysis process. This may be in part motivated by the fact that the sample itself comes from a forum, *Reddit*, that is part of such sub-culture (Anderson 2015). This could explain the prominent use of memes and the emergence of several discursive patterns typical of these media (e.g. self-deprecation, irony, offence). However, as argued in the background section, the connections between VRChat and Internet Culture exceed our sample. A clear example is the frequent inclusion of popular Internet memes in the game as avatars as well as the creation of successful new memes, such as Ugandan Knuckles, which gained notoriety in 2017 (Devries 2021). In order to create an overview of these connections, we have individuated four main themes that we found in this data and that connect uses of and discourses about VRChat. Specifically, these are: attention-seeking, trolling, unreality, and meta-awareness.

2. The full list of threads is available at 10.6084/m9.figshare.19358198

3.1 Attention-Seeking

Because of the importance of anonymity within Internet Culture, looking for attention online has often been depicted in a negative light and especially so, but not only, when performed by women (Manivannan 2013). People exposing themselves online – and therefore exposing their personal information and, in some measure, identity, are often described in a rather misogynistic way as "attention-whores" (Fortim and Moura Grando 2013), implying that their actions reflect a need to "boost their ego" in a narcissistic way. In our sample, we have clearly found a strong line of criticism and aggression against the mirror dwellers motivated exactly by the perception that these users are narcissistic, elitist or full of themselves, sometimes indicated as "thots" following a popular internet meme.

"(...) A lot of people who only sit in front of mirrors all day are elitist or plain ol' "thots". (...) - morerokk

The accusations of narcissism are sometimes linked to specific issues related to the social level of mirror interactions and in particular with a lack of socialisation from the mirror dwellers. Users then describe in-game actions supposedly offering better forms of entertainment aimed at convincing users to stop using mirrors and engage in other activities.

"And then there's me, running around as a small child with pistols that could be classed as WMDs, desperately trying to get people away from those godforsaken mirrors.STOP STARING AT YOURSELVES YOU NARCISSISTS HOLY SHIT ITS NOT THAT INTERESTING" - Th3_Shr00m

The connection between mirrors and narcissism, on the other hand, is more closely connected to the cultural level. It seems to be so deep rooted in the community that even users that do not oppose the practice strongly and try to defend its users sometimes use the term "narcissism" to describe it.

"I always figured it was a vanity thing or narcissism brought on by being in an avatar that more closely resembles what you want to be, what you feel you really are spiritually, or that you simply put a lot of effort into. (...) - ronoverdrive

This opinion of mirror dwellers, however, is not unanimous. Some users try to explicitly challenge this use of the word by claiming that these accusations appear baseless if someone is familiar with what the actual pathological conditions is.

"(...) I often see people throwing out terms like "narcissism" to describe it, and I find myself wondering if they've ever actually met a narcissist. (...) - WIntermute0001



Figure 1: Image shared by redditor TheKally with the caption "VRChat rebels be like".

Moreover, the relentless attacks against mirror dwellers have also stimulated a response that makes use of a very similar rhetoric, only turned against the attackers. Some users, defending the practice of using mirrors in VRChat, claim instead that it is those who insult mirror dwellers or share memes against them that are, in fact, those in craving for attention for attention and support by the community.

"What people say: "everyone's always looking at mirrors" What's being said: "why isn't anyone paying attention to ME!?"" - Insan3guy

The main counterpoint against the attacks against users enjoining mirrors, hence, seems to be that of pointing out the hypocrisy of the accusers, claiming that their stance against mirrors is just another way of asking for attention and approval. Both discourses are grounded on the media ideology of Internet Culture (and they use similar ways of expressing it, as shown for example by the image by user TheKally, Figure 2), but they disagree strongly on which behaviour is actually breaching it.

3.2 Trolling

Trolling indicates a set of aggressive techniques, often perceived or framed in a playful way by the perpetrators, that are typical of online interaction (Phillips 2015). It is often used as a form punishment and harassment, or in activities of gate keeping, for example to keep users that do not adhere to Internet Culture values away from certain websites (Thibault 2017). In our sample, the accusations and harassment against mirror dwellers emerge as a clear trend, often with the intent or modalities of trolling. Many users report activities of gate keeping or express ideas in favour of such behaviours. Our sample contains several traces of active harassment and trolling within the game. Some users recount their actions against mirror dwellers directly, explaining how they gather with other users and go disturbing the players standing in front of the mirrors.

"One of my favorite things to do is just finding some group of memers by the mirror, join them and blast meme songs with my soundboard. It's unhealthily fun" - Leaftineas

Other users report of these sort of activities while expressing support for them and reinforce the idea that these actions are generally performed by groups that quickly gather where mirror dwellers are in the attempt to troll them.

"(...) If you're gonna go to a public world to be "private", then your stupid ass deserves to be spammed by randos (...)" - FeathersRuff

Evidence of these "punitive expeditions" also emerges from witnesses that do not necessarily support them nor even express open concern over the unhealthy dedication of the aggressors.

"To be real, the dedication some people have towards trolling people vibin by a mirror doin their own thing is way more unhealthy. (...)" - WIFIPunk

Finally, some of the mirror dwellers themselves recount of how most of the interactions they experience are violent or rude, which they relate with the offensive discourses that surround the practice.

"(...) It's so rare that we get anyone actually nice or respectful, and I'm sure it's because of this weird stigma about the 'mirror crowd'. It's not that they don't exist, but it's rare. (...)" - ZostorInqo

The ideological conflict that we are describing sees a rather unidirectional form of aggression within VRChat. While mirror dwellers defend themselves or respond with their own criticism on Reddit, the situation is rather different within the game, as they are an easy target to spot due to the sheer nature of their identifying activity.

3.3 Unreality

As mentioned, the attraction towards unreality is one of the main characteristics of Internet Culture and is often expressed by a taste for surrealism, forms of pretend play, and passion for fiction and fictional characters (Auerbach 2012). In online discourses, unreality is often opposed to a reality that is perceived as dull, hurtful and generally dissatisfying. Unreality becomes a way of escaping depression (Chateau 2020).

In our sample, the role of VRChat and mirrors in reinforcing the feelings of escapism emerges strongly and is often brought up as a motivation to engage in such activities. User "evolvedant", for example, in a long answer to someone asking why people even spend time in front of mirrors in VRChat, makes an ironic parallelism between the app and the fictional world of the *Harry Potter* series. Two interesting ideas emerge from this response. The first is that mirrors in VRChat should not be used by "muggles" – how non-magical humans are called in J. K. Rowling's books. This connotes VRChat as an alternative, magical world that is not open to everybody, further reinforcing an idea of unreality but also of elitism.

The second idea that emerges is that mirrors show users what they really desire:

"So basically, when people look into the mirror in VRChat... what they see is a reflection of their deepest desires... and when people pick an avatar for themselves, it is often of what they like the most... whether it be a cute anime girl, or a furry, or whatever. Often people are not satisfied with their life, or how they look, their age, or even what their gender is. The avatar they choose allows them to get a taste of having an alternative to their life situation... and the mirror reflects that desire... showing them that which they long for the most.
"- evolvedant

The quoted text, connecting to a magical mirror from *Harry Potter* capable of showing people's true desires, underlines how VRChat users, as traditionally those who belong to Internet Culture, are dissatisfied with their lives and look for a way to escape reality. However, instead of hiding behind collective identities, they use avatars to attenuate their discomfort and even to fight dysphoria. This specific relation with mirrors in VR is connected to the first of the levels we have individuated using Lacan: the bodily level. Mirrors, then, are cardinal in enabling the users to truly *transform* into their avatars as an escape from their real selves.

Other users, also explaining why they like to use mirrors, explicitly acknowledge the role of the game, and of mirror dwelling, to escape reality.

"(...) Are waiting for their friends to get online, are just in VRChat to escape the great world we live in and dont feel like talking. (...)" - AlmerRaIn

We can see that VRChat, by allowing users to decide and set up their avatars, is seen as a space of freedom and mirrors are one of the devices that players have at their disposal for exploring adoption of new identities.

"Even so, anyone is permitted to spend their time as they please online. Especially in VRC, where you get to become someone else and do what you want." - ihavecrabss

Escapism, however, is not the only aspect related to unreality appreciated by users in our sample. The fact that VR allows to take control and embody imaginary creatures, and the surreal feeling that it can be gained by looking in a mirror and seeing them, is also indicated as one of the reasons for mirror dwelling.

"I only do it because I still feel amazed thinking that here I am, controlling a neon colored fictional creature that moves according to how I do" - Thebowmanman

3.4: Meta-awareness

Since its beginning, Internet Culture is characterised by a strong meta-awareness, as proved by several attempts of recording its interaction and its many "meta" jokes (Auerbach 2012). In our sample, the users appear to be extremely well aware of how the practice of using mirrors in the app has become a trope in itself.

"Its a vrc meme at this point. I always joke around about it with my friends"
- HoshouNeko

The aggressive discussion around mirror dwellers, although very divisive in the player community, is perceived by some as a unifying element exactly in virtue to the fact that it would not be understandable by outsiders. The awareness of the niche nature of the altercation is well present in the mind of the players.

"love this meme, it's something only the VRChat community can understand lol. Absolute golden meme take my poor mans award" - nxthvn

4. CONCLUSIONS

This study examined 27 threads on the *VRChat* community forum on *Reddit* with the goal of exploring discussions around virtual mirrors in the gameful social virtual reality experiences of *VRChat*. The analysis was conducted with the focus on the discourses and ideological dynamics that emerge from this phenomenon but also from the integration of the media ideology of Internet Culture with Social VR practices.

The results shed some light about the rich ecosystem of social VR communities and on how mirrors are able to influence them on several levels: the bodily one (allowing users to escape their own identity and reality by experiencing a stronger embodiment with their avatars), the social one (causing conflicts around the practices related to the use of mirrors, perceived as narcissistic by some) and the cultural one (relater to the dissonance between the medium affordances and the media ideologies of Internet culture). The cultural level is particularly interesting for us, as our analysis highlights how social VR has the potential of bringing strong change in all of online culture. For a long time, much of Internet Culture has been organised around a radical idea of anonymity and an open hostility to the idea of sharing personal data online, and to people that do so (Bernstein et al. 2011). With time, this ideological position has weakened, and transformed in a generic hostility towards social media, professional influencers, *image crafting* and forms of online pornography as *OnlyFans*.

Interestingly enough, although *VRChat* users do not share any personal images of themselves, the use of mirrors in the game seems to attract similar kinds of criticism. The accusations of narcissism that emerged from our sample seem to simply be adaptations of old arguments to a new medium: the mirror dwellers are full of themselves and are too proud of their identity. Trolling is a technique perfectly in line with the use of offense for gate keeping often used in online communities (Thibault 2017). The violent response of some *VRChat* players to mirror dwelling would seem as a typical Internet Culture interaction.

However, the use of mirrors by VRChat players does not really violate anonymity in any way. On the contrary, by reinforcing the link between user and avatar it can further separate the players from their real identities. In our sample, we saw this when players emphasise the unreality and escapism connected with the use of mirrors: also typical traits of Internet Culture. Mirror dwellers, therefore, do not appear as in opposition to Internet Culture, but as participants in it. The posts underlining the hypocrisy of their attackers are perfectly in line with this ideology, essentially accusing them to be the real attention-seekers.

VRChat, thus, illustrates a fascinating focal point of online subcultures. Ideologically, it positions itself within Internet Culture, but the different medium on which is based on is exploding the deep contradictions in the discourses about online identity. While until now it was relatively easy to distinguish between anonymity and use of real identities online, VR and embodiment have further changed and complicated the borders between identities, avatars, and users. The media ideologies of online communication cannot be indifferent to this change, and our study illustrates how strong debates about how to deal with this new situation are already ongoing in the communities. We can only speculate about how this will evolve and we present some ideas for further research.

4.1 Future avenues

As mentioned, this research is part of a larger effort to shed some light on the future of social VR and on its possible effects on gaming and internet cultures. For this reason, this exploratory study is also aiming to open novel research avenues. Primarily, novel studies examining the relationship of practices and discourses around social immersive VR worlds could look deeper into the idiosyncrasies emerging from social VR as they could be a useful tool for understanding the current changes of media ideologies. As outlaid in the introduction, social VR is becoming increasingly popular and diverse while relying on the bottom-up development. This is particularly interesting when investigating online communities as those are the same ones who are building the media and experiences themselves making the social VR of tomorrow closely intertwined with its communities.

The blurred lines between the self and the avatar due to the body ownership illusion calls for an interesting avenue to exploring not only *online* identities but also how they interplay with those in VR. For example, what is the relation between the level of congruence of self and avatar identities and how it affects online practices. Similarly, engaging with how these connections can change for different users, and focusing, for example, on how LGBTQ players perceive and appropriate these dynamics would offer an important research line to pursue.

Finally, it would be intriguing to examine whether the same discourse is present both inside and outside of VR. Different environments and cultures of, for example, Reddit and VRChat in and of themselves could shape the practices and attitudes in distinct ways. Thus, it is not necessarily true that individuals participate in same discourses on both platforms. Drawing these parallels could help us gain a more nuanced understanding of the factors encouraging anti-social attitudes and behaviors. Ultimately, research on this area could be used for promoting more inclusive and safer gameful social VR environments.

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